DRAFT ENVIRONMENTAL IMPACT STATEMENT

SAMISH INDIAN NATION

TRUST ACQUISITION AND CASINO PROJECT
ANACORTES, SKAGIT COUNTY, WASHINGTON

JUNE 5, 2013
PUBLISHED AUGUST 2014

Lead Agency:
Bureau of Indian Affairs
Northwest Regional Office
911 Northeast 11th Avenue
Portland, Oregon 97232
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EXECUTIVE SUMMARY

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ES.1 INTRODUCTION

This Environmental Impact Statement (EIS) has been prepared to assess the potential environmental consequences of the following proposed Federal actions in response to the Samish Indian Nation's (hereinafter "Tribe") requests:

(1) The Bureau of Indian Affairs (BIA) acquisition in trust of three parcels totaling approximately 11.41 acres in accordance with Section 5 of the Indian Reorganization Act (IRA) and the procedures set forth in 25 CFR Part 151 for the development of a gaming facility; and,
(2) The Secretary of the Interior's issuance of a reservation proclamation pursuant to Section 7 of the IRA and determination that the site may be considered the "initial reservation" of the Tribe allowing gaming on the property pursuant to the Indian Gaming Regulatory Act (IGRA) Section 20(b)(1)(B).

The foreseeable consequence of the Proposed Action will be that the Tribe develops a casino facility on the trust property. The effects of the Proposed Project and other development alternatives, including the No Action alternative, are analyzed within this EIS. The Proposed Project site is located in the City of Anacortes, Skagit County, Washington, south of State Route (SR-) 20 and east of Thompson Road. The March's Point project site includes Skagit County Assessor's Parcel Numbers (APNs) P19917, P19919, and P19920.

As part of the National Environmental Policy Act (NEPA) review process for this project, the BIA:

- Issued a Notice of Intent (NOI) in the *Federal Register* on August 11, 2011; and
- Held a public scoping meeting on September 14, 2011 at the Fidalgo Bay Resort in Anacortes, Washington.

The Scoping Report for the Proposed Samish Indian Nation's Trust Acquisition and Casino Project was released in October 2011.

ES.2 PURPOSE AND NEED

The Tribe is in need of a land base and revenue to improve the long-term economic vitality and self-governance of the Tribe and its members. The creation of a stable, sustainable source of employment and revenue is needed to support a variety of fundamental Tribal governmental, administrative, operational, social, and educational programs to benefit Tribal members. Acquiring land in trust and issuing a reservation proclamation will facilitate the establishment of a Tribal land base and the creation of a reliable source of revenue for governmental programs.

ES.3 ALTERNATIVES

This document describes and analyzes four development alternatives (A, B, C, and D) and the No Action alternative (E). The alternatives vary in the degree to which they meet the purpose and need of the Tribe. Alternative A is considered to most suitably meets the purposes and needs of the Tribe and is, therefore, the Tribe's Proposed Project. The alternatives are as follows:

- Alternatives A, B, and C include placing approximately 11. 41 acres into Federal trust status (March's Point site) and issuance of a reservation proclamation. Alternatives A and B include development of a gaming facility and Alternative C consists of retail/commercial uses. Selection of Alternatives A, B, or C would require that the March's Point site be brought into trust by the BIA though the CFR 25 Part 151 (Fee-to-Trust) process.
- Alternative D consists of transferring a 2.4-acre property (Fidalgo Bay Resort Flats site (Flats site) into federal trust and developing a gaming facility. Selection of Alternative D would require that the Flats site be brought into trust by the BIA though the CFR 25 Part 151 (Fee-to-Trust) process and that it be the subject of a request for a reservation proclamation.
- Alternative E is the No Action alternative that does not bring either site into federal trust and does not include development of either site.

These alternatives are described in detail in **Section 2.0** and are summarized below. The Executive Summary Table (**Section ES.5**) summarizes potential effects to each element of the environment, mitigation measures to avoid or minimize impacts, and levels of significance for each environmental impact. Other off-site alternatives were considered and rejected; these alternatives are described in **Section 2.8**.

ES.3.1 ALTERNATIVE A – PROPOSED PROJECT

Alternative A, the Proposed Project, includes approval of the Tribe's application for the fee-to-trust acquisition and issuance of an initial reservation proclamation by the Department of the Interior. The foreseeable consequence of these actions would be that the Tribe develops a casino on the approximately 11.41 acre March's Point site located within the City.

This alternative consists of construction of a 48,100-square-foot gaming facility with video lottery terminals (VLTs), as well as Class III gaming and other activities. Additional components include surface parking and stormwater protection and retention/detention facilities. The development would utilize the entire project site.

ES.3.2 ALTERNATIVE B – REDUCED INTENSITY CASINO DEVELOPMENT

Alternative B is similar to Alternative A in many aspects, entailing placement of the property into trust and issuance of a reservation proclamation. Under this alternative, however, the casino would be reduced in size to approximately 32,130 square feet and the size of the parking lot would be reduced. Because the smaller casino would not utilize the entire 11.41 acre site, a portion of the site on the eastern edge of the property (approximately 3.9 acres) would not be developed in the foreseeable future under Alternative B.

ES.3.3 ALTERNATIVE C – NON-GAMING ALTERNATIVE

Alternative C consists of transferring the property into federal trust and developing approximately 137,000 square-feet of retail and accessory commercial uses at the March's Point site. The development would utilize the entire project site.

ES.3.4 ALTERNATIVE D –FIDALGO BAY RESORT FLATS SITE

Alternative D consists of transferring approximately 2.4 acres of Tribal-owned property into trust as an initial reservation and the Tribe developing a casino on the site. The Flats site consists of approximately 2.4 acres of land located approximately 2.6 miles northwest of the March's Point site. Alternative D is a located between Tommy Thompson Trail and Fidalgo Bay Road in the City. This alternative consists of construction of a 48,100 square foot gaming facility with VLTs, and Class III gaming and other activities. Additional components include 300 spaces of surface parking. The development would utilize the entire 2.4-acre project site.

ES.3.5 ALTERNATIVE E – NO ACTION

Under the No Action alternative, neither the 11.41 acre March's Point site, nor the 2.4-acre Flats site would be placed into trust for the benefit of the Tribe, no reservation proclamation would be issued, and neither of the sites would be developed as described under the alternatives identified. Land use jurisdiction of the properties would remain with the City. For the purposes of the environmental analyses under this alternative, it is assumed that the properties would remain undeveloped. The No Action alternative would not meet the objectives of the Tribe or the Federal government in promoting self-determination and economic self-sufficiency of the Tribe.

ES.4 AREAS OF CONTROVERSY AND CONCLUSIONS

ES.4.1 ALTERNATIVE A – PROPOSED PROJECT

A small number of local residents attended the public scoping hearing for the project and five provided either written or oral comments regarding the project. Of those who did comment, some supported the project because of the economic benefits and a belief that the proposed facility would be an attractive addition to the area. Those who opposed the project expressed concerns about traffic impacts, and capacity of water and sewer services. Potential adverse impacts to traffic conditions were also identified through correspondence with the Washington State Department of Transportation (WSDOT), Skagit County, and the City as a potential area of concern. Although the issue was not raised during the scoping period, the proposed facility could have competitive economic impacts to other regional gaming operations.

Employment generated by Alternative A would be a positive, beneficial effect, but would not substantially increase employment in the local economy. This increase in employment could result in a small amount of migration into the local area with minor effects on housing availability, local schools, and other public services. Removing the land from the civil jurisdiction of the City would replace the City's land use, zoning, and planning priorities with those of the Tribe. Construction of the Alternative A project may also induce minor growth in a small section of the SR-20 corridor.

Potential impacts to agencies providing services to problem gamblers would be avoided through Tribal contributions to problem gambling programs. Implementation of traffic-related mitigation identified in **Section 5.2.7** and the Transportation Impact Study would ensure that effects to levels of service at local intersections are minor. Consultation with the appropriate service providers indicates adequate water and sewer capacity to serve the project (**Section 4.10**). A detailed list of potential environmental effects from Alternative A is presented below in Table ES-1.

ES.4.2 ALTERNATIVE B – REDUCED INTENSITY

Alternative B would cause similar impacts and controversies as Alternative A, although at a reduced scale. Under Alternative B, the size of the casino would be reduced from 48,100 to 32,000 square feet and the parking lot would be reduced from 500 to 300 spaces. Because less land would be paved for buildings and parking, the amount of developed space would reduced by approximately 3.9 acres. The Tribe has no plans at present to develop this area if Alternative B is selected. Alternative B would generate less net revenue, and thus not fully meet the Tribe's Purpose and Need to the same degree as Alternative A. Impacts from Alternative B would be less than Alternative A but more intense than the No Action alternative; however, all impacts from Alternative B could be reasonably mitigated to less than significant levels.

ES.4.3 ALTERNATIVE C – NON-GAMING ALTERNATIVE

Like Alternatives A and B above, Alternative C (retail and accessory commercial uses) poses a potential traffic impact by placing greater demands on local and regional transportation infrastructure. Estimated traffic volumes would be greatest for the non-gaming alternative. While Alternative C avoids controversy associated with competition to other regional gaming operations and the potential socioeconomic impacts related to gambling, it does not fully address the objectives of the Tribe related to the generation of substantial new revenues for the operation of Tribal governmental programs and the benefit of Tribal members. Establishing a new retail center outside the downtown core of the City could also detract from established downtown business entities. It is expected that all impacts can be reasonably mitigated to less than significant levels.

ES.4.4 ALTERNATIVE D –FIDALGO BAY RESORT FLATS SITE

Alternative D would cause similar impacts and controversies as Alternative A, although at a different location. Although trip generation rates would be similar to Alternative A, traffic impacts would be substantially worse at the Flats site due to the poor configuration of the roadways. It is expected that, due to the location and roadway configuration, the significant impacts to the roadway system could not be reasonably mitigated to a less than significant level. Noise is expected to be an area of controversy due to the proximity of the casino facility to the condominium located immediately north of the Flats site. The noise analysis presented in **Section 4.10** found that noise would be a significant unavoidable adverse effect from developing the Flats site.

ES.4.5 ALTERNATIVE E –NO ACTION

The No Action Alternative would not cause any significant environmental impacts, but would not meet the Tribal Purpose and Need.

ES.5 ENVIRONMENTAL CONSEQUENCES AND SUMMARY MATRIX

The environmental consequences of the alternatives analyzed within this EIS are summarized in **Table ES-1** below. Mitigation measures have been identified where feasible to address specific effects regardless of whether they are considered "significant." Mitigation measures identified in the design process have been incorporated into the project description (**Section 2.0**). Additional measures identified during the preparation of the EIS to mitigate specific effects are summarized in **Table ES-1** below. A detailed discussion of environmental consequences is provided within **Section 4.0** of this document.

TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
GEOLOGY AND SOILS					
Topography	Alternative A would involve minimal clearing and grading and would result in less than significant effects on topographic characteristics. -LS	Alternative B would have similar impacts to topography as Alternative A, but to a lesser degree. - LS	Development of Alternative C would have similar impacts to topography as Alternative A. -LS	Development of Alternative D would involve minimal clearing and grading and would have less than significant effects on topography.-LS	NE
Mitigation	NA	NA	NA	NA	NA
Soils	Alternative A could impact soils due to erosion during construction, operation, and maintenance activities. Such activities include clearing, grading, trenching, and backfilling.-PS	Alternative B could impact soils due to erosion during construction, operation, and maintenance activities, similar to Alternative A.-PS	Alternative C could impact soils due to erosion during construction, operation, and maintenance activities, similar to Alternative A.-PS	Alternative D could adversely affect soils due to erosion during construction, operation, and maintenance activities.-PS	NE
Mitigation	The Tribe shall comply with the General Construction National Pollutant Discharge Elimination System (NPDES) permit from the EPA. As required by the NPDES, a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will describe construction practices, stabilization techniques and structural Best Management Practices (BMPs) that are to be implemented to prevent erosion and minimize sediment transport. BMPs shall be inspected, maintained, and repaired to assure continued performance of their intended function. Reports summarizing the scope of these inspections, the personnel conducting the	Alternative B will have the same mitigation measures for erosion as Alternative A.	Alternative C will have the same mitigation measures for erosion as Alternative A.	Alternative D will have the same mitigation measures for erosion as Alternative A.	NA

Levels of significance are provided before and after mitigation for each effect.

Significant = S Potentially significant=PS Less than significant = LS Beneficial effect = BE No effect = NE Not applicable = N/A

TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	inspection, the dates of the inspections, major observations relating to the implementation of the SWPPP, and actions taken as a result of these inspections shall be prepared and retained as part of the SWPPP. The SWPPP shall include, as appropriate, the following requirements: Stripped areas shall be stabilized through temporary seeding using dryland grasses. Conveyance channels and severe erosion channels shall be mulched or matted to prevent excessive erosion. Exposed stockpiled soils shall be covered with plastic covering to prevent wind and rain erosion. The construction entrance shall be stabilized by the use of rip-rap, crushed gravel, or other such material to prevent the track-out of dirt and mud. Construction roadways shall be stabilized through the use of frequent watering. Construction roadways shall be stabilized through the use of frequent watering, stabilizing chemical application, or physical covering of gravel or rip-rap.				

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	Filter fences shall be erected at all onsite stormwater exit points and along the edge of graded areas to stabilize non-graded areas and control siltation of onsite stormwater. Dust suppression measures included in Section 5.2.3 Air Quality shall be implemented to control the production of fugitive dust and prevent wind erosion of bare and stockpiled soils.				
After Mitigation	LS	LS	LS	LS	NA
Seismicity	Impacts from seismicity under Alternative A are considered less than significant.-LS	The on-site geological conditions for Alternative B are the same as for Alternative A. -LS	The on-site geological conditions for Alternative C are the same as for Alternatives A and B.	Impacts from seismicity under Alternative D are considered less than significant. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Mineral Resources	There are no known or mapped mineral resources within the project site. Development of Alternative A would have no adverse effects related to mineral resources.-LS	Mineral resources associated with Alternative B are the same as for Alternative A. -LS	Mineral resources associated with Alternative C are the same as for Alternatives A and B.-LS	There are no known or mapped mineral resources within the project site. Development of Alternative D would have no adverse effects related to mineral resources.-LS	NE
Mitigation	NA	NA	NA	NA	NA
WATER RESOURCES					
Surface Water Flooding	Alternative A would be located outside the 100-year and 500-year floodplains. No impacts from flooding are expected to occur. –LS	Similar to Alternative A, no impacts from flooding are expected to occur under Alternative B. -LS	Similar to Alternative A, no impacts from flooding are expected to occur under Alternative C. -LS	The Fidalgo Bay Flats site is located outside the 100-year and 500-year floodplains. Therefore, Alternative D would not impede or redirect flood flows, alter floodplain elevations, or affect floodplain	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
				management.-LS	
Mitigation	NA	NA	NA	NA	NA
Construction Impacts	Construction activities under Alternative A would result in ground disturbance, which could lead to erosion. -PS	Construction impacts resulting from Alternative B would be similar to Alternative A. -PS	Construction impacts resulting from Alternative C would be similar to Alternative A. -PS	Construction activities under Alternative D on the Weaverling Spit Site would result in ground disturbance, which could lead to erosion. - PS	NE
Mitigation	Mitigation listed below in the **Surface Water Quality** section also applies to construction impacts.	Mitigation listed below in the **Surface Water Quality** section under Alternative A also applies to construction impacts.	Mitigation listed below in the **Surface Water Quality** section under Alternative A also applies to construction impacts.	Mitigation listed below in the **Surface Water Quality** section under Alternative A also applies to construction impacts.	NA
After Mitigation	LS	LS	LS	LS	NA
Stormwater Runoff	Development of Alternative A would increase impervious surfaces on the March's Point Site and thereby generate increased stormwater runoff during rain events. -LS	Alternative B would have similar impacts to stormwater runoff as Alternative A. -LS	Development of Alternative C would have similar impacts to stormwater runoff as Alternative A. -LS	Development Alternative D would generate increased runoff during rain events due to increased impervious surfaces.- LS	NE
Mitigation	Mitigation listed below in the **Surface Water Quality** section also applies to stormwater runoff.	Mitigation listed below in the **Surface Water Quality** section under Alternative A also applies to stormwater runoff.	Mitigation listed below in the **Surface Water Quality** section under Alternative A also applies to stormwater runoff.	Mitigation listed below in the **Surface Water Quality** section under Alternative A also applies to stormwater runoff.	NA
After Mitigation	LS	LS	LS	LS	NA
Surface Water Quality	Surface water quality could be adversely affected from Alternative A if runoff from project facilities flushes trash, debris, oil, sediments, and grease into area surface waters.-LS Prior to construction, an NPDES General Construction	Alternative B would have similar impacts to surface water quality as Alternative A.-LS	Alternative C would have similar impacts to surface water quality as Alternative A.-LS	Runoff from project facilities, especially surface parking lots, could flush trash, debris, oil, sediments, and grease into area surface waters, impacting water quality. -LS	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	Permit shall be obtained from the USEPA and a SWPPP shall be prepared and approved by the USEPA. The Tribe shall incorporate source control BMPs to prevent the contamination of surface water and groundwater by polluted stormwater. Source control BMPs may include but are not limited to the following:				
Mitigation	-Trash storage areas for receptacles will be designed to minimize stormwater runoff contact with disposed solid trash. Trash receptacles will contain lids and be placed on impervious pavement. Trash receptacles along with signs encouraging use of trash receptacles will be placed in common areas to reduce littering. -Waste materials dumped into storm drain inlets will be prohibited with visible signs. All storm drain inlets located within the project boundaries will be stenciled with the message "Only rain down the drain" or a comparable statement. -Educational materials will be provided to employees on measures to prevent stormwater pollution. Good housekeeping practices such	Alternative B would have the same mitigation measures for surface water quality as Alternative A.	Alternative C would have the same mitigation measures for surface water quality as Alternative A.	Alternative D would have the same mitigation measures for surface water quality as Alternative A.	NA

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	as not littering, regular sweeping, and maintenance of vehicles can reduce runoff pollution. -Guidance for proper handling of fertilizers, pesticides, cleaning solutions, and other common harmful chemicals will be provided to appropriate employees. Additionally, proper disposal of wash water, sweepings, and yard clippings will also be required. -Landscaping for the project will be designed by a landscape architect and will include vegetation and an efficient irrigation system. Efficient irrigation systems maximize infiltration, provide retention, and slow runoff. Placement of vegetation and pervious surfaces at the outlet of runoff from impervious surfaces can help reduce the stormwater flow volume and level of contaminants. Pervious surfaces will be specified wherever reasonable and feasible. -Landscaping will not be overwatered. Automated irrigation systems will be designed to prevent runoff at all times, including rain gauge equipment tied to the logic controls that shut down the				

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	system based on rainfall to prevent unnecessary irrigation cycles. Periodic visual inspection by maintenance staff to detect leaks will be implemented. -Loading docks will be properly designed to reduce stormwater pollution. Design aspects can include covered docks or spill collection in the bay. Runoff must not be directed to depressed docks and direct connection to a storm drain is prohibited. -On-site restaurants will have contained areas and sinks with sanitary sewer connections for disposal of wash water containing food wastes. -Fertilizer use shall be limited to the minimum amount necessary and shall be adjusted for the nutrient levels in the water used for irrigation. Fertilizer shall not be applied immediately prior to anticipated rain. The Tribe shall incorporate treatment BMPs into the design of the stormwater collection system to prevent the contamination of surface and groundwater by polluted stormwater. Treatment BMPs shall include but are not limited				

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	to the following: -Inlet filters: Inlet filters shall be sized based on water quality flow rate. -Detention Basins: The detention basin shall be sized for flood control attenuation and required water quality volume.				
After Mitigation	LS	LS	LS	LS	NA
Groundwater Quality	Development of Alternative A would not require the use of on-site groundwater supplies as water service would be provided through a service agreement between the Tribe and the City. No adverse impacts to on-site groundwater supplies and private wells would occur.- LS	Impacts to groundwater supply and quality as a result of the development of Alternative B would be similar to those of Alternative A as both alternatives are similar in design and scope of development.-LS	Impacts to groundwater supply and quality as a result of the development of Alternative C would be similar to those of Alternative A as both alternatives are similar in design and scope of development.-LS	Alternative D would not require the use of on-site groundwater supplies as water would be provided pursuant to a services agreement with the City. -LS	NE
Mitigation	Mitigation listed above in the **Surface Water Quality** section also applies to groundwater quality.	Mitigation listed above in the **Surface Water Quality** section under Alternative A also applies to groundwater quality.	Mitigation listed above in the **Surface Water Quality** section under Alternative A also applies to groundwater quality.	Mitigation listed above in the **Surface Water Quality** section under Alternative A also applies to groundwater quality.	NA
After Mitigation	LS	LS	LS	LS	NA
AIR QUALITY					
Construction-Related Emissions	Construction of Alternative A would emit PM_{10}, $PM_{2.5}$, NO_x, SO_2, CO, VOC, GHGs and HAPs primarily in the form of diesel particulate matter (DPM) from the use of construction equipment and grading activities.-PS	Construction emissions for Alternative B would be from the same sources as Alternative A. -PS	Construction emissions for Alternative C would be from the same sources as Alternative A. -PS	Construction emissions for Alternative D would be from the same sources as Alternative A. -PS	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
Mitigation	The Tribe shall control fugitive dust emissions (PM_{10}) during construction through the following actions, as applicable: -Spray exposed soil with water or other suppressant. -Minimize dust emissions during transport of fill material or soil by wetting down loads, ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks, and/or covering loads. -Promptly clean up spills of transported material on public roads. -Restrict traffic on site to reduce soil disturbance and the transport of material onto roadways. -Locate construction equipment and truck staging areas away from sensitive receptors as practical and in consideration of potential effects on other resources. -Provide wheel washers to remove particulate matter that would otherwise be carried offsite by vehicles to decrease deposition of particulate matter on area roadways -Cover dirt, gravel, and debris piles as needed to reduce dust	Alternative B would have the same mitigation measures for construction-related emissions as Alternative A.	Alternative C would have the same mitigation measures for construction-related emissions as Alternative A.	Alternative D would have the same mitigation measures for construction-related emissions as Alternative A	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	and wind-blown debris. The Tribe shall control emissions of volatile organic compounds (VOC), nitrogen oxides (NOx), sulfur oxides (SOx), and carbon monoxide (CO) whenever reasonable and practicable by requiring all diesel-powered equipment be properly maintained and minimizing idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. Since these emissions would be generated primarily by construction equipment, machinery engines shall be kept in good mechanical condition to minimize exhaust emissions. The Tribe shall require all diesel powered equipment with a rating of 50 horsepower or greater to be equipped with diesel particulate filters. If air quality complaints are made regarding the project, a representative of the Tribe shall meet with the complainant and appropriate regulatory agencies to address the issue.				
After Mitigation	LS	LS	LS	LS	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
Operational Emissions	Buildout of Alternative A would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary emissions from combustion of natural gas in boilers and other equipment on the project site. -LS	Buildout of Alternative B would result in similar operational emissions as Alternative A. -LS	Buildout of Alternative C would result in similar operational emissions as Alternative A. -LS	Operation of Alternative D would not result in significant adverse effects associated with the regional air quality.-LS	NE
Mitigation	The Tribe shall provide transportation (e.g., shuttles) to nearby population centers, major transit stations, and multi-modal centers. The Tribe shall ensure the use of clean fuel vehicles in the vehicle fleet where practicable. The Tribe shall provide preferential parking for vanpools and carpools. The Tribe shall provide on-site pedestrian facility enhancements such as walkways, benches, proper lighting, and building access, which are physically separated from parking lot traffic. The Tribe shall provide adequate ingress and egress at entrances to the casino to minimize vehicle idling and traffic congestion.	Alternative B would have the same mitigation measures for operational emissions as Alternative A.	Alternative C would have the same mitigation measures for operational emissions as Alternative A.	Alternative D would have the same mitigation measures for operational emissions as Alternative A.	NA
After Mitigation	LS	LS	LS	LS	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
BIOLOGICAL RESOURCES					
Terrestrial Habitats	Alternative A would result in the removal of the snowberry patch and the ruderal/disturbed areas; however, these areas are not considered sensitive habitats as they present limited resources for wildlife.-LS	Alternative B would avoid impacts to the snowberry patch, and would adversely affect less acreages of riparian and nonnative annual grassland than Alternative A. However, as stated under Alternative A, none of these terrestrial habitat types are considered sensitive.-LS	Adverse effects to habitat types from the development proposed under Alternative C would be similar to those described for Alternative A. -LS	Alternative D would affect 1.79 acres of terrestrial habitat; however, none of the terrestrial habitat types are considered sensitive. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Waters of the U.S.	Alternative A would affect approximately 0.05 acres of potentially jurisdictional waters of the U.S. -PS	Alternative B would affect approximately 0.04 acres of potentially jurisdictional waters of the U.S. -PS	Alternative C would affect approximately 0.05 acres of potentially jurisdictional waters of the U.S. -PS	Alternative D would affect approximately 0.006 acres of potentially jurisdictional waters of the U.S. -PS	NE
Mitigation	Potential waters of the US on the March's Point/Flats sites shall be avoided if possible. If not possible, a permit will be obtained from the USACE prior to any discharge of dredged or fill material into waters of the U.S. A Nationwide Permit may be required since the development of any of the alternatives may result in impacts to less than 0.5 acres of potential waters of the U.S. The Tribe will comply with all the terms and conditions of the permit and compensatory mitigation will be in place prior to any direct effects to waters of the U.S. At minimum, mitigation measures require the creation of wetlands at a 1:1	Alternative B would have the same mitigation measures for the waters of the U.S. as Alternative A.	Alternative C would have the same mitigation measures for the waters of the U.S. as Alternative A.	Alternative D would have the same mitigation measures for the waters of the U.S. as Alternative A.	NA

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TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	ratio for any affected waters of the U.S. The USEPA will require a 401 Water Quality Certification permit prior to the USACE issuance of a 404 permit. Mitigation will be implemented in compliance with any permits.				
After Mitigation	LS	LS	LS	LS	NA
Federal Species of Concern	Alternative A would result in the removal of ornamental trees that provide roosting habitat for the potentially occurring Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*) and long-legged myotis (*Myotis volans*). -PS	Adverse effects to federally listed species of concern from Alternative B would be similar to those described for Alternative A. -PS	Adverse effects to federally listed species of concern from Alternative C would be similar to those described for Alternative A. -PS	Alternative D would occur in close proximity to trees within the coniferous forest that provide marginal nesting habitat for the bald eagle (*Haliaeetus leucocephalus)* -PS	NE
Mitigation	A qualified biologist will conduct a preconstruction survey to determine the presence of roosting bats prior to commencement of construction activities and removal of trees. -The preconstruction survey shall be conducted when bats are expected to be present and active. -If no special status species of bats are roosting, then no further mitigation is required beyond documenting the results of the preconstruction survey in letter report for the	Alternative B would have the same mitigation measures for Federal Species of Concern as Alternative A.	Alternative C would have the same mitigation measures for Federal Species of Concern as Alternative A.	Mitigation measures include: A qualified biologist will conduct a preconstruction survey for bald eagle nests within one-mile of the project site. If an active nest is located within one mile of construction activities, the Tribe will comply with the recommendations identified in the USFWS (2007) *National Bald Eagle Management Guidelines and Conservation* to avoid disturbing nesting bald eagles and their young. If the active nest is visible from	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	Tribe's records. - If roosting bats are present, the biologist will recommend appropriate bat exclusion devices (i.e., light weight polypropylene netting (0.16-inch mesh), plastic sheeting, tube-type excluders, etc) that would be installed during a period in the day when the biologist determines that the roost site is not being occupied by the bat. -The appropriate bat exclusion devices will be installed prior to commencement of construction activities.			the project site, recommendations include maintaining a buffer of at least 660 feet between construction activities and the nest, restricting all clearing, external construction, and landscaping activities within 660 feet of the nest until the nesting season over the bald eagle nesting season in the Pacific Northwest is from January 1 through August 15), and maintaining and establishing landscape buffers. If the active nest is not visible from the project site recommendations include maintaining a buffer of at least 660 feet between construction activities and the nest and maintaining and establishing landscape buffers.	
After Mitigation	LS	LS	LS	LS	NA
Federally Listed Migratory Birds	The development of Alternative A would remove ornamental trees that provide potential nesting habitat for migratory bird species and other birds of prey protected under the MBTA. -PS	Adverse effects to federally listed migratory bird species and other birds of prey from Alternative B would be similar to those described for Alternative A. - PS	Adverse effects to federally listed migratory bird species and other birds of prey from Alternative C would be similar to those described for Alternative A. - PS	Adverse effects to federally listed migratory bird species and other birds of prey from Alternative D would be similar to those described for Alternative A. - PS	NE
Mitigation	If feasible, tree removal activities will occur outside of the nesting season (the nesting season extends from March 1 to September 15). If tree	Alternative B would have the same mitigation measures for federally listed migratory birds as Alternative A.	Alternative C would have the same mitigation measures for federally listed migratory birds as Alternative A.	Alternative D would have the same mitigation measures for federally listed migratory birds as Alternative A	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	removal activities are to be conducted during the nesting season, a preconstruction survey for nesting birds protected under the Migratory Bird Treaty Act (MBTA) within proposed disturbance areas will be conducted by a qualified biologist within 14 days prior to the anticipated date of the tree removal. If construction activities or tree removal activities are delayed or suspended for more than 14 days following the preconstruction survey, the project site shall be resurveyed. A copy of the preconstruction survey shall be submitted to the Tribe for their records. If an active nest is located within a tree anticipated for removal or is identified within 250 feet of construction activities, specific mitigation measures will be developed in consultation with the USFWS. At a minimum, these measures will include a 250-foot no-work buffer that will be maintained between the nest and construction activities until the USFWS approves of any other mitigation and any trees proposed for removal will be postponed until a qualified biologist has determined the young have fledged and are				

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	independent of the nest site.				
After Mitigation	LS	LS	LS	LS	NA
Critical Habitat	Alternative A would not directly affect critical habitat for marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), or bull trout (*Salvelinus confluentus*) Coastal-Puget Sound Distinct Population Segment (DPS) because no critical habitat has been designated within the March's Point Site. -LS	Adverse effects to critical habitat from the development proposed under Alternative B would be similar to those described for Alternative A. -LS	Adverse effects to critical habitat from the development proposed under Alternative C would be similar to those described for Alternative A. -LS	Adverse effects to critical habitat from the development proposed under Alternative D would be similar to those described for Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Critical and Essential Fish Habitat	The development of Alternative A would not directly affect Chinook salmon (*Oncorhynchus* (=*Salmo*) *tshawytscha*) Upper Columbia Spring-Run essential fish habitat (EFH), Snake River Fall-Run EFH, Snake River EFH, and Puget Sound EFH and bull trout EFH because none occurs within the March's Point Site. Stormwater from Alternative A to the manmade drainage ditch (DCH 1) that drains offsite could indirectly affect Chinook salmon EFH and bull trout EFH in Padilla Bay. -PS	Adverse effects to Chinook salmon EFH and bull trout EFH resulting from the development of Alternative B are similar to those discussed under Alternative A. -PS	Adverse effects to Chinook salmon EFH and bull trout EFH resulting from the development of Alternative C are similar to those discussed under Alternative A. -PS	Adverse effects to Chinook salmon EFH and bull trout EFH resulting from the development of Alternative D are similar to those discussed under Alternative A. -PS	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
Mitigation	The Tribe will comply with the BMPs and mitigation measures identified in Sections 2.2, 5.2.1, 5.2.2, and 5.2.10 to ensure that the project would not degrade water quality within designated bull trout critical habitat and EFH and Chinook salmon EFH.	Alternative B would have the same mitigation measures for critical and EFH as Alternative A.	Alternative C would have the same mitigation measures for critical and EFH as Alternative A.	Alternative D would have the same mitigation measures for critical and EFH as Alternative A.	
After Mitigation	LS	LS	LS	LS	NA
CULTURAL AND PALEONTOLOGICAL RESOURCES					
Cultural Resources	Development of Alternative A has the potential to cause direct adverse effects to unidentified subsurface archaeological resources. -PS	Alternative B would have similar potential impacts to cultural resources as Alternative A. -PS	Alternative C would have similar potential impacts to cultural resources as Alternative A. -PS	Development of Alternative D has the potential to cause direct adverse effects to subsurface archaeological resources. -PS	NE
Mitigation	In the event of any inadvertent discovery of prehistoric or historic archaeological resources or paleontological resources during construction-related earth-moving activities, all such finds shall be subject to Section 106 of the National Historic Preservation Act as amended (36 CFR 800). Procedures for post-review discoveries without prior planning pursuant to 36 CFR 800.13 shall be followed. All work within 50 feet of the find shall be halted until a professional archaeologist can assess the significance of the find. If any find is determined to be	Alternative B would have the same mitigation measures for cultural resources as Alternative A.	Alternative C would have the same mitigation measures for cultural resources as Alternative A.	Alternative D would have the same mitigation measures for cultural resources as Alternative A. An archaeological monitor and/or a tribal monitor shall be present to observe all ground disturbing activities during construction and to ensure implementation of all mitigation measures. The parking lot shall be reconfigured to avoid the previously identified on-site cultural resource area, or the resource shall be preserved in place by covering with protective fill material and then sealing the area with impervious parking lot material.	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	significant by the archaeologist, then representatives of the Tribe shall meet with the archaeologist to determine the appropriate course of action, including the development of a Treatment Plan, if necessary. All significant cultural materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional archaeologist according to current professional standards. If human remains are discovered during ground-disturbing activities on Tribal lands, the Tribal Official and BIA representative shall be contacted immediately. No further disturbance shall occur until the Tribal Official and BIA representative have made the necessary findings as to the origin and disposition. If the remains are determined to be of Native American origin, the BIA representative shall notify a Most Likely Descendant (MLD). The MLD is responsible for recommending the appropriate disposition of the remains and any grave goods.				
After Mitigation	LS	LS	LS	LS	NA
Paleontological	Development of Alternative A	Alternative B has the similar	Alternative C has the similar	Alternative D has the similar	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
Resources	has the potential for discovery of unrecorded, subsurface paleontological resources during heavy ground-disturbing activity. -PS	potential for discovery of unrecorded, subsurface paleontological resources as Alternative A. -PS	potential for discovery of unrecorded, subsurface paleontological resources as Alternative A. -PS	potential for discovery of unrecorded, subsurface paleontological resources as Alternative A. -PS	
Mitigation	In the event of accidental discovery of paleontological materials during ground-disturbing activities, a qualified paleontologist shall be contacted to evaluate the significance of the find and collect the materials for curation as appropriate.	Alternative B would have the same mitigation measures for paleontological resources as Alternative A.	Alternative C would have the same mitigation measures for paleontological resources as Alternative A.	Alternative D would have the same mitigation measures for paleontological resources as Alternative A.	NA
After Mitigation	LS	LS	LS	LS	NA
SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE					
Economic Output	Development of Alternative A would have a substantial beneficial impact on local and regional economies through the generation of direct, indirect, and induced output. -BE	Construction and operation of Alternative B would have impacts comparable to those described for Alternative A, but to a lesser scale since Alternative B is reduced in size and scope. -BE	Construction and operation of the Alternative C would generate significant economic output for a variety of businesses in Skagit County. Additionally, Alternative C would generate substantial tax revenues for state, County, and local governments. -BE	Construction and operation of Alternative D would be identical to Alternative A, with the exception of anticipated property tax impacts since Alternative D would be located on a different site. -BE	NE
Mitigation	NA	NA	NA	NA	NA
Employment	Construction and operation of Alternative A would generate substantial temporary and ongoing employment opportunities and wages in Skagit County. -BE	Construction and operation of Alternative B would generate substantial direct employment opportunities and wages, as well as indirect and induced employment opportunities and wages. -BE	Construction and operation of Alternative C would generate substantial temporary and ongoing employment opportunities and wages in Skagit County. -BE	Alternative D would have similar impacts on employment as Alternative A. - BE	NE
Mitigation	NA	NA	NA	NA	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
Housing	Alternative A would have a negligible impact on the regional housing stock, and would not be expected to stimulate regional housing development. -LS	Under Alternative B, impacts to housing would be comparable to, but smaller than Alternative A. -LS	Development of Alternative C would have comparable impacts on housing as Alternative A. -LS	Development of Alternative D would have similar impacts on housing as Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Problem and Pathological Gambling	Development of Alternative A has the potential to increase problem gambling. -LS	Development of Alternative B would result in impacts that are comparable though smaller than Alternative A, since Alternative B is reduced in size and scope. -LS	Alternative C would not result in impacts to pathological or problem gambling since a casino would not be developed under this alternative. -NE	Development of Alternative D would have similar impacts on problem and pathological gambling as Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Crime	Under Alternative A, criminal incidents would be expected to increase in the project area, particularly at the project site, as with any other development of this size. However, increased tax revenues resulting from Alternative A and local agreements between the Tribe, County, and City of Anacortes would fund expansion of law enforcement services required to accommodate planned growth. -LS	Development of Alternative B would result in impacts that are comparable though smaller than Alternative A, since Alternative B is reduced in size and scope. -LS	Social impacts to crime from Alternative C would be comparable to Alternative A. -LS	Development of Alternative D would have similar impacts on crime as Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Community Impacts	Development of Alternative A would create new demands on community services. -LS	Development of Alternative B would result in impacts that are comparable though smaller than Alternative A, since Alternative B is reduced in size	Development of Alternative C would have similar impacts on community services as Alternative A. -LS	Development of Alternative D would have similar impacts on community services as Alternative A. -LS	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
		and scope. -LS			
Mitigation	NA	NA	NA	NA	NA
Impacts to the Samish Indian Nation	Alternative A would benefit the Tribe by generating new income and creating employment opportunities. -BE	The effects to the Samish Indian Nation under Alternative B are comparable to those described for Alternative A, but to a lesser scale since Alternative B is reduced in size and scope. -BE	The effects to the Samish Indian Nation under Alternative C are comparable to those described for Alternative A, but to a lesser scale since a large portion of the revenue generated by the alternative would not be anticipated to be collected by the Tribe. -BE	Development of Alternative D would have similar impacts on the Samish Indian Nation as Alternative A. -BE	NE
Mitigation	NA	NA	NA	NA	NA
Environmental Justice: Minority and Low-Income Communities	Alternative A would not result in significant adverse effects to minority or low-income communities. -LS	Alternative B would not result in significant adverse effects to minority or low-income communities. -LS	Alternative C would not result in significant adverse effects to minority or low-income communities. -LS	Alternative D would have similar impacts on minority or low-income communities as Alternative A. -LS	
Mitigation	NA	NA	NA	NA	NA
TRANSPORTATION/CIRCULATION					
Construction-Related Traffic	Traffic impacts resulting from the construction of Alternative A would be temporary and intermittent in nature and would generally occur during off-peak traffic hours (5 AM to 6 AM and 10 AM to 4 PM). -LS	Alternative B would have less of an impact on traffic than Alternative A. -LS	Construction traffic would be temporary, significantly less than operational traffic, and would occur outside of the peak hour, significant adverse effects would not occur. -LS	Alternative D would result in traffic impacts similar to Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Operational Traffic	Development of Alternative A would have direct adverse effects on traffic and	Alternative B would similar effects on traffic and circulation as Alternative A. -S	Alternative C would have direct adverse effects on traffic and circulation. -S	Alternative D would have direct adverse effects on traffic and circulation. -S	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	circulation. -S				
Mitigation	The Tribe shall remove existing vegetation on the project property east of the Stevenson Road east access and shall fund 100% of the removal of vegetation east of the project site within the City's right-of-way on Stevenson Road, which would result in an acceptable sight distance to the east of the project site. The Tribe shall implement and pay a fair share contribution to the following mitigation measures for all alternatives, which would reduce effects associated with pedestrian and transit facilities: -Sidewalks and pathways shall be planned and constructed on the site to connect site development to transit stops and public path and bikeways to encourage and facilitate use of transit and non-motorized travel modes. -The Tribe shall implement the regional Commute Trips Reduction (CTR) programs including employee trip reductions programs, employee shuttles and other similar means of achieving commute trip reduction. Although the following	Alternative B would have the same mitigation measures for traffic as Alternative A, except that the voluntary widening of Thompson Road would not be done under Alternative B.	Alternative C would have the same mitigation measures for traffic as Alternative A. Additionally, the Tribe shall fund 100% of the cost to construct a separate northbound left- and right-turn lane (for a northbound left, through and right turn lane) with an optimized signal split, 90-second cycle length, and a northbound left-turn with a minimum of 200 feet with taper at Intersection #1-SR-20/Thompson Road. The Tribe shall fund 100% to construct a southbound left-turn at Intersection #2-Thompson Road/Summit Park Road and only provide a right-in, right-out and left-out along with through in/out movements along Summit Park Road and the proposed site access connection.	The Tribe shall fund 100% of the cost to close the intersection at SR-20 Spur/Fidalgo Bay Road and restripe Fidalgo Bay Road to make it a one-way northbound roadway from the SR-20 Spur to Weaverling Road. The Tribe shall fund 100% of the cost to construct a median refuge land on the south leg of R Avenue, which allows westbound left-turns from 30th Avenue at the intersection of 30th Street/R Avenue and provide directional signage to route traffic to 30th Street then R Avenue to SR-20.	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	mitigation measure is not warranted by unacceptable traffic conditions, the Tribe will voluntarily fund the following roadway improvement to improve traffic operations and reduce queuing impacts along March's Point for Alternative A: The Tribe shall fund 100 percent of the cost to construct a separate northbound left-turn/through lane (for a northbound left and through lane) with an optimized signal spit, 90-second cycle length, and a northbound left-turn with a minimum 135 feet with taper at the SR-20/Summit Park Road intersection.				
After Mitigation	LS	LS	LS	LS	NA
Transit, Bicycle, and Pedestrian Facilities	No significant adverse effects would occur to pedestrian facilities as a result of Alternative A. - LS	Transit, bicycle, and pedestrian facilities under Alternative B would be the same as Alternative A. -LS	Impacts to bicycle and pedestrian facilities under Alternative C would be similar to Alternative A. -LS	Impacts to bicycle and pedestrian facilities under Alternative D would be similar to Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
LAND USE					
Land Use Designations	Alternative A would not be consistent with local land use designations. However, once property is taken into federal trust, only federal and Tribal land use regulations are applicable on trust lands. The development of the gaming facility would be inconsistent	Land use plans for Alternative B are the same as for Alternative A. -LS	Alternative C could be consistent with local land use designations depending on the type of retail/commercial uses. -LS	Alternative D would not be consistent with local land use designations. Once property is taken into federal trust, only federal and Tribal land use regulations are applicable on trust lands. The development of the gaming facility would be inconsistent with the marine	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	with the heavy manufacturing zoning designation. The Tribe intends to adopt and enforce all ordinances, standards and requirements of the City until such time that the Tribe adopts its own standards of environmental protection, building code standards, fire code standards, and safety standards that meet or exceed City standards (**Appendix K**),- LS			commercial zoning designation. The Tribe intends to adopt and enforce all ordinances, standards and requirements of the City until such time that the Tribe adopts its own standards of environmental protection, building code standards, fire code standards, and safety standards that meet or exceed City standards (**Appendix K**), - LS	
Mitigation	NA	NA	NA	NA	NA
Coastal Zone Management Act	The March's Point site is not located within lands designated under the Coastal Zone Management Act (CZMA). Project BMPs and mitigation measures would be implemented to avoid or minimize the potential for impacts to the shoreline environment under Alternative A. -LS	Impacts under the Coastal Zone Management Act for Alternative B are the same as for Alternative A. -LS	Impacts under the Coastal Zone Management Act for Alternative C are the same as for Alternative A. -LS	The eastern portion of the Flats site is located within CZMA designated shoreline. The enforceable policies of the City Shoreline Master Program are reflected in the applicable coastal general plan and zoning designations. Alternative D is generally consistent with the purpose of the existing zoning designation for the Flats site and, with mitigation, is compatible with the surrounding land uses. -PS	
Mitigation	NA	NA	NA	In accordance with the Coastal Zone Management Act (CZMA), to the maximum extent practicable, development of the Flats site shall be consistent with the applicable enforceable policies of the State of Washington	

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
				Shoreline Management Act (SMA) and City of Anacortes Shoreline Master Program (SMP).	
After Mitigation	NA	NA	NA	LS	
Existing Land Uses	Alternative A would be compatible with surrounding land uses; therefore, any potential impacts to land use resulting from Alternative A would be less than significant. -LS	Alternative B would have the same effects on existing land uses as Alternative A. -LS	Alternative C would have similar impacts to existing land uses as Alternative A. -LS	Alternative D would be compatible with surrounding land uses; therefore, any potential impacts to land use resulting from Alternative D would be less than significant. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Agriculture	Alternative A would have minimal adverse effects on agriculture. -LS	Alternative B would have similar effects on agriculture as Alternative A, but to a lesser degree. -LS	Alternative C would have minimal adverse effects on agriculture. -LS	Alternative D would have minimal adverse effects on agriculture. NE	NE
Mitigation	NA	NA	NA	NA	NA
PUBLIC SERVICES					
Water Supply	No significant effects to the water supply distribution facilities would occur as a result of Alternative A. However, in the event of a water shortage or increase in demand on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to meet water consumption needs and insufficient fire flows in the case of an emergency. -PS	Alternative B would result in similar impacts to water supply as Alternative A, but to a lesser degree. -PS	Alternative C would result in similar impacts to water supply as Alternative A. -PS	No significant effects to the water supply distribution facilities would occur as a result of Alternative D. However, in the event of a water shortage or increase in demand on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to meet water consumption needs and insufficient fire flows in the case of an emergency. -PS	NE
Mitigation	The Tribe shall enter into an agreement with the City of	Alternative B would have the same mitigation measures for	Alternative C would have the same mitigation measures for	Alternative D would have the same mitigation measures for	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	Anacortes for municipal water service to the project site. Water conservation measures shall be implemented, including low flow fixtures and electronic dispensing devices in faucets.	water supply as Alternative A.	water supply as Alternative A.	water supply as Alternative A.	
After Mitigation	LS	LS	LS	LS	NA
Wastewater Service	No significant effects to the City wastewater collection and treatment facilities would occur as a result of Alternative A. However, in the event of an increase in demand on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to treat project wastewater flows. -PS	Alternative B would result in similar impacts to wastewater services as Alternative A, but to a lesser degree. -PS	Alternative C would result in similar impacts to wastewater services as Alternative A. -PS	No significant effects to the City wastewater conveyance or treatment facilities would occur as a result of Alternative D. However, in the event of an increase in wastewater flows on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to dispose of Alternative D wastewater flows. -PS	NE
Mitigation	The Tribe shall obtain a service agreement with the City of Anacortes to provide municipal sewer service.	Alternative B would have the same mitigation measures for wastewater service as Alternative A.	Alternative C would have the same mitigation measures for wastewater service as Alternative A.	Alternative D would have the same mitigation measures for wastewater service as Alternative A.	NA
After Mitigation	LS	LS	LS	LS	NA
Solid Waste Service	Construction and operation of Alternative A would not result in significant effects on solid waste services. - LS	Alternative B would result in similar impacts to wastewater services as Alternative A, but to a lesser degree. -LS	Alternative C would result in similar impacts to wastewater services as Alternative A, but to a lesser degree. -LS	Alternative D would result in a temporary increase in waste generation similar in composition and volume to Alternative A. -LS	NE
Mitigation	Construction waste shall be recycled to the fullest extent practicable. Environmentally preferable	Alternative B would have the same mitigation measures for wastewater service as	Alternative C would have the same mitigation measures for wastewater service as	Alternative D would have the same mitigation measures for wastewater service as	NA

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SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	materials shall be selected, to the extent practical, for construction of facilities. A solid waste management plan shall be adopted by the Tribe that addresses recycling and solid waste reduction on site. These measures shall include, but are not limited to, the installation of a trash compactor for cardboard and paper products, and annual waste stream analysis. Recycling bins shall be installed throughout the facilities for glass, cans and paper products. Decorative trash and recycling receptacles shall be places strategically throughout the site to encourage people not to litter. Security guards shall be trained to discourage littering on site.	Alternative A.	Alternative A.	Alternative A.	
After Mitigation	LS	LS	LS	LS	NA
Electricity, Natural Gas, and Tele-communication	Alternative A would result in a less than significant impact to electricity, natural gas, and telecommunications services and demand. -LS	Alternative B would result in similar impacts to electricity, natural gas, and tele-communication as Alternative A. -LS	Alternative C would result in similar impacts to electricity, natural gas, and tele-communication as Alternative A, but to a lesser degree due to shorter hours of operation. -LS	Alternative D would result in similar impacts to electricity, natural gas, and tele-communication as Alternative A. -LS	NE
Mitigation	The Tribe shall contact the Utility Notification Center, which provides a free "Dig Alert" to all excavators (e.g.,	Alternative B would have the same mitigation measures for electricity, natural gas, and telecommunication as	Alternative C would have the same mitigation measures for electricity, natural gas, and telecommunication as	Alternative C would have the same mitigation measures for electricity, natural gas, and telecommunication as	NA

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TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	contractors, homeowners, and others) in Washington. This call shall automatically notify all utility service providers at the excavator's work site. In response, the utility service providers shall mark or stake the horizontal path of underground facilities, provide information about the facilities, and/or give clearance to dig. Buildings shall be thoroughly insulated and weatherized so as to minimize energy loss due to heating and cooling waste. Doors and windows shall be regularly inspected for air leaks, and shall be caulked or weather-stripped as appropriate where leaks are identified. Storm windows and double-paned glass shall be used to the extent practicable, shall be maintained in good repair, and shall be weatherized. New windows shall meet energy-saving criteria set forth by the National Fenestration Rating Council (NFRC). Caulk and sealant shall be used as appropriate to prevent air leaks where plumbing, ducting, or electrical wiring penetrates through exterior walls. Exterior walls shall be sealed with appropriate sealants.	Alternative A.	Alternative A.	Alternative A.	

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TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
After Mitigation	LS	LS	LS	LS	NA
Public Health and Safety	A less than significant impact to public health and safety would occur under Alternative A due to the health and safety requirements within the Tribal-State gaming compacts. –LS	Alternative B would have the same effects on public health and safety as Alternative A. – LS	Alternative C would have potential public health and safety impacts due to the development of a retail center without the requirements provided in the Tribal-State gaming compact in regards to public health and safety. –PS	Alternative D would have the same effects on public health and safety as Alternative A. – LS	NE
Mitigation			-The Tribe shall adopt and comply with standards no less stringent than federal public health standards for food and beverage handling. -The Tribe shall develop the retail structure in accordance with the International Building Code. -The Tribe shall allow inspection of food and beverage services by appropriate health inspectors, during normal hours of operation, to assess compliance with applicable standards.		
After Mitigation	LS	LS	LS	LS	
Law Enforcement Services	Alternative A will have minimal direct adverse effects on law enforcement services. However, increased calls for law enforcement services would occur due to an	Alternative B would result in similar impacts to law enforcement services as Alternative A. -PS	Increased calls for City service under Alternative C would occur due to an increased number of employees and patrons anticipated on the March's Point Site during	Alternative D would result in similar impacts to law enforcement services as Alternative A. -PS	NE

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TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	increased number of employees and patrons anticipated on the March's Point Site during operation. PS		operation. -PS		
Mitigation	- In accordance with Item C-1 Section XIV, Public Health and Safety, of the Tribal-State Compact for Class III Gaming, the Tribe shall contribute to a fund for purposes of providing assistance to non-tribal service agencies. The Tribe shall provide on-site security for casino operations to reduce and prevent criminal and civil incidents. -All parking areas shall be well lit and monitored by parking staff, and/or roving security guards at all times during operation. This will aid in the prevention of auto theft and other similar criminal activity. -Areas surrounding the gaming facilities shall have "No Loitering" signs in place, be well lit and be patrolled regularly by roving security guards. This will aid in the prevention of illegal loitering and all crimes that relate to, or require, illegal loitering. -The Tribe shall provide traffic control with appropriate signage and the presence of peak-hour traffic control staff.	Alternative B would have the same mitigation measures for law enforcement services as Alternative A.	Alternative C would have the same mitigation measures for law enforcement services as Alternative A with the exception of the contributions to local agencies included within the Class III Gaming Compact.	Alternative D would have the same mitigation measures for law enforcement services as Alternative A.	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	This would aid in the prevention of off-site parking, which could create possible security issues. -The Tribe shall conduct background checks of all gaming employees and ensure that all employees meet licensure requirements established by the Indian Gaming Regulatory Act (IGRA) and the Tribe's Gaming Ordinance. -The Tribe shall adopt a Responsible Alcoholic Beverage Policy that shall include, but not be limited to, checking identification of patrons and refusing service to those who have had enough to drink. -Prior to operation the Tribe shall enter into agreements to reimburse the City of Anacortes Police Department and the Skagit County Sheriff's Office for reasonable direct and indirect costs incurred in conjunction with providing law enforcement services.				
After Mitigation	LS	LS	LS	LS	NA
Fire Protection and Emergency Medical Services	Alternative A would create additional risks from fires and add to the responsibilities of firefighting and emergency	Alternative B would result in similar impacts to fire protection and emergency medical services as Alternative	Alternative C would result in similar impacts to fire protection and emergency medical services as Alternative A. -PS	Alternative D would result in similar impacts to fire protection and emergency medical services as Alternative	NE

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TABLE ES-1
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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	services. -PS	A. -PS		A. -PS	
Mitigation	-Prior to operation the Tribe shall enter into a service agreement to reimburse the City of Anacortes Fire Department for additional demands caused by the operation of the facilities on trust property. The agreement shall address any required conditions and standards for emergency access and fire protection systems. -During construction, any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws. Staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak.	Alternative B would have the same mitigation measures for fire protection and emergency medical services as Alternative A.	Alternative C would have the same mitigation measures for fire protection and emergency medical services as Alternative A.	Alternative D would have the same mitigation measures for fire protection and emergency medical services as Alternative A.	NA
After Mitigation	LS	LS	LS	LS	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
NOISE					
Construction Noise	Alternative A would not result in a significant adverse effect to ambient noise levels in the project vicinity during any phase of construction. -LS	Alternative B would result in similar noise impacts as Alternative A, but to a lesser degree. -LS	Noise resulting from construction activities within the project site from Alternative C would be similar to Alternative A. -LS	Noise resulting from construction activities within the project site from Alternative D would be similar to Alternative A. -LS	NE
Mitigation	Construction using heavy equipment shall not be conducted between 10:00 p.m. and 7:00 a.m. Additionally, the following measures shall be used to minimize impacts from noise during work hours (7:00 a.m. to 10:00 p.m.): -All engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. -Loud stationary construction equipment shall be located as far away from residential receptor areas as feasible. -All diesel engine generator sets shall be provided with enclosures.	Alternative B would have the same mitigation measures for construction noise as Alternative A.	Alternative C would have the same mitigation measures for construction noise as Alternative A.	Alternative D would have the same mitigation measures for construction noise as Alternative A.	NA
After Mitigation	LS	LS	LS	LS	NA
Operational Noise	Operation of Alternative A would not result in significant adverse effects associated with the ambient noise environment. -LS	Operation of Alternative B would have similar impacts on the ambient noise environment as Alternative A. -LS	Operation of Alternative C would have similar impacts on the ambient noise environment as Alternative A. -LS	Operation of Alternative D would have similar impacts on the ambient noise environment as Alternative A. Proximity to sensitive receptors would result in significant unavoidable	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
				adverse effects. -S	
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	S	NA
HAZARDOUS MATERIALS					
Construction	There is a potential risk of inadvertent release of hazardous materials during the construction of Alternative A. -PS	The potential for releasing hazardous materials during the construction of Alternative B is similar to Alternative A. -PS	The potential for releasing hazardous materials during the construction of Alternative C is similar to Alternative A. -PS	The potential for releasing hazardous materials during the construction of Alternative D is similar to Alternative A. -PS	NE
Mitigation	Hazardous materials must be stored in appropriate and approved containers in accordance with applicable regulatory agency protocols. Potentially hazardous materials, including fuels, shall be stored away from drainages and secondary containment shall be provided for all hazardous materials stored during construction and operation. Vehicles and equipment used during construction shall be provided proper and timely maintenance to reduce potential for mechanical breakdowns leading to a spill of materials into water bodies. Fuel, oil, and hydraulic fluids shall be transferred directly	Alternative B would have the same mitigation measures for construction noise as Alternative A.	Alternative C would have the same mitigation measures for construction noise as Alternative A.	Alternative D would have the same mitigation measures for construction noise as Alternative A.	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	from a service truck to construction equipment tanks and shall not otherwise be stored onsite. Paint, thinner, solvents, cleaners, sealants, and lubricants used during construction shall be stored in a locked utility building, handled per the manufacturers; directions, and replenished as needed. In the event that contaminated soil and/or groundwater are encountered during construction related earth-moving activities, all work shall be halted until a professional hazardous materials specialist or a qualified environmental professional can assess the extent of contamination. If contamination is determined to be significant, representatives of the Tribe shall consult with the EPA to determine the appropriate course of action, which may include the development of a Sampling Plan and Remediation Plan.				
After Mitigation	LS	LS	LS	LS	NA
Operation	The amount and types of hazardous materials that would be stored, used, and generated during the operation of Alternative A could have a potentially significant impact to the environment and public.	The potential to release hazardous materials during the operation of Alternative B is similar to Alternative A. -PS	The potential to release hazardous materials during the operation of Alternative C is similar to Alternative A. - PS	The potential to release hazardous materials during the operation of Alternative D is similar to Alternative A. - PS	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	-PS				
Mitigation	Mitigation measures listed under Construction also apply to Operation.	Mitigation measures listed under Construction of Alternative A also apply to the Operation of Alternative B.	Mitigation measures listed under Construction of Alternative A also apply to the Operation of Alternative C.	Mitigation measures listed under Construction of Alternative A also apply to the Operation of Alternative D.	NA
After Mitigation	LS	LS	LS	LS	NA
AESTHETICS					
Effects on Viewsheds	Alternative A would have a minimal effect on visual resources. -PS	Alternative B would have similar effects on visual resources as Alternative A. -PS	Effects to viewsheds surrounding the project would be substantially similar to those discussed under Alternatives A and B, as the main visual elements would be very similar. -PS	Alternative D would significantly impact viewsheds at the Weaverling Spit Site by transforming open views to commercial development. -PS	NE
Mitigation	Mitigation measures listed under Shadow, Light, and Glare also apply to Viewsheds.	Mitigation measures listed under Shadow, Light, and Glare also apply to Viewsheds.	Mitigation measures listed under Shadow, Light, and Glare also apply to Viewsheds.	Mitigation measures listed under Shadow, Light, and Glare also apply to Viewsheds.	NA
After Mitigation	LS	LS	LS	LS	
Shadow, Light, and Glare	Alternative A could potentially have direct adverse effects on shadow, light, and glare. -PS	Alternative B would have similar effects on shadow, light, and glare as Alternative A. -PS	Alternative C would have similar effects on shadow and glare as Alternative A, and would have fewer effects on lights than Alternative A.	Alternative D would have similar effects on shadow and glare as Alternative A, and would have fewer effects on lights than Alternative A.	NE
Mitigation	Placement of lights on buildings shall be designed so as not to cast light or glare offsite. Shielding, such as with a horizontal shroud, shall be used for all outdoor lighting so as to ensure it is downcast. Timers shall be utilized so as to limit lighting to necessary	Alternative B would have the same mitigation measures for shadow, light, and glare as Alternative A.	Alternative C would have the same mitigation measures for shadow, light, and glare as Alternative A.	Alternative D would have the same mitigation measures for shadow, light, and glare as Alternative A.	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	times. All exterior glass shall be non-reflective low-glare glass. Screening features and natural elements should be integrated into the landscaping design of the alternatives to screen the view of the facilities from existing residences directly adjacent to the project site.				
After Mitigation	LS	LS	LS	LS	NA
Community Character	The existing and proposed land uses for Alternative A indicate that project related impacts to community character would be less than significant. -LS	Effects to community character under Alternative B would be similar to those experienced under Alternative A. -LS	A retail facility at the March's Point Site under Alternative C would have a less than significant effect on community character. -LS	Alternative D is consistent with zoning plans for the Weaverling Spit site and therefore would result in less than significant impacts to community character. -LS	NE
Mitigation	NA	NA	NA	NA	NA
CUMULATIVE EFFECTS					
Geology and Soils	With implementation of measures identified in the **Geology and Soils** section, above, Alternative A would result in less than significant cumulative effects on land resources.-LS	With implementation of measures identified in the **Geology and Soils** section, above, Alternative B would result in less than significant cumulative effects on land resources.-LS	With implementation of measures identified in the **Geology and Soils** section, above, Alternative C would result in less than significant cumulative effects on land resources.-LS	With implementation of measures identified in the **Geology and Soils** section, above, Alternative D would result in less than significant cumulative effects on land resources.-LS	NE
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	LS	NE
Water Resources	With implementation of measures identified in the **Water Resources** section, above, Alternative A would result in less than significant cumulative effects on water	With implementation of measures identified in the **Water Resources** section, above, Alternative B would result in less than significant cumulative effects on water	With implementation of measures identified in the **Water Resources** section, above, Alternative C would result in less than significant cumulative effects on water	With implementation of measures identified in the **Water Resources** section, above, Alternative D would result in less than significant cumulative effects on water	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	resources.-LS	resources.-LS	resources.-LS	resources.-LS	
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	LS	NA
Air Quality	Alternative A would not contribute to a significant cumulative effect to air quality and no mitigation is required. -LS	Alternative B would not contribute to a significant cumulative effect to air quality. -LS	Alternative C would not contribute to a significant cumulative effect to air quality. -LS	Alternative D would not contribute to a significant cumulative effect to air quality. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Carbon Monoxide Hot Spot Analysis	No significant cumulative impacts would occur as a result of Alternative A and no further analysis is needed. -LS	No significant cumulative impacts would occur as a result of Alternative B and no further analysis is needed. -LS	No significant cumulative impacts would occur as a result of Alternative C and no further analysis is needed. -LS	No significant cumulative impacts would occur as a result of Alternative C and no further analysis is needed. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Climate Change	Alternative A would increase greenhouse gas emissions related to construction, area sources, and indirect sources related to mobile sources, electricity, wastewater processing, and water transport. -S	Alternative B would have similar impacts related to climate change as Alternative A but to a lesser degree. -S	Alternative C would have similar impacts related to climate change as Alternative A but to a lesser degree. -S	Alternative D would have similar impacts related to climate change as Alternative A but to a lesser degree. -S	NE
Mitigation	Implementation of measures identified in the **Air Quality** section, above, also apply to cumulative effects on climate change.	Implementation of measures identified in the **Air Quality** section, above, also apply to cumulative effects on climate change.	Implementation of measures identified in the **Air Quality** section, above, also apply to cumulative effects on climate change.	Implementation of measures identified in the **Air Quality** section, above, also apply to cumulative effects on climate change.	NA
After Mitigation	LS	LS	LS	LS	NA
Biological Resources	With implementation of measures identified in the **Biological Resources** section, above, Alternative A would	Alternative B would result in similar less than significant cumulative effects on biological resources as Alternative A. -	Cumulative effects associated with biological resources resulting from Alternative C would be similar to Alternative	Cumulative effects associated with biological resources resulting from Alternative D would be similar to Alternative	

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	result in less than significant cumulative effects on biological resources.-LS	LTS	A. -LTS	A. -LTS	
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	LS	NA
Cultural Resources	With implementation of measures identified in the **Cultural Resources** section, above, Alternative A would result in less than significant cumulative effects on cultural resources.-LS	With implementation of measures identified in the **Cultural Resources** section, above, Alternative B would result in less than significant cumulative effects on cultural resources.-LS	With implementation of measures identified in the **Cultural Resources** section, above, Alternative C would result in less than significant cumulative effects on cultural resources.-LS	With implementation of measures identified in the **Cultural Resources** section, above, Alternative D would result in less than significant cumulative effects on cultural resources.-LS	NE
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	LS	NA
Socioeconomic Conditions	Alternative A would not contribute to a significant cumulative adverse effect to socioeconomic conditions. -LS	Alternative B would not contribute to a significant cumulative adverse effect to socioeconomic conditions. -LS	Alternative C would not contribute to a significant cumulative adverse effect to socioeconomic conditions. -LS	Alternative D would not contribute to a significant cumulative adverse effect to socioeconomic conditions. -LS	NE
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	NA	NA
Transportation	With implementation of measures identified in the **Transportation** section, above, Alternative A would result in less than significant cumulative effects on transportation, circulation, transit, and pedestrian activities-LS	With implementation of measures identified in the **Transportation** section, above, Alternative B would result in less than significant cumulative effects on transportation, circulation, transit, and pedestrian activities.-LS	With implementation of measures identified in the **Transportation** section, above, Alternative C would result in less than significant cumulative effects on transportation, circulation, transit, and pedestrian activities.-LS	With implementation of measures identified in the **Transportation** section, above, Alternative D would result in less than significant cumulative effects on transportation, circulation, transit, and pedestrian activities.-LS	NE

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	LS	NA
Land Use	Cumulative land use impacts within the City and County are expected to be minimal because of the general planning obligations under the State Growth Management Act (GMA). -LS	Cumulative impacts to land use under Alternative B are similar to those described for Alternative A due to the similar size and scope of development on the March's Point Site. -LS	Cumulative impacts to land use under Alternative C are similar to those described for Alternatives A and B. -LS	Implementation of Alternative D would result in minimal adverse cumulative effects to land use. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Agriculture	Alternative A would not result in adverse cumulative effects to agriculture. -LS	Alternative B would have similar cumulative effects to agriculture as Alternative A. -LS	Alternative C would have similar cumulative effects to agriculture as Alternative A. -LS	Alternative D would result in minimal adverse cumulative effects to agriculture. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Public Services					
Water Supply	Alternative A would not result in adverse cumulative effects to water supply services. -LS	Alternative B would not result in cumulative effects to water supply services. -LS	Alternative C would not result in similar cumulative effects to water supply services. -LS	Alternative D would not result in adverse cumulative effects to water supply services. -LS	NE
Mitigation	Implementation of measures identified in the **Public Services** section, above, also apply to cumulative effects on water supply.	Implementation of measures identified in the **Public Services** section, above, also apply to cumulative effects on water supply.	Implementation of measures identified in the **Public Services** section, above, also apply to cumulative effects on water supply.	Implementation of measures identified in the **Public Services** section, above, also apply to cumulative effects on water supply.	NA
After Mitigation	LS	LS	LS	LS	NA
Wastewater Service	Alternative A would not result in cumulative significant effects to the City's wastewater collection and treatment system. -LS	Alternative B would result in similar cumulative effects to wastewater services as Alternative A. -LS	Alternative C would result in similar cumulative effects to wastewater services as Alternative A. -LS	Alternative D would result in minimal adverse cumulative effects to wastewater services. -LS	NE
Mitigation	Implementation of measures identified in the **Public Services** section, above, also	Implementation of measures identified in the **Public Services** section, above, also	Implementation of measures identified in the **Public Services** section, above, also	Implementation of measures identified in the **Public Services** section, above, also	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	apply to cumulative effects on wastewater services.	apply to cumulative effects on wastewater services.	apply to cumulative effects on wastewater services.	apply to cumulative effects on wastewater services.	
After Mitigation	LS	LS	LS	LS	NA
Solid Waste	Alternative A would not result in significant cumulative effects to solid waste services in the geographic area of the cumulative effects zone. -LS	Alternative B would result in similar cumulative effects to solid waste services as Alternative A. -LS	Alternative C would result in similar cumulative effects to solid waste services as Alternative A. -LS	Alternative D and potential cumulative projects in the vicinity of the Weaverling Spit site would not create cumulatively significant impacts to solid waste services. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Electricity, Natural Gas, and Tele-communication	Alternative A would result in less than significant cumulative effects. -LS	Alternative B would result in similar cumulative effects to energy services as Alternative A. -LS	Alternative C would result in similar cumulative effects to energy services as Alternative A. -LS	Alternative D would result in minimal adverse cumulative effects to energy services. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Law Enforcement Services	Alternative A would result in minimal adverse cumulative effects to law enforcement services. -LS	Alternative B would result in similar cumulative effects to law enforcement services as Alternative A. -LS	Alternative C would result in similar cumulative effects to law enforcement services as Alternative A. -LS	Alternative D would not create incremental significant effects when combined with the cumulative projects. -LS	NE
Mitigation	Implementation of measures identified in the **Public Services** section, above, also apply to cumulative effects on wastewater services.	Implementation of measures identified in the **Public Services** section, above, also apply to cumulative effects on wastewater services.	Implementation of measures identified in the **Public Services** section, above, also apply to cumulative effects on wastewater services.	Implementation of measures identified in the **Public Services** section, above, also apply to cumulative effects on wastewater services.	NA
After Mitigation	LS	LS	LS	LS	NA
Fire Protection and Emergency Medical Services	Alternative A would not create incremental significant effects when combined with the cumulative projects. -LS	Alternative B would result in similar cumulative effects to fire protection and emergency services as Alternative A. -LS	Alternative C would result in similar cumulative effects to fire protection and emergency services as Alternative A. -LS	Alternative D would not create incremental significant effects when combined with the cumulative projects. -LS	NE
Mitigation	Implementation of measures identified in the **Public Services** section, above, also	Implementation of measures identified in the **Public Services** section, above, also	Implementation of measures identified in the **Public Services** section, above, also	Implementation of measures identified in the **Public Services** section, above, also	NA

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RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	apply to cumulative effects on fire protection and emergency services.	apply to cumulative effects on fire protection and emergency services.	apply to cumulative effects on fire protection and emergency services.	apply to cumulative effects on fire protection and emergency services.	
After Mitigation	LS	LS	LS	LS	NA
Noise	Alternative A would not result in adverse cumulative effects to the ambient noise environment. -LS	Cumulative noise impacts from construction and operation of Alternative B are similar to those described for Alternative A. -LS	Cumulative noise impacts from construction and operation of Alternative C are similar to those described for Alternative A. -LS	Alternative D would result in significant and unavoidable adverse effect associated with traffic noise levels for sensitive noise receptors during the affected environment and the cumulative scenario. -S	NE
Mitigation	Implementation of measures identified in the **Noise** section, above, also apply to cumulative effects on Noise.	Implementation of measures identified in the **Noise** section, above, also apply to cumulative effects on Noise.	Implementation of measures identified in the **Noise** section, above, also apply to cumulative effects on Noise.	Implementation of measures identified in the **Noise** section, above, also apply to cumulative effects on Noise.	NA
After Mitigation	LS	LS	LS	S	NA
Hazardous Materials	Alternative A would not result in adverse cumulative effects to hazardous materials.- LS	Cumulative effects associated with hazardous materials resulting from Alternative B would be similar to Alternative A. -LS	Cumulative effects associated with hazardous materials resulting from Alternative C would be similar to Alternative A. -LS	Alternative D would not result in adverse cumulative effects to hazardous materials. -LS	NE
Mitigation	Implementation of measures identified in the **Hazardous Materials** section, above, also apply to cumulative effects on hazardous materials.	Implementation of measures identified in the **Hazardous Materials** section, above, also apply to cumulative effects on hazardous materials.	Implementation of measures identified in the **Hazardous Materials** section, above, also apply to cumulative effects on hazardous materials.	Implementation of measures identified in the **Hazardous Materials** section, above, also apply to cumulative effects on hazardous materials.	NA
After Mitigation	LS	LS	LS	LS	NA
Aesthetics	Alternative A would not result in adverse cumulative effects to aesthetics. -LS	Cumulative impacts to visual resources are similar to those described for Alternative A. -LS	Cumulative impacts to visual resources are similar to those described for Alternative A. -LS	Alternative D would not result in adverse cumulative effects to aesthetics. -LS	NE
Mitigation	Implementation of measures identified in the **Aesthetics**	Implementation of measures identified in the **Aesthetics**	Implementation of measures identified in the **Aesthetics**	Implementation of measures identified in the **Aesthetics**	NA

Levels of significance are provided before and after mitigation for each effect.

Significant = S Potentially significant=PS Less than significant = LS Beneficial effect = BE No effect = NE Not applicable = N/A

TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	section, above, also apply to cumulative effects on aesthetics.	section, above, also apply to cumulative effects on aesthetics.	section, above, also apply to cumulative effects on aesthetics.	section, above, also apply to cumulative effects on aesthetics.	
After Mitigation	LS	LS	LS	LS	NA
INDIRECT EFFECTS					
Geology and Soils	With standard construction practices and specifications required by the jurisdictional agency and the General Construction National Pollutant Discharge Elimination System (NPDES) permit program, there would be no adverse effects to geology and soils as a result of off-site traffic mitigation under Alternative A. –LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to water resources. -NE	Indirect effects to geology and soils would be similar to Alternative A. -LS	Indirect effects to geology and soils would be similar to Alternative A. -LS	NE
Mitigation	Compliance with legal requirements and industry standards.	NA	Compliance with legal requirements and industry standards.	Compliance with legal requirements and industry standards.	NA
After Mitigation	LS	NE	LS	LS	NA
Water Resources	With standard construction practices and specifications required by the jurisdictional agency and, if warranted, the General Construction NPDES permit program, there would be no adverse effects to water quality as a result of off-site traffic mitigation under Alternative A. –LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to water resources. –NE	Indirect effects to water resources under Alternative C would be similar to Alternative A. -LS	Indirect effects to water resources under Alternative D would be similar to Alternative A. -LS	NE
Mitigation	Compliance with legal requirements and industry standards.	NA	Compliance with legal requirements and industry standards.	Compliance with legal requirements and industry standards.	NA

Levels of significance are provided before and after mitigation for each effect.

Significant = S Potentially significant=PS Less than significant = LS Beneficial effect = BE No effect = NE Not applicable = N/A

TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
After Mitigation	LS	NE	LS	NA	NA
Air Quality	As traffic improvements would take place within an area in attainment for all criteria air pollutants, corresponding air effects would not be significant. -LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to air quality. –NE	Indirect effects to air quality would be similar to Alternative A. -LS	Indirect effects to air quality would be similar to Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Biological Resources	There would be no indirect effects to biological resources as a result of off-site traffic mitigation under Alternative A. -LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to biological resources. –NE	Indirect effects to biological resources would be similar to Alternative A. -LS	Indirect effects to biological resources would be similar to Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	NA	NA
Cultural Resources	Implementation of Alternative A would not result in significant adverse indirect effects regarding cultural resources. -LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to cultural resources. –NE	Indirect effects regarding cultural resources would be similar to Alternative A. -LS	No significant impacts to cultural resources would result from off-site traffic improvements under Alternative D. -LS	NE
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	LS	LS	NA
Socioeconomic Conditions	There would be no indirect effects to socioeconomic conditions as a result of off-site traffic mitigation under Alternative A. -LS	Indirect effects regarding socioeconomic conditions would be similar to Alternative A. -LS	Indirect effects regarding socioeconomic conditions would be similar to Alternative A. -LS	Indirect effects regarding socioeconomic conditions would be similar to Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Land Use	There would be no indirect	There would be no off-site	Indirect effects to land use	Indirect effects to land use	NE

Levels of significance are provided before and after mitigation for each effect.

Significant = S Potentially significant=PS Less than significant = LS Beneficial effect = BE No effect = NE Not applicable = N/A

TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
	effects to land use as a result of off-site traffic mitigation under Alternative A. -LS	traffic mitigation under Alternative B; and therefore, no indirect effects to land use. -NE	would be similar to Alternative A. -LS	would be similar to Alternative A. -LS	
Mitigation	NA	NA	NA	NA	NA
Public Services	There would be no indirect effects to public services as a result of off-site traffic mitigation under Alternative A. -LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to public services. -NE	Indirect effects to public services would be similar to Alternative A. -LS	Indirect effects to public services would be similar to Alternative A. -LS	NA
Mitigation	NA	NA	NA	NA	NA
Noise	No significant indirect noise impacts are expected to occur as a result of off-site traffic mitigation under Alternative A. -LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to noise. -NE	Indirect impacts related to noise would be similar to Alternative A. -LS	Indirect impacts related to noise would be similar to Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
Hazardous Materials	Potential indirect hazardous materials impacts from the construction of off-site roadway improvements are considered to be less than significant under Alternative A. -LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to hazardous materials. –NE	Potential indirect impacts relating to hazardous materials would be similar to Alternative A. -LS	Potential indirect impacts relating to hazardous materials would be similar to Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA
After Mitigation	LS	LS	NA	NA	NA
Aesthetics	No significant indirect effects to aesthetics or community character are expected to occur as a result of off-site traffic mitigation under Alternative A. -LS	There would be no off-site traffic mitigation under Alternative B; and therefore, no indirect effects to aesthetics. –NE	Indirect effects to aesthetics or community character would be similar to Alternative A. -LS	Indirect effects to aesthetics or community character would be similar to Alternative A. -LS	NE

Levels of significance are provided before and after mitigation for each effect.

Significant = S Potentially significant=PS Less than significant = LS Beneficial effect = BE No effect = NE Not applicable = N/A

TABLE ES-1
SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	NO ACTION
Mitigation	NA	NA	NA	NA	NA
GROWTH-INDUCING EFFECTS					
Growth-Inducing Effects	The minimal amount of commercial growth that may be induced by Alternative A would not result in significant adverse environmental effects. -LS	The potential growth inducement of Alternative B would be similar to Alternative A. -LS	The potential growth inducement of Alternative B would be similar to Alternative A. -LS	The potential growth inducement of Alternative B would be similar to Alternative A. -LS	NE
Mitigation	NA	NA	NA	NA	NA

Levels of significance are provided before and after mitigation for each effect.

Significant = S Potentially significant=PS Less than significant = LS Beneficial effect = BE No effect = NE Not applicable = N/A

SECTION 1.0

PURPOSE AND NEED

SECTION 1.0
PURPOSE AND NEED

1.1 SUMMARY OF THE PROPOSED ACTION AND ALTERNATIVES

This Draft Environmental Impact Statement (DEIS) has been prepared pursuant to the National Environmental Policy Act (NEPA) to address the potential environmental impacts of proposed federal actions (taking approximately 11.41 acres into federal trust status for the Tribe for gaming and other tribal government purposes, and issuing a reservation proclamation) intended to improve the long-term economic vitality and self-governance of the Samish Indian Nation ("Tribe"). These federal actions are referred to collectively in this document as the "Proposed Action."

Section 5 of the Indian Reorganization Act (IRA) of 1934, 25 U.S.C § 465, provides the Secretary of the Interior (Secretary) with general authority to acquire land in trust status for Indian tribes in furtherance of the statue's broad goals of promoting Indian self-government and economic self-sufficiency. The regulations at 25 C.F.R. Part 151 implement the Secretary's trust acquisition authority found in section 5 of the IRA, 25 U.S.C. § 467, authorizes the Secretary to proclaim trust land to be an Indian reservation, and is implemented pursuant to the BIA's reservation proclamation guidelines.

The Indian Gaming Regulatory Act (IGRA) was enacted in 1988 to regulate the conduct of Indian gaming and to promote tribal economic development, self-sufficiency and strong tribal governments. The IGRA generally prohibits gaming on lands acquired in trust after 1988, unless certain exceptions found in Section 20 of IGRA, 25 U.S.C. § 2719, are met. Here, the relevant exception is the "initial reservation" exception that allows gaming on land acquired in trust after 1988 if the lands are taken in trust as part of "the initial reservation of an Indian tribe acknowledged by the Secretary under the federal acknowledgment process, 25 U.S.C. § 2719 (b)(1)(B)(ii)." The Section 20 exceptions are implemented through regulations found in 25 C.F.R. Part 292.

Section 292.6(c) requires that the particular land at issue must be proclaimed to be a reservation pursuant to Section 7of the IRA, and it must be the first proclaimed reservation of the Tribe following its federal acknowledgment.

Section 20 does not provide the Secretary with authority to acquire land in trust; rather, it authorizes gaming on lands once those lands are acquired into trust. Because the Tribe has requested that land be taken in trust for gaming as its initial reservation, it must satisfy the initial reservation exception before it may game on the parcel.

The DEIS has been completed in accordance with the applicable requirements of NEPA and its implementing regulations and guidance. NEPA requires the BIA to review and analyze the environmental impacts associated with the Proposed Action. This document provides a detailed description of the development alternatives and an analysis of the potential consequences that may result from the Proposed Action. The No Action alternative is also addressed as required under NEPA. This document discusses alternatives, avoidance of effects, and mitigation measures.

For the purpose of this DEIS, the BIA serves as the Lead Agency for compliance with NEPA, with the City of Anacortes ("City") and the Tribe serving as a Cooperating Agencies. The Washington Department of Transportation ("WSDOT") declined an invitation to serve as a cooperating agency. Letters from these cooperating agencies are included in **Appendix A**.

1.1.1 SUMMARY OF THE PROPOSED PROJECT

The Proposed Action analyzed in this EIS involves improving the economic vitality of the Tribe and strengthening the Tribe by placing approximately 11.41 acres into Federal trust for the Tribal Government and issuing a reservation proclamation. The foreseeable consequence of the Proposed Action will be the development and operation of a casino facility and associated surface parking (collectively the "Proposed Project") by the Tribe.

1.1.2 PROPOSED PROJECT LOCATION

The Proposed Project site (March's Point site) is located in the City of Anacortes, Skagit County Washington (**Figures 1-1** and **1-2**). The approximately 11.41-acre site encompasses three contiguous tax lots southeast of the intersection of State Route 20 (SR-20) and Thompson Road. The three parcels, identified in **Table 1-1**, are located within Sections 4 of Township 34 North, Range 2 East, Willamette Base Meridian.

TABLE 1-1
ASSESSOR'S PARCEL NUMBERS – MARCH'S POINT SITE

Reference #	APN	Size (acres)
1	P19917	2.69
2	P19919	4.83
3	P19920	3.88
Total		**11.41**

Source: Skagit County Department of Assessment and GIS, 2011.

1.2 PURPOSE AND NEED

The Tribe wishes to create a Tribal land base (initial reservation) for its members and establish a location where it can conduct the economic development necessary to fund Tribal Government services and provide employment opportunities for its members. The Proposed Action serves the needs of the Tribe by promoting meaningful opportunities for economic development and self-sufficiency of the Tribe and its members.

The Tribe, which was federally recognized in April 1996, has an enrollment of 3,544 people, with the majority (66%) between the ages of 18 and 65 (Samish Indian Nation, 2010). Of the total workforce of 2,349, approximately 20% are unemployed (Samish Indian Nation, 2010).

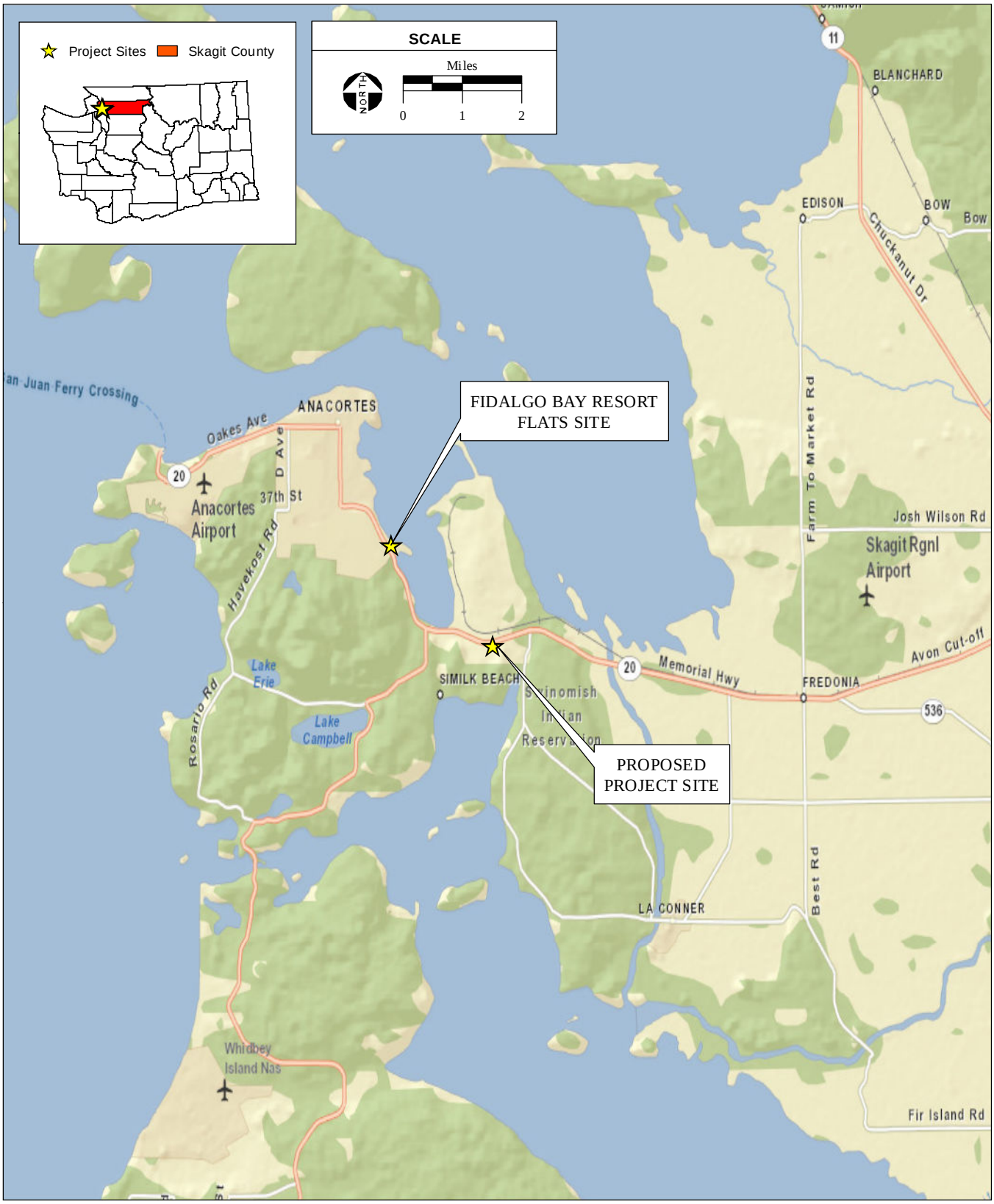
The casino facility will be operated pursuant to the requirements of Federal law and a Tribal/State Compact. The casino facility will provide the Tribal Government with a long-term, sustainable revenue base from which to fund its government operations and Tribal programs that will decrease Tribal members' dependence on Federal or state funding.

The Tribal Government plans to use revenues to fund a variety of social, housing, governmental, administrative, educational, health and welfare services to improve the quality of life of Tribal members, and to provide capital for other economic development and investment opportunities. The Tribe intends to manage and operate the casino in order to maximize the economic benefits and employment opportunities for Tribal members. The casino would also employ many local non-Tribal residents. Casino operations will also promote the purchase of goods and services, which may be provided by nearby communities. Additionally, funds from the Proposed Project will be used to assist local governmental operations, programs and services, and charitable organizations, including local educational institutions.

In summary, revenues from the Proposed Project will fund the operations of the Tribal Government and its social, housing, educational and health and welfare programs, including elder housing. Operation of those Tribal programs and the Tribe's efforts to achieve self-determination and self-governance will be enhanced.

1.3 OVERVIEW OF THE NEPA ENVIRONMENTAL REVIEW PROCESS

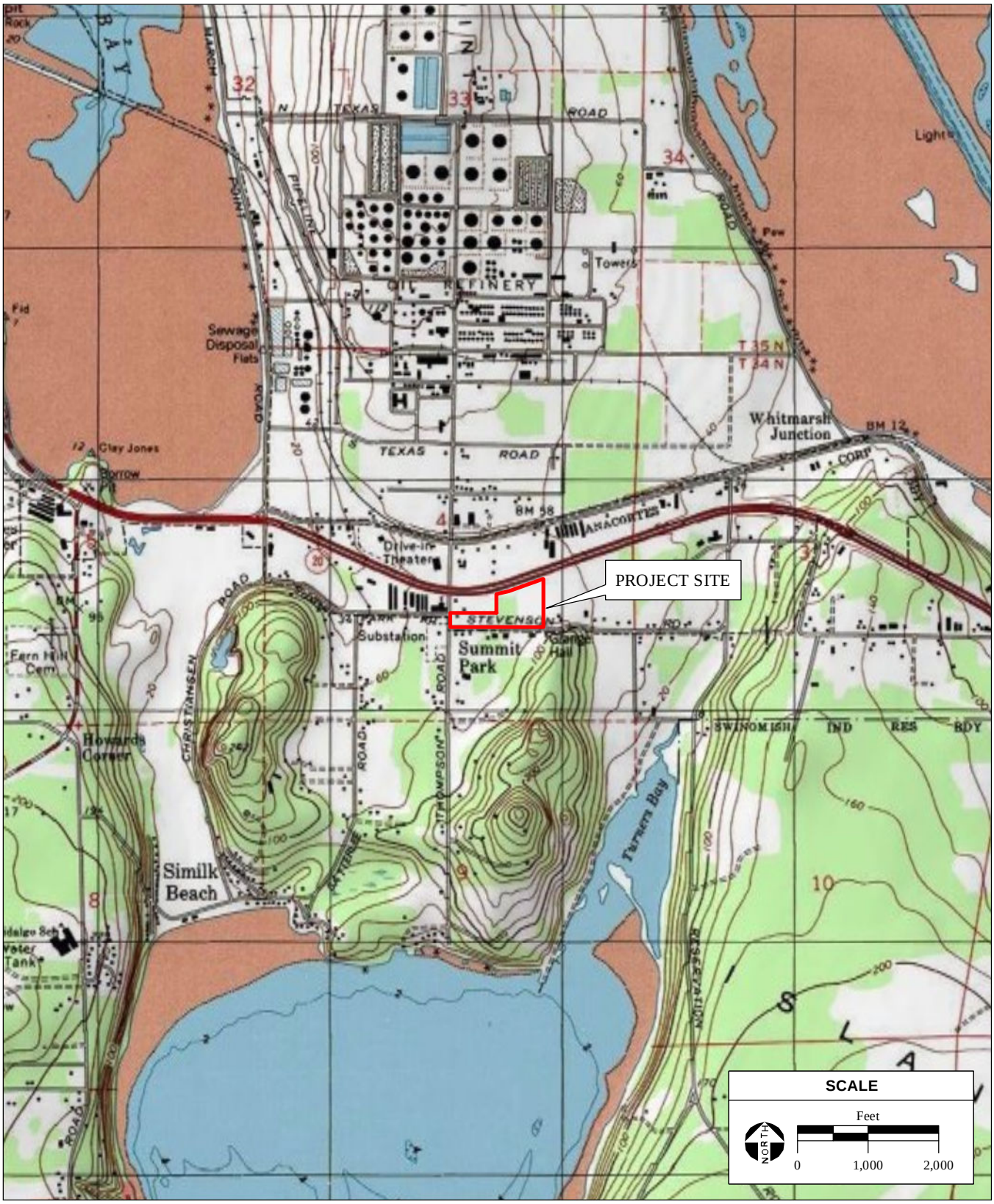
NEPA requires that an EIS be prepared for major Federal actions that could significantly affect the quality of the human environment. This document has been completed in accordance with applicable requirements, including those set out in NEPA (42 U.S.C. 4321 et seq.); the Council on Environmental



SOURCE: ESRI Server Data, 2009; AES, 2013

Figure 1-1

Regional Location - Proposed & Alternative Project Sites



SOURCE: "Anacortes North, WA" T34N R2E, Section 4, Williamette Baseline & Meridian; Group West, 2009; AES, 2013

Figure 1-2
Site and Vicinity - March's Point Site

Quality (CEQ) Regulations for Implementing NEPA (43 CFR Part 46 and 40 CFR Sections 1500 – 1508); and the BIA's NEPA handbook (59 IAM 3-H).

The BIA published a Notice of Intent (NOI) in the *Federal Register* on August 11, 2011, describing the Proposed Action and Alternatives, and announcing the BIA's intent to prepare an EIS (**Appendix B**). During the NOI comment period, the BIA identified six potential Cooperating Agencies: United States Environmental Protection Agency (USEPA), Washington Department of Ecology (Ecology), WSDOT, the Tribe, Skagit County (County), and the City (**Appendix A**). As of this writing, the City and the Tribe have accepted the invitation to become a cooperating agency and WSDOT has declined. No other agencies have responded to the invitation.

The BIA issued the Scoping Report in October 2011. Refer to **Section 1.4** for further details on the Scoping Report and scoping process.

This DEIS will be distributed to Federal, Tribal, State, and local agencies and other interested parties for a 45-day review and comment period. The review and comment period begins after the EPA publishes the Notice of Availability (NOA) in the *Federal Register*. The NOA provides the time and location of public hearing(s) to receive comments from the public concerning this Draft EIS. Substantive comments received during the comment period, including those submitted or recorded at public hearing(s), will be addressed in the Final EIS.

1.4 SCOPING

The CEQ Regulations for Implementing NEPA require a "scoping" process, to determine and narrow the range of issues to be addressed during the environmental review of a Proposed Action (40 CFR Section 1501.7). The scoping process entails a determination of the issues that will be addressed in the EIS by soliciting comments from agencies, organizations and individuals. All issues that were raised during the NOI comment period were considered during the scoping process. The issues that were raised during the NOI comment period have been summarized within the *Samish Fee-to-Trust Acquisition and Casino Project Environmental Impact Statement Scoping Report*. This report was published by the BIA in October 2011 and is available for review from the BIA Northwest Region Office at 911 NE 11th Avenue, Portland, Oregon 97232 and at the project website http://www.samisheis.com. This EIS addresses the issues and concerns summarized in the scoping report. Alternatives analyzed within the DEIS were developed based on consultation with the Tribe, consideration of the comments received during the scoping process, ability to reduce environmental impacts, ability to accomplish the purpose and need for the Proposed Action, and feasibility.

1.5 MEMORANDUM OF UNDERSTANDING

A Memorandum of Understanding (MOU) was executed in April 2003 by the City of Anacortes and the Tribe (**Appendix K**) to "better achieve mutual goals through an improved relationship between sovereign Tribal government and City government." The MOU indicates that it is "a testament to the commitment by the Parties to strengthen their government to government relationship," and sets forth certain agreements with respect to the development of tribal properties. Specifically, the City recognizes and agrees that the Tribe shall exercise sovereign powers to regulate and manage tribal properties, while the Tribe agrees to adopt and enforce all ordinances, standards and requirements of the City until such time that the Tribe adopts its own standards of environmental protection, building code standards, fire code standards, and safety standards that meet or exceed City standards. The MOU provides a foundation for subsequent agreements between the City and Tribe to address specific issues, such as:

- Law Enforcement and Emergency Response;
- Fire Protection and Emergency Medical Services;
- Road Construction and Maintenance;
- Bridge Construction and Maintenance;
- New Business Development and Recruitment;
- Environmental Regulatory Programs and Funding; and
- Archeological Protections.

The MOU additionally states that it is in both parties best interest to reach agreements on the provision of public services by the City to tribal property. Public services as defined in the MOU include police protection services, fire protection services, paramedic and ambulance services, sewer services, water services, publicly-funded sidewalk construction and maintenance services; road construction and maintenance services, drainage maintenance and control services, emergency services, code enforcement services, and similar services, benefits and duties to the extent provided by the City of Anacortes (**Appendix K**).

In accordance with the MOU, the Tribe and the City are currently in the process of negotiating a specific agreement for the provisions of public services to the March's Point site.

1.6 REGULATORY REQUIREMENTS, PERMITS AND APPROVALS

The Proposed Project, and implementation of mitigation for adverse effects of the Proposed Project, will require Tribal, Federal, State and local permits and approvals. **Table 1-2** identifies each responsible agency and the potential permit or approval required.

TABLE 1-2
POTENTIAL PERMITS AND APPROVALS REQUIRED

Agency	Permit or Approval	Alternative
Federal		
Secretary of the Interior	Transfer of the selected alternative project site into Federal trust status for the Tribal Government	A, B, C, D
U.S. Environmental Protection Agency	Compliance with National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges From Construction Activities as required by the Clean Water Act.	A, B, C, D
U.S. Fish and Wildlife Service and National Marine Fisheries Service	Section 7 Consultation under the Federal Endangered Species Act if endangered species may be affected by the project.	A, B, C, D
National Oceanic and Atmospheric Administration	Coastal Zone Management Act Consistency Determination	D
State		
Washington Office of Archaeology and Historic Preservation	Consultation under Section 106 of the National Historic Preservation Act.	A, B, C, D
Washington Department of Transportation	Approval of an Encroachment Permit for the construction of intersection improvements.	A, B, C
County		
Skagit County Board of County Commissioners Skagit County Department of Public Works and Community Development	Approval of engineering and construction plans for intersection improvements. Approval of an Encroachment Permit for intersection improvements.	A, B, C, D
City		
City of Anacortes Public Works Department	Approval of engineering and construction plans for intersection improvements. Approval of an Encroachment Permit for roadway and intersection improvements. Approval of agreement for the provision of public services. Approval of an Encroachment Permit for potential upgrade of existing utility lines.	A, B, C, D

Source: AES, 2013.

SECTION 2.0

ALTERNATIVES

SECTION 2.0
ALTERNATIVES

2.1 INTRODUCTION

This section describes the alternatives that are analyzed within this Draft Environmental Impact Statement (DEIS). These alternatives include four development alternatives (A, B, C, and D) as well as the No Action Alternative (E). Consistent with Council on Environmental Quality (CEQ) guidelines (40 CFR Section 1502.14), this section includes a detailed discussion and comparison of the alternatives analyzed in this DEIS.

The development alternatives (A - D) selected for analysis were derived from the screening and scoping process and, to varying degrees, meet the purpose and need described in **Section 1.2**. Three of the four development alternatives, if chosen, would be built on the March's Point site and would include placing approximately 11.41 acres into Federal trust status. The remaining development alternative, if chosen, would be built on the Fidalgo Bay Resort Flats site (Flats site) and would include placing approximately 2.4 acres into Federal trust status.

Due to the size of the proposed casino developments, Alternatives A and D are expected to best secure long-term economic opportunities for development and self-sufficiency for the Samish Indian Nation (Tribe) and its members; however Alternative A would have lesser environmental impacts and is, therefore, the Tribe's Proposed Project. Alternatives B and C, including the development of a reduced intensity casino development or retail development, respectively, would be less effective than Alternative A in meeting the Tribe's purpose and need. Alternative E would not meet the Tribe's long-term economic goals.

2.2 ALTERNATIVE A – PROPOSED PROJECT AND INITIAL RESERVATION PROCLAMATION

Alternative A consists of the following components: (1) placing approximately 11.41 acres into Federal trust status as the initial reservation for the Tribe; and, (2) the subsequent development by the Tribe of a gaming facility, including ancillary parking facilities. This alternative, which constitutes the Tribe's and the Bureau of Indian Affairs (BIA) Proposed Project, most suitably meets all aspects of the purpose and needs of the Proposed Action by promoting the Tribe's long-term economic development and self-governance capability. Components of the Proposed Project are described below.

2.2.1 CASINO FACILITY

Alternative A would include the development of a 48,100 square foot casino structure and parking facilities on the 11.41-acre March's Point site. The Proposed Project facilities would occupy the eastern portion of the March's Point site, with surface parking surrounding the casino structure along Stevenson Road to the south. A site plan for the proposed facilities included under the Proposed Project is presented as **Figure 2-1**.

The Proposed Project would include the development of 13,200 square feet of gaming floor and 8,750 square feet of restaurant and beverage facilities (**Table 2-1**).

TABLE 2-1
ALTERNATIVE A – PROPOSED PROJECT COMPONENTS

Project Component	Area (sf)
Gaming Floor	13,200
Gaming Support	4,620
Food / Beverage	8,720
Back-of-House	9,445
Circulation	5,705
Administration / Accounting	5,270
Human Resources	1,140
TOTAL	48,100

Source: Group West, 2009.

CASINO

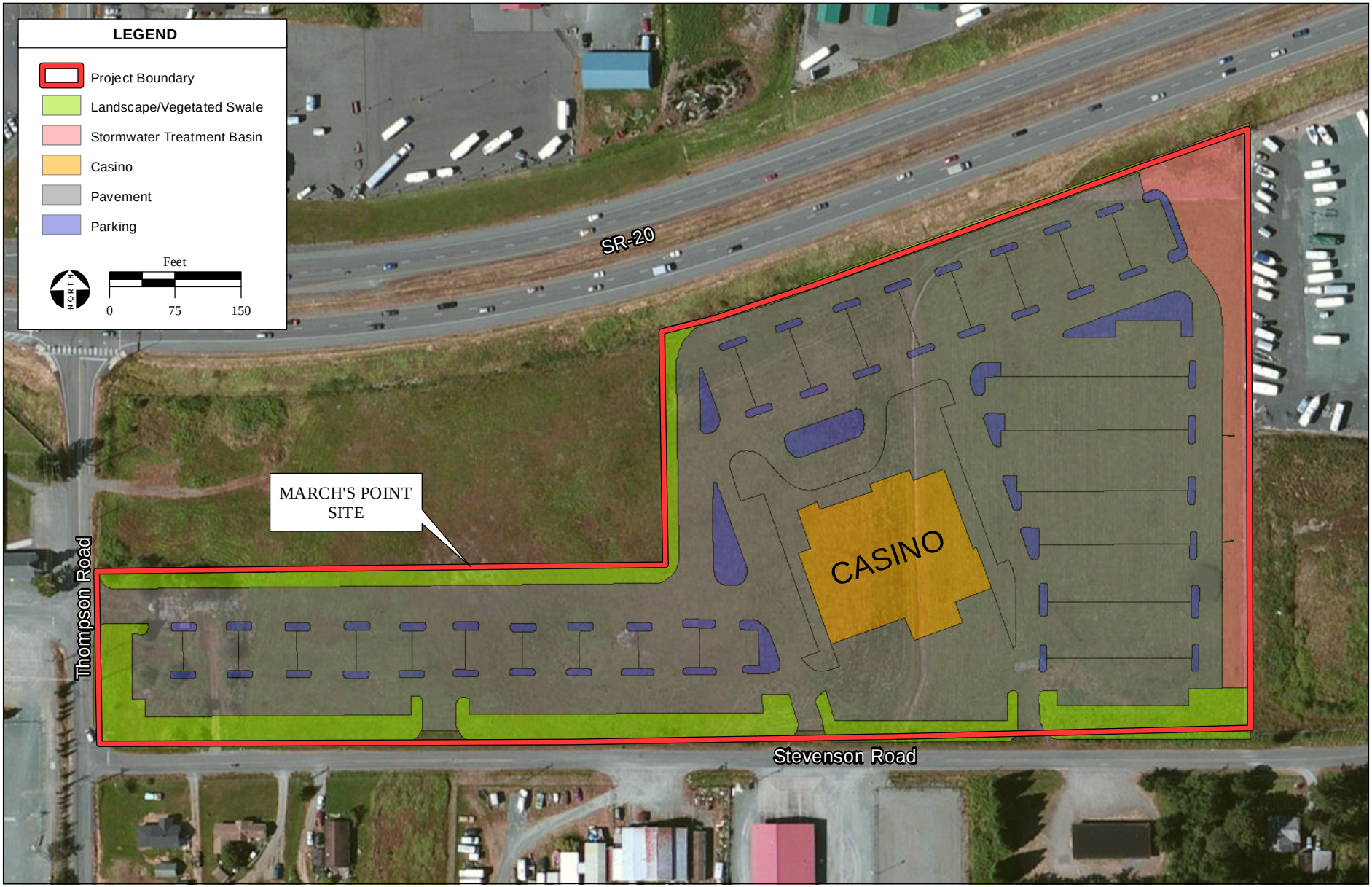
The casino facility would be housed in a single-story structure. The main entry would face State Route (SR-) 20, with the gaming floor and associated public spaces, including food and beverage, encompassing a majority of the building. The casino support facilities (back-of-house[1]) would also be on the main floor as would the porte cochere (valet areas for guest drop-off and pick-up). The casino structure would be developed consistent with International Building Code (IBC) standards. The Tribe will additionally consult with the City of Anacortes (City) to ensure adequate access is provided for fire protection, emergency services, and solid waste removal.

ANCILLARY COMPONENTS

Site Access

Vehicle access to the March's Point site would be provided via four driveways. Three driveways would be located along Stevenson Road to the south and one driveway would be located along Thompson Road to the west. Improvements to these access intersections would be made as described in **Section 5.2.7** to manage the ingress and egress of traffic at the project site. Frontage improvements including vegetated

[1] Back-of-House is defined as support and service areas not viewed by guests.



SOURCE: Microsoft aerial photograph, 7/9/2010; AES, 2013

Figure 2-1
Proposed Project Site Plan

landscaping, curb, gutter, and sidewalk improvements would be developed along Thompson Road and Stevenson Road.

Parking

Alternative A includes a paved, surface parking area surrounding the casino facility containing a total of 500 spaces. Employee parking would also be contained in a portion of these surface lots.

Signage, Lighting, and Landscaping

Exterior signage would be an integral part of the exterior architectural design. Signs would be compatible with the building architecture as well as the natural characteristics of the site.

Exterior lighting of the project would be an integral part of the design and strategically positioned to minimize off-site lighting and any direct site lines to the public. The lighting fixtures would be integrated into components of the architecture to eliminate direct contact from the viewer's eyes to the actual light source. Downcast lighting and low-pressure sodium bulbs would be used in the landscaped and parking areas to minimize off-site scatter; lighting fixtures would be an integral part of the overall design and strategically positioned to minimize any direct site lines or glare to the public; and exterior landscape and architectural lighting would be used to enhance the architecture of the buildings, accentuate their design, and provide for public safety. Illuminated signs would be designed to blend with the light levels of the building and landscape lighting in both illumination levels and color characteristics. Landscaping would be designed to break up the mass of the building, yet still attract travelers to the facility.

Water Supply

Under Alternative A, the casino development would connect to the existing City domestic water system at one of two locations; one connection could be located along Stevenson Road to the south of project site and one to the east of the project site along SR-20. The project site is within the City water district boundaries and the City currently provides service to adjacent properties along Thompson Road. Water demand calculations for this alternative are discussed in **Section 4.10.** The City has capacity to meet anticipated demand for domestic water from the proposed project (**Section 4.10.1**), as well as future planned development (**Section 4.15**). As discussed in **Section 1.5**, the Tribe is in the process of negotiating an agreement with the City for the provision of public services to the project site, including water supply.

The required fire flow for a structure is the combined flow required for the fire hydrants and sprinkler systems, which is determined by the International Fire Code (IFC) and National Fire Protection Association (NFPA) Code 13.

Wastewater Treatment

The Tribe would obtain a services agreement with the City to provide sewer service. Connection to the existing City wastewater conveyance system would occur, with wastewater treatment occurring at the City wastewater treatment plant (WWTP). The City WWTP facilities meet Washington State Department of Ecology (Ecology) and Department of Health (DOH) water quality standards including the Water Reclamation and Reuse Standards and National Pollutant Discharge Elimination System (NPDES) permitting program (NPDES Permit #WA-002025-7). As discussed in **Section 1.5**, the Tribe is in the process of negotiating an agreement with the City for the provision of public services to the project site, including wastewater collection and treatment.

Table 2-2 shows the estimated average and peak day wastewater flows for Alternative A. The components of Alternative A would have an estimated average daily flow of 26,000 gallons per day (gpd). Based on this estimate, the peak day design flow is 41,000 gpd. The peak day design flow assumes that the facilities are operating at maximum capacity. As described in **Section 4.10.1**, average daily flows in the City are 1.92 MGD and the existing City WWTP system is designed to accommodate an estimated peak flow of 4.5 MGD. The City has adequate capacity to provide sewer service to the proposed project.

TABLE 2-2
ESTIMATED WASTEWATER FLOWS – ALTERNATIVE A

Area Description	Square Footage	Number of Seats	Flow/Unit	Average Day Flows (gallons per day)	Peak Day Flows (gallons per day)
Gaming Floor	13,200	570	22	12,540	20,190
Restaurant/Lounge	8,720	220	55	12,100	19,481
Casino Support / Administration	7,590	20	10	200	322
Back-of-House/Employee Area	9,445	40	10	400	644
Misc.	9,045	-	-	-	-
Total	48,000	850	-	26,000	41,000

Notes:
[1] Based on similar facilities;
[2] Estimated quantity;
[3] Rounded to 2 significant digits
[4]Assumes peaking factor of 1.61 times average day flow
Source: AES, 2011

Under Alternative A, wastewater generated on-site would flow to the existing City sewer line located within Thompson Road. From there, wastewater would flow via gravity and pump station beneath the roads to the City treatment plant located at 500 T Avenue. Treated wastewater effluent would be released

from the WWTP under the existing NPDES permit. Treated effluent would meet water quality guidelines as discussed further in **Section 4.3**, Water Resources.

Site Drainage

Stormwater from the March's Point site would be collected through internal drains within the parking lot and be directed to on-site vegetated landscaping swales ringing the project site. Stormwater would flow through these vegetated swales into one on-site stormwater treatment basin, tentatively located along the eastern border of the project site, where settling and treatment would occur. Stormwater would then be discharged to a short, vegetated swale along the northeastern corner of the project site prior to off-site discharge to an existing, unnamed ditch. Once off-site, stormwater is broadcast into an undeveloped low spot prior to flowing into a culvert under SR-20. This culvert discharges into a drainage ditch on the north side of SR-20 that flows into Padilla Bay. The stormwater facilities will be designed to comply with the City of Anacortes Large Parcel Storm Water Plan (City of Anacortes, 2009).

Storm filter vaults shall be developed within the parking lot and where feasible, all areas outside of buildings, roads, and parking areas will be kept as permeable surfaces, either as vegetation or high infiltration cover such as mulch, gravel, or turf block. Rooftops will drain to either embedded cisterns or vegetated drip lines to maximize infiltration prior to surface water discharge.

Construction and operation of Alternative A would incorporate a variety of industry standard Best Management Practices (BMPs). In many cases, such as storm water pollution and prevention plans (SWPPP) prepared for NPDES general construction permits, certain BMPs are requisite conditions of permit approval. **Chapter 5.0** presents select BMPs that have been specifically incorporated into the project design to avoid or minimize potential adverse effects resulting from the development of Alternative A.

Natural Gas Supply

There is a natural gas pipeline located adjacent to the March's Point site within Thompson Road. If the Tribe chooses to use natural gas for space and water heating, kitchen operations, or other purposes, it would need to enter into a service agreement with Cascade Natural Gas or other similar service provider as described in more detail in **Section 3.10**, Public Services.

Law Enforcement and Fire Protection

Law enforcement services would be provided by the City of Anacortes Police Department (APD), while prosecution, and court and jail services would be provided by the Skagit County Sheriff's Office. Fire protection services would be provided by either the City of Anacortes Fire Department (AFD) or the Skagit County Fire Department. Law enforcement and fire protection would be provided under service agreements between the Tribe and the agencies that would provide these services. As discussed in

Section 1.5, the Tribe is in the process of negotiating an agreement with the City for the provision of public services to the project site, including law enforcement and fire protection.

TRIBAL-STATE COMPACT

The Tribe has entered into a Tribal-State Compact to govern the conduct of Class III gaming on Tribal lands. The 2006 Tribal-State Compact includes the following provisions:

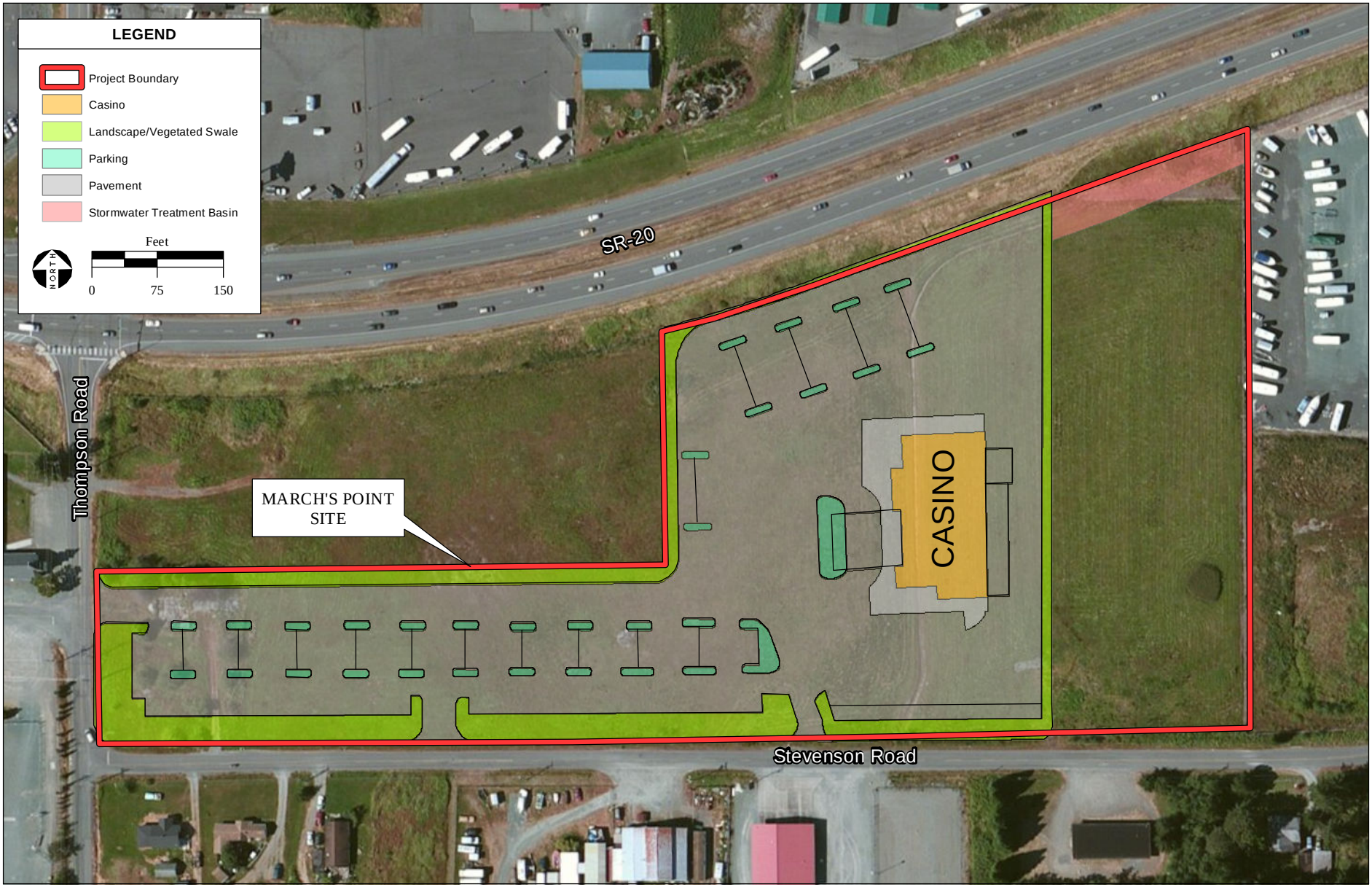
- Tribal Government will adopt and comply with standards no less stringent than federal health standards for food and beverage handling;
- Tribal Government will adopt and comply with standards no less stringent than federal water quality, and safe drinking water standards;
- Tribal Government will adopt and comply with standards no less stringent than federal workplace and occupational health and safety standards;
- Tribal Government will comply with Tribal codes and other applicable federal law regarding public health and safety; and
- Through the establishment of a mitigation fund, the Tribal Government will make reasonable provisions for adequate emergency, fire, medical, and related relief and disaster services for patrons and employees of the gaming facility.

2.3 ALTERNATIVE B – REDUCED INTENSITY

Alternative B, the Reduced Intensity Alternative, consists of development of a reduced size casino structure on the March's Point site. Alternative B is similar to Alternative A in most respects, entailing the placement of the property into trust, issuance of an initial reservation proclamation, and the subsequent development of a gaming facility. Operation of the casino, project construction, water supply, wastewater disposal, and site drainage would be similar to Alternative A, however at a smaller size, as described below.

2.3.1 CASINO

This alternative entails a reduced intensity casino on the March's Point site. Alternative B includes a total of 32,130 square feet of space that utilizes the central and western portion of the project site. Alternative B plans call for 9,000 square feet of gaming floor and 5,520 square feet of restaurant and lounge areas. The components of Alternative B are listed in **Table 2-3**. **Figure 2-2** shows the proposed site plan for Alternative B. As discussed in **Section 1.5**, the Tribe is in the process of negotiating an agreement with the City of Anacortes for the provision of public services to the project site, including water supply, wastewater treatment and disposal, law enforcement, fire protection, and emergency medical services.



SOURCE: Microsoft aerial photograph, 7/9/2010; AES, 2013

Figure 2-2
Reduced Intensity Site Plan

A portion of the property along the eastern site boundary (approximately 3.9 acres) would not be developed anytime in the foreseeable future under Alternative B.

TABLE 2-3
ALTERNATIVE B – REDUCED INTENSITY COMPONENTS

Project Component	Area (sf)
Gaming Floor	9,000
Gaming Support	3,870
Food / Beverage	5,520
Back-of-House	5,925
Circulation	3,550
Administration / Accounting	3,775
Human Resources	490
TOTAL	32,130

Source: Group West, 2011.

CASINO FACILITY

Under Alternative B, the casino facility would be housed in a single-story structure similar to that described under Alternative A. The location of the reduced intensity facility would also be similar to Alternative A. The casino structure would be developed consistent with IBC standards. The Tribe will consult with the City to ensure adequate fire and emergency access.

ANCILLARY COMPONENTS

Under Alternative B, the ancillary components related to the signage, lighting, landscaping, natural gas, law enforcement and fire protection are similar to those described under Alternative A. See the description of each component under Alternative A (**Section 2.2.1**).

Site Access

Site access under Alternative B would be similar to that described under Alternative A above, although there would only be two entrances to the site from Stevenson Road.

PARKING

Alternative B provides for a 300 space surface parking lot; 200 fewer spaces than proposed under Alternative A. Employee parking would be contained within a designated area within the surface lot.

Water Supply

The on-site water supply system under Alternative B is similar to the system described under Alternative A. The project would connect to the existing City domestic water system at one of two locations; either along Stevenson Road to the south of project site or to the east of the project site along SR-20. The

project site is within the City water district boundaries and the City currently provides service to adjacent properties along Thompson Road. Water demand calculations for Alternative B are discussed in **Section 4.10.** The City has capacity to meet anticipated demand for domestic water from Alternative B (**Section 4.10.2**), as well as future planned development (**Section 4.15**).

Fire flow infrastructure requirements under Alternative B would be similar to that described under Alternative A above.

Wastewater Disposal

The wastewater disposal components of Alternative B are similar to those described under Alternative A. The Tribe would obtain a services agreement with the City to provide sewer service. Alternative B would utilize gravity lines and connection to existing City wastewater conveyance lines in Thompson Road, similar to the system described under Alternative A. **Table 2-4** shows the estimated average and peak day flows for Alternative B. The components of Alternative B would have an estimated average daily flow of 18,000 gpd. Based on this estimate, the peak day design flow is estimated at 28,000 gpd. The peak day design flow assumes that the Alternative B casino facilities are operating at maximum capacity. The City has adequate capacity to meet the wastewater conveyance and treatment demands associated with Alternative B.

TABLE 2-4
ESTIMATED WASTEWATER FLOWS – ALTERNATIVES B

Area Description	Square Footage	Number of Seats	Flow/Unit	Average Day Flows (gallons per day)	Peak Day Flows (gallons per day)
Gaming Floor	9,000	386	22	8,492	13,673
Restaurant/Lounge	5,520	150	55	8,250	13,283
Casino Support / Administration	5,630	20	10	200	322
Back-of-House	7,040	30	10	300	483
Misc.	4,810	-	-	-	-
Total	32,000	586	-	18,000	28,000

Notes:
[1] Based on similar facilities;
[2] Estimated quantity;
[3] Rounded to 2 significant digits
[4] Assumes peaking factor of 1.61 times average day flow
Source: AES, 2011

As described for Alternative A, wastewater under Alternative B would flow via gravity and pump station to the City WWTP for treatment and discharge. The existing NPDES permit from the USEPA allows for discharge of this treated wastewater effluent at the WWTP.

Site Drainage

Similar to Alternative A, stormwater from the site would be collected through internal drains within the parking lot and be directed to on-site vegetated landscaping swales ringing the project site. This system would include vegetated swales and a detention basin similar to those described under Alternative A. The detention basin, located along SR-20, would be reduced in size due to the reduction of impervious surface proposed under Alternative B. Water quality design features described under Alternative A would additionally be developed under Alternative B.

Construction and operation of Alternative B would incorporate a variety of industry standard BMPs. In many cases, such as SWPPPs prepared for NPDES general construction permits, certain BMPs are requisite conditions of permit approval. **Section 5.0** presents select BMPs that have been specifically incorporated into the project design to avoid or minimize potential adverse effects resulting from the development of Alternative B.

Law Enforcement and Fire Protection

Law enforcement services would be provided by the APD, while prosecution, and court and jail services would be provided by the Skagit County Sheriff's Office. These services would be identical to those described under Alternative A.

Fire protection services would be provided by either the AFD or Skagit County Fire Department. These services would be identical to those described under Alternative A.

TRIBAL-STATE COMPACT

The terms of the 2006 Tribal-State Compact would be the same for Alternative B as those described above for Alternative A. The Tribe agrees to adopt and comply with federal food and beverage handling standards, as well as federal water quality, occupational and safety, and emergency services standards.

2.4 ALTERNATIVE C – RETAIL CENTER

Alternative C is a non-gaming alternative located on the March's Point site, consisting of three free standing retail/commercial buildings. Similar to Alternatives A and B, Alternative C entails the placement of the March's Point site into trust and the issuance of a reservation proclamation. The Indian Gaming Regulatory Act (IGRA) would not, however, be applicable to Alternative C because gaming is not proposed on the site under this alternative. Components of Alternative C are described below.

2.4.1 RETAIL CENTER

The Retail Center Alternative would consist of three buildings housing various retail based activities covering the entire March's Point site. This alternative contains one 120,000 square foot building that could be leased to a single major tenant or subdivided as required. The other buildings would be single story retail structures situated along the western portion of the site. The casino structure would be developed consistent with IBC standards through consultation with the City to ensure adequate fire and emergency access. These two buildings total 17,000 square feet. As discussed in **Section 1.5**, the Tribe is in the process of negotiating an agreement with the City of Anacortes for the provision of public services to the project site, including water supply, wastewater treatment and disposal, law enforcement, fire protection, and emergency medical services. **Figure 2-3** shows the proposed site plan for Alternative C. **Table 2-5** lists Alternative C program components.

TABLE 2-5
ALTERNATIVE C- RETAIL CENTER USE AREAS

Project Component	Area (sf)
Retail Anchor Building	120,000
Stand Alone Retail Structures	17,000
TOTAL	137,000

Source: Group West, 2009.

ANCILLARY COMPONENTS

Site Access and Parking

Site access under Alternative C would be identical to that described under Alternative A.

Under Alternative C, surface parking for 300 vehicles would be provided throughout the retail center.

Signage, Lighting, and Landscaping

The exterior signage would be an integral part of the exterior architectural design. Signs would be compatible with the building architecture as well as the natural characteristics of the site.

The exterior lighting under Alternative C would be an integral part of the design and strategically positioned around the retail buildings to minimize off-site lighting and any direct site lines to the public. The lighting fixtures would be integrated into components of the architecture to eliminate direct contact from the viewer's eyes to the actual light source. While many types of lighting would be used throughout the exterior of the project, the majority would be high pressure sodium, which provides a softer, yellow/golden light that minimizes harsh glare. The architectural design of the project would be enhanced by the landscaping using plant material native to the region.

SOURCE: Microsoft aerial photograph, 7/9/2010; AES, 2013

Figure 2-3

Non-Gaming Alternative Site Plan

Water Supply

Water supply distribution under Alternative C would be similar to that described under Alternative A. Refer to the description under Alternative A for more detail. On-site distribution lines would be constructed to connect buildings and fire hydrants to the existing system. Water demand calculations for this alternative are discussed in **Section 4.10**, Public Services. Fire flow infrastructure requirements under Alternative C would be similar to that described under Alternative A. The City has capacity to supply the water demand associated with Alternative C (**Section 4.10.3**), as well as future planned development (**Section 4.15**).

Wastewater Disposal

The wastewater treatment and disposal components of Alternative C are the same as described under Alternative A. The Tribe would obtain a services agreement with the City to provide for off-site disposal of wastewater. Alternative C would utilize gravity lines and connection to existing City of Anacortes wastewater collection lines, similar to the system described under Alternative A.

Table 2-6 shows the estimated average and peak day flows for Alternative C. The components of Alternative C would have an estimated average daily flow of 13,700 gpd. Based on this estimate the peak day design flow is 22,000 gpd. The peak day design flow assumes that the on-site retail facilities are operating at maximum capacity.

TABLE 2-6
DESIGN WASTEWATER FLOWS – ALTERNATIVE C

Area Description	Square Footage	Flow/Square Foot	Average Day Flows (gallons per day)	Peak Day Flows (gallons per day)
Retail	137,000	0.1	13,700	22,000

Notes:
[1] Based on similar facilities;
[2] Estimated quantity;
[3] Rounded to 2 significant digits
[4] Assumes peaking factor of 1.61 times average day flow
Source: AES, 2011

As described for Alternative A, wastewater generated on-site would flow via gravity and pump stations to the City WWTP for treatment and discharge. The existing NPDES discharge permit from the USEPA allows for discharge of this treated wastewater effluent at the WWTP. The existing City WWTP system is designed to handle an estimated peak flow of 4.5 MGD. The City has adequate capacity to meet the wastewater conveyance and treatment demands associated with Alternative C.

Site Drainage

Similar to Alternative A, stormwater from the site would be collected through internal drains within the parking lot and be directed to on-site vegetated landscaping swales ringing the project site. This system would include vegetated swales and a detention basin similar to those described under Alternative A. Ultimate discharge is to Padilla Bay. The stormwater facility will be designed to comply with the City of Anacortes Large Parcel Storm Water Plan (City of Anacortes, 2009). Water quality design features described under Alternative A would additionally be developed under Alternative C.

Construction and operation of Alternative C would incorporate a variety of industry standard BMPs. In many cases, such as SWPPPs prepared for NPDES permits, certain BMPs are requisite conditions of permit approval. **Chapter 5.0** presents select BMPs that have been specifically incorporated into the project design to avoid or minimize potential adverse effects resulting from the development of Alternative C.

Natural Gas Supply

There is a natural gas pipeline located adjacent to the site within Thompson Road and if the Tribe chooses to use natural gas for Alternative C, they would need to reach a service agreement with Cascade Natural Gas or other similar service providers as described in more detail in **Section 3.10**, Public Services.

Law Enforcement and Fire Protection

Law enforcement services would be provided by the APD, while prosecution, and court and jail services would be provided by the Skagit County Sheriff's Office. These services would be identical to those described under Alternative A.

Fire protection services would be provided by the AFD. These services would be identical to those described under Alternative A.

TRIBAL-STATE COMPACT

Selecting Alternative C would not affect the 2006 Tribal-State Compact and the Compact would not be applicable to the retail development associated with Alternative C.

2.5 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

Alternative D consists of the development of a casino facility on the Flats site, 2.6 miles northwest of the March's Point site. Alternative D entails the placement of the Flats site into trust, issuance of an initial reservation proclamation, and the subsequent development of a gaming facility. Alternative D is a located in the City between Tommy Thompson Trail and Fidalgo Bay Road.. The 2.4-acre Flats site is

located within Section 23, Township 35 North, Range 2 East, as depicted on the 7.5' USGS "Anacortes North" topographic quadrangle. The Flats site is currently owned by the Tribe.

The Flats site includes the western portions of parcel numbers P33272and P33269, as well as a northern portion of parcel P33271. Parcels P33272 and P33269 are currently undeveloped and bisected by the Tommy Thompson Trail; the portions of these parcels situated east of the trail would not be brought into trust and would not be developed as part of this project. Parcel P33271 provides RV hook-ups and parking for the Fidalgo Bay Resort. Selecting Alternative D would result in the loss of one row of RV parking that provides space for 15 vehicles. The Flats site is located roughly 1,000 feet north of the Fidalgo Bay Resort. **Figure 2-4** shows the proposed location of Alternative D. Components of Alternative D are described below.

2.5.1 CASINO

Alternative D would include a proposed casino facility occupying the entire Flats site. Alternative D includes a development identical to the casino described under Alternative A, including 13,200 square feet of gaming floor and 8,720 square feet of restaurant and beverage facilities. **Figure 2-5** shows the proposed site plan for Alternative D. **Table 2-7** lists the components of the casino alongside square footage allocations.

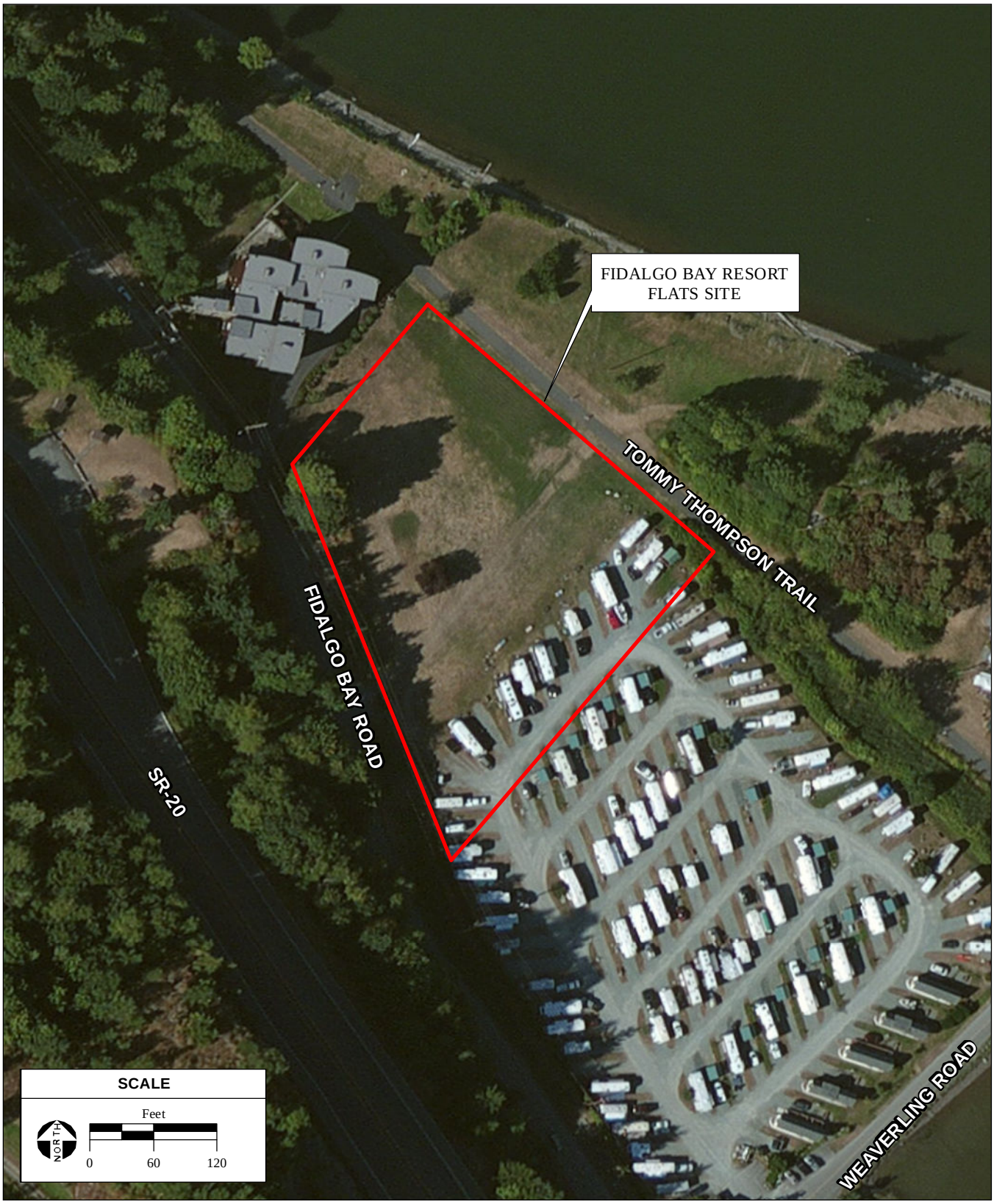
TABLE 2-7
ALTERNATIVE D – FLATS SITE COMPONENTS

Project Component	Area (sf)
Gaming Floor	13,200
Gaming Support	4,620
Food / Beverage	8,720
Back-of-House	9,445
Circulation	5,705
Administration / Accounting	5,270
Human Resources	1,140
TOTAL	48,100

Source: Group West, 2009.

CASINO FACILITY

Under Alternative D, the casino facility would be a single-story structure incorporating many of the natural materials of the general region including stone and wood. The casino structure would be developed consistent with IBC standards through consultation with the City to ensure adequate fire and emergency access.



SOURCE: Microsoft aerial photograph, 7/9/2010; AES, 2013

Figure 2-4
Aerial Photograph - Alternative Project Site

SOURCE: Microsoft aerial photograph, 7/9/2010; AES, 2013

Figure 2-5

Fidalgo Bay Resort Flats Site Plan

Ancillary Components

Site Access

Access to the project site would be provided via two driveways located along Fidalgo Bay Road. Improvements to these access points would be made as described in **Section 5.2.7**, to manage the ingress and egress of traffic at the project site. Two internal roadways could provide a connection and access to the adjacent Fidalgo Bay Resort property.

Parking

Alternative D contains approximately 300 surface parking spaces to the south and east of the casino structure; this is 200 fewer spaces than proposed under Alternative A. Employee parking would be provided within a designated area on the surface lot.

Signage, Lighting, and Landscaping

The exterior signage would be an integral part of the exterior architectural design. Signs would be compatible with the building architecture as well as the natural characteristics of the site.

The exterior lighting of the project would be an integral part of the design and strategically positioned to minimize off-site lighting and any direct site lines to the public. The lighting fixtures would be integrated into components of the architecture to eliminate direct contact from the viewer's eyes to the actual light source. While many types of lighting would be used throughout the exterior of the project, the majority would be high pressure sodium, which provides a softer, yellow/golden light that produces less of a harsh glare.

The architectural design of the project would be enhanced by the landscaping using plant material native to the region.

Water Supply

Alternative D is located within the City municipal water service area. The Tribe would obtain a Service Agreement letter from the City to provide service under Alternative D. An 8-inch diameter waterline runs along Fidalgo Bay Road which has capacity and pressure to serve Alternative D, including fire suppression needs. On-site distribution lines would be constructed to connect buildings and fire hydrants to the existing system. No water storage on site is proposed. Water demand calculations for this alternative are discussed in **Section 4.10**, Public Services.

Wastewater Disposal

The Tribe would obtain a services agreement with the City to provide for off-site disposal of wastewater. **Table 2-8** shows the estimated average and peak day wastewater flows for Alternative A. The components of Alternative A would have an estimated average daily flow of 26,000 gallons per day

(gpd). Based on this estimate, the peak day design flow is 41,000 gpd. The peak day design flow assumes that the Flats site casino facilities are operating at maximum capacity. Under Alternative D, wastewater would connect to the existing municipal system through an existing sewer line located adjacent to the property within an easement under the Tommy Thompson Trail. This wastewater collection system is routed to the City WWTP. The City has adequate capacity to meet the wastewater conveyance and treatment demands associated with Alternative D and the Tribe would obtain a Service Agreement letter from the City to provide wastewater treatment and disposal service under this alternative.

TABLE 2-8
ESTIMATED WASTEWATER FLOWS – ALTERNATIVES D

Area Description	Square Footage	Number of Seats	Flow/Unit	Average Day Flows (gallons per day)	Peak Day Flows (gallons per day)
Gaming Floor	13,200	570	22	12,540	20,190
Restaurant/Lounge	8,720	220	55	12,100	19,481
Casino Support / Administration	7,590	20	10	200	322
Back-of-House/Employee Area	9,445	40	10	400	644
Misc.	9,045	-	-	-	-
Total	48,000	850	-	26,000	41,000

Notes:
[1] Based on similar facilities;
[2] Estimated quantity;
[3] Rounded to 2 significant digits
[4] Assumes peaking factor of 1.61 times average day flow
Source: AES, 2011

Site Drainage

Stormwater from the site would be collected through internal drains within the parking lot and directed to on-site vegetated landscaping swales ringing the project site. Stormwater would flow through these vegetated swales into one on-site stormwater treatment basin, tentatively located in the southeastern corner of the Flats site. Discharge would be via a vegetated swale that runs north/south along the eastern boundary of the site. This swale continues off-site and enters a culvert under Weaverling Road and ultimately discharge stormwater into the Fidalgo Bay. A NPDES general construction permit from the EPA would be obtained prior to construction activities for stormwater discharge.

The stormwater facility will be designed to comply with the City of Anacortes Large Parcel Storm Water Plan (City of Anacortes, 2009). Water quality design features described under Alternative A would additionally be developed under Alternative D.

Construction and operation of Alternative D would incorporate a variety of industry standard BMPs. In many cases, such as SWPPPs prepared for NPDES general construction permits, certain BMPs are requisite conditions of permit approval. **Chapter 5.0** presents select BMPs that have been specifically incorporated into the project design to avoid or minimize potential adverse effects resulting from the development of Alternative D.

Natural Gas Supply

Alternative D would use natural gas for a number of purposes including space and water heating and kitchen operations. Natural gas service to the site would be provided by Cascade Natural Gas or other service provider as described in more detail in **Section 3.10**, Public Services.

Law Enforcement and Fire Protection

Law enforcement services would be provided by the APD to provide law enforcement services, and prosecution, court and jail services would be provided by the Skagit County Sheriff's Department. These services would be identical to those described under Alternative A. AFD would provide fire protection services under Alternative D. These services and agreements would be identical to those described under Alternative A.

TRIBAL-STATE COMPACT

The terms of the 2006 Tribal-State Compact would be the same for Alternative D as those described above for Alternative A. The Tribe agrees to adopt and comply with federal food and beverage handling standards, as well as federal water quality, occupational and safety, and emergency services standards.

2.6 ALTERNATIVE E – NO ACTION

Under the No Action Alternative, neither the March's Point site nor the Flats site would be placed into Federal trust for the benefit of the Tribe. Neither site would be developed as described under any of the alternatives identified. Land use jurisdiction of the properties would remain with the City. The proposed trust parcels would continue to be vacant.

2.7 COMPARISON OF ALTERNATIVES

Section 1502.14 of the CEQ's Regulations for Implementing NEPA states that an EIS should present environmental impacts of proposed alternatives in a comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. Alternatives considered must include those that offer substantial environmental advantages over the Proposed Project and which may be feasibly accomplished in a successful manner considering economic, environmental,

social, technological, and legal factors. A summary comparison of each of the proposed alternatives, including the No Action/No Development Alternative, is provided below.

In accordance with CEQ Regulations, the alternatives considered in this document include those which could accomplish most of the basic objectives of the project, and that could avoid or substantially lessen one or more of the significant effects of the project. A detailed description of each of the proposed alternatives, including the No Action/No Development Alternative, is provided above. A summary comparison of environmental impacts is provided below:

- As discussed in more detail in **Chapter 4.0** of this EIS, the environmental effects associated with Alternative A that would result from increased employment and economic growth would include an increase in demand for goods, services, and public services/utilities. Additionally, project-related traffic associated with Alternative A would generate an increase in traffic congestion that may increase air emissions and noise effects, both during construction and operation. Implementation of mitigation identified in **Section 5.0** would reduce these potential adverse effects. Of the alternatives evaluated within this EIS, Alternative A would best meet the purposes and needs of the BIA in promoting the long-term economic vitality and self-governance of the Tribe as the casino facility described under Alternative A would provide the Tribe with the best opportunity for securing a viable means of attracting and maintaining a long-term, sustainable revenue stream.

- The environmental effects associated with Alternative B that would result from increased employment and economic growth would also include an increase in demand for goods, services, and public services/utilities, but to a lesser extent than under Alternative A. Additionally, Alternative B would generate less traffic than Alternative A and therefore would have fewer impacts associated with traffic congestion, mobile air emissions and traffic related noise effects. During construction, traffic impacts would also be less than under Alternative A, as the footprint would be smaller requiring fewer trips to deliver materials, less equipment, and fewer trips to dispose of fill as an underground parking structure would not be constructed. Implementation of mitigation identified in **Section 5.0** would reduce these potential adverse effects. Alternative B would also provide economic development opportunities for the Tribe; however, the economic returns would be smaller than under Alternative A and, therefore, would not be the most efficient means of attracting and maintaining a long-term, sustainable revenue stream.

- The environmental consequences of Alternative C include less employment and economic growth for both the Tribe and neighboring communities than would occur from Alternatives A, B and D. Due to the similarity in size to Alternative A, Alternative C would have similar impacts as Alternative A relating to air quality, noise, and public services/utilities during both construction and operation. Because Alternative C includes development of auto-oriented retail, traffic would

be greatest for this alternative. Implementation of mitigation identified in **Section 5.0** would reduce these potential adverse effects. The competitive market forces associated with commercial development, and the substantially lower profitability of retail development in comparison to gaming operations make Alternative C less attractive than Alternative A from the standpoint of securing a long term, sustainable revenue stream.

- The environmental effects associated with Alternative D that would result from increased employment and economic growth would include an increase in demand for goods, services, and public services/utilities. Due to the similarity in size to Alternative A, Alternative D would have similar impacts as Alternative A relating to air quality, and public utilities during both construction and operation. Because of the poor roadway geometry in the project area, traffic impacts from developing a casino at the Flats site would be greater than those associated with developing the March's Point site. Implementation of mitigation identified in **Section 5.0** would reduce these potential adverse effects. Because of the close proximity of residences to the Flats site, noise impacts would be significant and unavoidable. Although Alternative D would meet the purposes and needs of the BIA in promoting the long-term economic vitality and self-governance of the Tribe, noise impacts, traffic impacts, proximity to residences, and a greater potential presence of cultural resources would make the Flats site less environmentally preferable compared with Alternative A at the March's Point site.

- Alternative E, the No Action/No Development Alternative would avoid all environmental effects associated with the development of Alternatives A, B, C, and D and thus would have significantly less environmental effects. However, this alternative would not meet the purpose and need for the Proposed Action.

Based on the considerations discussed above, Alternative A best meets the purpose and need of the Tribe to establish and maintain a long-term, sustainable revenue stream. Revenue and employment opportunities generated by Alternative A would allow the Tribe to be fully self-reliant, to provide employment opportunities for tribal members, and to strengthen the tribal government. For a detailed, quantitative discussion of potential environmental consequences associated with each of the alternatives, refer to **Chapter 4.0**. Measures to avoid, minimize, or mitigate adverse effects are provided in **Chapter 5.0**.

2.8 OFF-SITE ALTERNATIVES ELIMINATED FROM CONSIDERATION

The intent of the analysis of alternatives in the EIS is to present to decision-makers and the public a reasonable range of alternatives that are both feasible and sufficiently different from each other in critical aspects. Section 1502.14(a) of the CEQ's Regulations for implementing NEPA requires a discussion of

alternatives that were eliminated from further study, and the reasons for their having been eliminated. The alternatives discussed herein were considered and rejected from full EIS analysis because these alternatives were deemed infeasible or would not fulfill the stated purpose and need of the Proposed Action.

OFF-SITE CAMPBELL LAKE CASINO

In an effort to present an additional off–site alternative to decision-makers and the public, properties currently owned by the Tribe were examined to determine their feasibility. The Campbell Lake Alternative consists of an alternative site for the development of a gaming facility. The 80-acre site is located in along SR-20 near Lunz Road, approximately 4.4 miles south of the Flats site. The site was given serious consideration by the Tribe because it is already in federal trust. However, the site was rejected from further consideration because of the rural/residential nature of the area, absence of existing infrastructure sufficient for large scale development, and low traffic volumes. The site currently contains tribal housing units and undeveloped forest/open space that provides habitat for numerous biologically sensitive resources.

FIDALGO BAY RESORT EXPANDED RV FACILITY

The Tribe's existing commercial venture, the Fidalgo Bay RV Park consists of approximately 22 acres, and is located immediately south of the Flats site. The expansion and enhancement of these facilities was considered due to the availability of the existing RV park infrastructure. Upon further consideration of this alternative the Tribe determined it was not feasible for several reasons. Based on the Tribe's past experience in operation of the RV park, further investment in the RV park would not be expected to generate enough revenue to meet the Tribe's unmet needs. No expanded customer base was identified which might lead to different profitability results. As a result, the Tribe determined that this alternative would fail to meet the purpose and need.

SECTION 3.0

DESCRIPTION OF AFFECTED ENVIRONMENT

SECTION 3.0

DESCRIPTION OF AFFECTED ENVIRONMENT

3.1 INTRODUCTION

As required by the Council on Environmental Quality's (CEQ) regulation, 40 CFR Section 1502.15, this section describes the existing environment of the area affected by the Proposed Project and Alternatives. Resource areas or issues that are described in this section include:

Section	Resource Area/Issue
3.2	Geology and Soils
3.3	Water Resources
3.4	Air Quality
3.5	Biological Resources
3.6	Cultural and Paleontological Resources
3.7	Socioeconomic Conditions
3.8	Transportation/Circulation
3.9	Land Use
3.10	Public Services
3.11	Noise
3.12	Hazardous Materials
3.13	Aesthetics

3.2 GEOLOGY AND SOILS

This section describes the geology and soils of the March's Point site (Proposed Project Site) and Fidalgo Bay Resort Flats site (Flats site).

3.2.1 SETTING – MARCH'S POINT SITE

The March's Point site is situated in the northern section of the Puget Trough physiographic province approximately 60 miles northwest of Seattle, Washington. This region is situated between the Cascade Range to the east and the Olympic mountains to the west. The physiography of the region is a variety of coastal estuaries with scattered islands and gently sloping hills composed of sediments derived from glacial till (USGS, 2011).

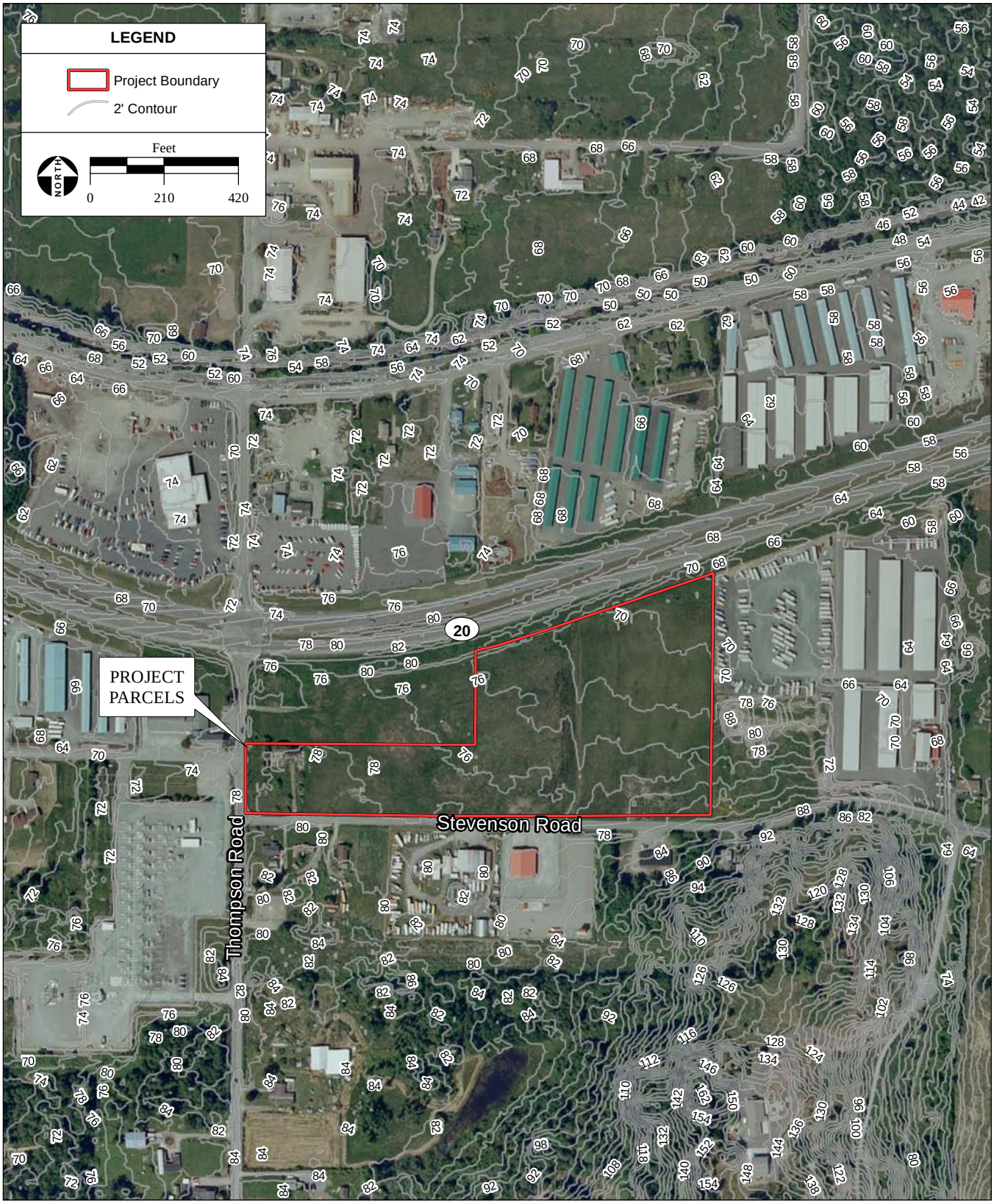
TOPOGRAPHY

The western Skagit Basin area is underlain primarily by glacially deposited Mesozoic sedimentary and volcanic rocks. The March's Point site is situated along the western terminus of the Skagit River Drainage Basin and is located along an inlet to Fidalgo Island with elevations ranging from 70 to 80 feet above mean sea level (amsl). On-site slopes generally range from 0 to 8 percent. Gently sloping topography is found within the surrounding City with elevations ranging from sea level along the coastal areas to 1,270 feet amsl at the summit of Mt. Erie to the west of the site. **Figure 3.2-1** shows the elevation contours of the March's Point site.

GEOLOGIC SETTING

The March's Point site lies within the northern section of the Puget Trough physiographic province. Oceanic crustal plates collide with the North American continent in this zone, with the oldest rocks occurring in the North Cascade Mountains to the east and the San Juan Islands in the west. The compression of these rocks along the Juan de Fuca Plate with the North American Plate approximately 37 million years ago resulted in a chain of volcanoes which has been erupting for the last 36 million years. The Cascade Range has emerged over the past 5 to 7 million years, including several mountains which are still volcanically active today (Lasmanis, 1991).

Washington has a long history of volcanic activity and five volcanoes are situated within its borders. Mount Baker is the closest volcano to the project site; located approximately 40 miles to the northeast. Mount Baker is the most glaciated of the Cascade Range volcanoes and contains more than 0.43 cubic miles of snow and ice. Crests of hydrothermally altered rock and cooled lava are visible above the glaciers and upper sides of the volcano. Although Mount Baker is considered volcanically active, it has not experienced frequent or explosive eruptions like some of the neighboring volcanoes. Mount Baker's most recent eruption was around 1870, although increased fumarolic activity and several small-volume debris avalanches were observed during the 1950's and 1970's (WSDNR, 2011).



SOURCE: USGS 1/9th Arc Second, Digital Elevation Model, 2011; AEX Aerial Photograph, 5/15/2009; AES, 2011

Figure 3.2-1
Topography of the Proposed Project Site

Other major influences to the geology of Washington were the ice age eras beginning in more recent geologic history. The Puget Sound has repeatedly experienced advancing and retreating continental ice sheets, with the Fraser Glaciation being the most recent glacial period. Approximately 15,000 years ago the Cordilleran Ice Sheet covered the Puget Sound region with ice over 3,000 feet thick. This event occurred during the Vashon Glaciation, which was third phase of the Fraser Glaciation and is believed to have left the clearest imprint on the region (Baum, 2008). Ice from this glaciation began to retreat approximately 14,000 years ago and retreated north of the present-day U.S. - Canadian border within 3,000 years. Land within the Puget Sound region was left scoured upon retreat of the Cordilleran Ice Sheet. The newly exposed ground revealed numerous land formations created by the advancing and retreating glacier, including the Puget Sound basin, Hood Canal, recessional lakes, and hundreds of drumlin hills. Beach erosion and deposition, volcanic mudflow deposits, sea-level rise, and tectonic deformation are other geologic activities resulted from the Vashon Glaciation.

SOILS

March's Point Site Soils

The project area is underlain by two main soil types: Coveland Gravelly Loam (35) and Bow Gravelly Loam (18 and 19) (NRCS 2011). **Figure 3.2-2** displays these soils in relation to the March's Point site. A brief description of each soil type is listed below.

Bow Gravelly Loam

Bow Gravelly Loam soils are formed in gravelly glacial drift over glaciocaustrine material mantled with volcanic ash. The slopes of these soils are moderate to short and are undulating, ranging from 0% to 8% slope. These soils are somewhat poorly drained with an average annual precipitation in the area of 23 inches. In a typical profile, the surface layer of these soils is five inches of dark brown gravelly loam covered with a one inch mat of leaves and organic debris. The subsurface layer is brown gravelly loam about 5 inches thick. Below this is dark grayish brown clay loam about 14 inches thick. The next layer, to a depth of 60 inches, is gray silty clay. Approximately one percent of the March's Point site contains this soil, which is considered Prime Farmland if drained as classified by the NRCS. NRCS farmland categories are explained in further detail in **Section 3.9**, Land Use. Prime farmland is considered to have the best possible features to sustain long-term agricultural productivity.

Coveland Gravelly Loam

Coveland Gravelly Loam has a slope ranging from 0 to 3% and is commonly found in slight depressions in terraces or uplands near bays and inlets. This soil is somewhat poorly drained and slowly permeable. Available water capacity is high and there is a moderate risk of erosion with this soil. A typical profile of the surface layer is black and dark brown gravelly loam about 9 inches thick. Below this is dark grayish brown very gravelly sandy loam which is about 5 inches thick. The underlying material, to a depth of 60 inches or more, is olive-gray silty clay. Approximately 99% of the March's Point site contains this soil type.

SOURCE: USDA SSURGO Soils Data, 2003; AEX Aerial Photograph, 5/15/2009; AES, 2011

Figure 3.2-2
Soil Types of the Proposed Project Site

Skagit County Soils Survey

The NRCS published a separate Land Capability Classification System soils survey for Skagit County in 1989. In this soil survey, soils are grouped according to Soils Capability Class. A Soils Capability Class indicates limitations for practical use for food, fiber, or forage production. Classes are designated by Roman numerals I through VIII, with additional coding by subclass indicated by lower case letters. Class I is the least restricted with Class VIII being severely limited and nearly precluded from use for commercial crop production. Prime farmland soils are those located on land that has a combination of physical and chemical characteristics best suited to produce forage, feed, food, and other crops.

Based on information from the NRCS Skagit County Soils Survey (1989), Soils Capability Classes on the project site are all Class III. The Soils Capability Classes are defined in **Table 3.2-1** for the soils occurring on the project site.

TABLE 3.2-1
SAMISH PROJECT SITE SOIL LIMITATIONS

Soils	Depth	Drainage	Erosion	Runoff	Capability Class
Bow gravelly loam 0-3% slope	Deep	Somewhat poorly drained	Slight to moderate	Very Slow	IIIw-5
Bow gravelly loam 3-8% slope	Deep	Somewhat poorly drained	Slight to moderate	Very Slow	IIIw-6
Coveland gravelly loam 0-3% slope	Moderately deep	Somewhat poorly drained	Moderate	Very Slow	IIIe-5

Notes: Capability Classes: Class I soils have few limitations that restrict their use, Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices, Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both, Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both, Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use, Class VI soils have severe limitations that make them generally unsuitable for cultivation, Class VII soils have very severe limitations that make them unsuitable for cultivation. Capability subclasses: (e) main limitation is risk of erosion unless close-growing plant cover is maintained, (w) water in or on the soil interferes with plant growth or cultivation. Capability units: (1) soil character, (3) degree of artificial ground modification, (4) degree of slope.
Source: NRCS, 1989, 2011.

SEISMIC CONSIDERATIONS

The State of Washington is situated at a convergent continental margin, which is the collisional boundary between two tectonic plates. More than 1,000 earthquakes occur in the State annually, and at least 20 damaging earthquakes have occurred in Washington during the past 125 years. Within Washington, the Cascade Range is the foundation of an active volcanic arc associated with the under-thrusting of oceanic lithosphere beneath North America along the Cascadia subduction zone. The Cascadia subduction zone, which is the convergent boundary between the North American plate and the Juan de Fuca plate, lies approximately 180 miles offshore to the west of the City. The two plates are converging at a rate of about 3 to 4 centimeters (cm) per year. In addition, the northward-moving Pacific plate is pushing the Juan de

Fuca plate north, causing complex seismic strain to accumulate and abruptly release in the form of earthquakes.

The March's Point site is located on the northern edge of the Puget Sound Fault Region. Faults within this region form a complex of approximately eleven interrelated seismogenic faults. These faults consist of zones of compound faulting at the boundaries of crustal uplifts and sedimentary basins. Seismic hazards associated with this region include subduction, intraslab, and shallow crustal earthquakes; all of which are capable of generating earthquakes of a magnitude of six or above (USGS, 2010).

Seismic Intensity: the Modified Mercalli Intensity Scale

Seismic intensity is a measure of the strength of shaking experienced in an earthquake. The Modified Mercalli Intensity Scale (MMIS) is a common measure of earthquake effects due to ground shaking intensity. The MMIS is an arbitrary ranking of intensity based on observed effects from an earthquake and does not have a mathematical basis. The MMIS is composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction, expressed by Roman numerals (**Table 3.2-2**). The "intensity" reported generally decreases the farther the location is removed from the earthquake epicenter. The lower numbers of the MMIS generally describe the manner in which people feel the earthquake. The higher numbers of the scale define observed structural damage that could accompany an earthquake (USGS, 1989). Intensities ranging from IV to X could cause moderate to significant structural damage.

The damage level represents the estimated overall level of damage that will occur for various MMIS intensity levels. The damage, however, will not be uniform. Some buildings will experience substantially more damage than this overall level, and others will experience substantially less damage. The age, material, type, method of construction, size, and shape of a building all affect its performance (ABAG, 1998). In addition, geologic factors of a particular site strongly influence the intensity of an earthquake – sites on soft ground or alluvium experience intensities two to three values higher than sites on bedrock (USGS, 1997).

Maximum peak ground acceleration intensities at the March's Point site could potentially cause MMIS VII ground shaking. Ground shaking effects of this intensity include moderate structural damage to ordinary buildings, but negligible damage to buildings of good design and construction.

TABLE 3.2-2
MODIFIED MERCALLI INTENSITY SCALE

Intensity Value	Intensity Description	Average Peak Acceleration
I.	Not felt except by a very few persons under especially favorable circumstances.	< 0.0015 g
II.	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.	< 0.0015 g
III.	Felt quite noticeably indoors, especially on upper floors of buildings, but many persons do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibration similar to the passing of a truck. Duration estimated.	< 0.0015 g
IV.	During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motorcars rocked noticeably.	0.015 g-0.02 g
V.	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.	0.03 g-0.04 g
VI.	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.	0.06 g-0.07 g
VII.	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motorcars.	0.10 g-0.15 g
VIII.	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motorcars disturbed.	0.25 g-0.30 g
IX.	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	0.50 g-0.55 g
X.	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.	> 0.60 g
XI.	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	> 0.60 g
XII.	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.	> 0.60 g

Notes: g is gravity = 980 centimeters per second squared.
Source: Bolt, 1988.

Magnitude: The Richter Magnitude Scale

The Richter scale is the best known scale for measuring the magnitude of earthquakes. The Richter magnitude scale was developed in 1935 by Charles F. Richter of the California Institute of Technology as a mathematical device to compare the size of earthquakes. The magnitude of an earthquake is determined from the logarithm of the amplitude of waves recorded by seismographs. Adjustments are included for the variation in the distance between the various seismographs and the epicenter of the earthquakes. On the Richter scale, magnitude is expressed in whole numbers and decimal fractions. For example, a magnitude 5.3 might be computed for a moderate earthquake, and a strong earthquake might be rated as magnitude 6.3. The Richter scale is not used to express damage.

Since the Richter scale has a logarithmic base, an earthquake with a recording of magnitude 7 signifies a disturbance with ground motion 10 times as large as an earthquake with a recording of magnitude 6. However, each whole number step in the magnitude scale corresponds to the release of about 31 times more energy than the amount associated with the preceding whole number value. Richter's original methodology is no longer used because it does not give reliable results when applied to earthquakes with a magnitude greater than 7 and it was not designed for earthquakes recorded with epicenters 600 kilometers away or farther. A "moment magnitude" scale is currently used by seismologists to provide a measure that differentiates between the largest earthquakes and was designed to be consistent with the Richter scale. Consequently, the relative Richter scale is still used but more precise measurements such as the moment magnitude are now used to calculate the magnitude of an earth-shaking event (USGS, 2003).

Liquefaction

Soil liquefaction can occur in seismic conditions. Liquefaction is the temporary transformation of saturated, non-cohesive material from a relatively stable, solid condition to a liquefied state as a result of increased soil pore water pressure. Soil pore water pressure is the water pressure between soil particles. Liquefaction can occur if three factors are present: seismic activity, loose sand or silt, and shallow ground water. Liquefaction potential has been found to be greatest where the groundwater is within a depth of 50 feet or less, and submerged loose, fine sands occur within that depth. Liquefaction potential decreases with increasing grain size and clay and gravel content, but increases as the ground acceleration and duration of shaking increases. The March's Point site and surrounding vicinity have a very low susceptibility to liquefaction (WSDNR, 2004).

Site Seismicity

The State of Washington is situated at a convergent continental margin, which is the collisional boundary between two tectonic plates. Within Washington, the Cascade Range is the foundation of an active volcanic arc associated with the under-thrusting of oceanic lithosphere beneath North America along the Cascadia subduction zone (Personius and Nelson, 2005). The Cascadia subduction zone, which is the convergent boundary between the North American continental plate and the Juan de Fuca oceanic plate, lies offshore of the coast of Washington. In addition to the eastward motion of the Juan de Fuca plate (at

a rate greater than five millimeters per year), the northward-moving Pacific plate is pushing the Juan de Fuca plate north, causing complex seismic strain to accumulate and abruptly release in the form of earthquakes (Personius and Nelson, 2005).

The International Building Code (IBC) classifies areas within the United States by seismic zones with the intent of developing design criteria for building construction which minimizes the potential for damage from seismic events. The seismic zone scale ranges from zero to four with zone four areas possessing the greatest risk for seismic-related damage due to the proximity to major fault systems. Skagit County, along with the Puget Sound Basin, is classified as being within Seismic Zone 3 of the IBC (Skagit County, 2008b).

The March's Point site is located on the northern edge of the Puget Sound Fault Region. Faults within this region form a complex of approximately eleven interrelated seismogenic faults. These faults consist of zones of compound faulting at the boundaries of crustal uplifts and sedimentary basins. Seismic hazards associated with this region include subduction, intraslab, and shallow crustal earthquakes; all of which are capable of generating a magnitude of six or above (USGS, 2010).

VOLCANIC HAZARD

Washington has a long history of volcanic activity and five volcanoes are situated within its borders. Mount Baker is the closest volcano to the March's Point site; located approximately 40 miles to the northeast. Mount Baker is the most glaciated of the Cascade Range volcanoes and contains more than 0.43 cubic miles of snow and ice. Crests of hydrothermally altered rock and cooled lava are visible above the glaciers and upper sides of the volcano. Although Mount Baker is considered volcanically active, it has not experienced frequent or explosive eruptions like some of the neighboring volcanoes. Mount Baker's most recent eruption was around 1870, although increased fumarolic activity and several small-volume debris avalanches were observed during the 1950's and 1970's (WSDNR, 2011)

MINERAL RESOURCES

Bedrock units that are commonly mined in Skagit County include Permian limestone, metavolcanic rocks, Paleozoic limestone, Twin Sisters Dunite, and other basic plutonic and volcanic rocks. Skagit County ranks sixth out of Washington State's 39 counties in terms of area disturbed by surface mining. Abundant sand and gravel resources are available from deposits of weak sedimentary and metamorphic rocks; although field investigations have shown that many of these deposits are of poor quality for aggregate (WSDNR, 2001).

No known mineral resources occur within the project site (USGS, 2011). There are several on-going mining activities and operations in the vicinity of the project site. Mining activities are currently focused on sand and gravel surface mines for construction. Copper, gold, silver, and manganese have also been mined in lesser amounts 4 miles west of March's Point site.

3.2.2 SETTING – FIDALGO BAY RESORT FLATS SITE

TOPOGRAPHY

The Flats site lies on moderately level sandy sediments along the western boundary of Fidalgo Bay. The topography of the Flats site and immediate vicinity is generally level with gentle slopes towards the west away from the coast. Steeper gradients are situated along the west sides of State Route 20 (SR-20). Elevations of the project area range from approximately 5 feet to 7 feet amsl. **Figure 3.2-3** shows the elevation contours of the Flats site.

GEOLOGIC SETTING

The Flats site is located 2.6 miles northwest of the March's Point site and also within the northern section of the Puget Trough physiographic province. Surficial deposits on the Flats site are similar to those found on the March's Point site and also consist of colluviums and glacial till (USGS, 2011).

SOILS

Flats Site Soil

The project area is underlain entirely by the Xerorthents soil type (0 to 5 percent slopes). This soil has a slope ranging from 0% to 5% and is the only soil type found on the Flats site. Xerorthents are found in glacial outwashcommonly consist of mechanically removed and mixed materials found in cut and fill areas primarily used for urban development. The soil is very well-drained, very permeable, and easily tilled. No single profile is representative of this soil type due to its widely varied material composition and consistency. Although commonly observed profiles typically include a surface layer of olive to white gravelly course sand about eight inches thick. The next layer reaches a depth of approximately 60 inches or more and is a pale olive color with stratified extremely gravelly coarse sand.

Skagit County Soil Survey

The capability class occurring on the Flats site is defined in **Table 3.2-3.** The Soils Capability Class on the Flats site is VIIs (NRCS, 1989). **Section 3.9** (Land Use) discusses agricultural land associated with the Flats site.

TABLE 3.2-3
FLATS SITE SOIL LIMITATIONS

Soils	Depth	Permeability	Drainage	Erosion	Runoff	Capability Class
Xerorthents (165) 0-5% slope	Very Deep	Rapid	Excessively well-drained	Slight	Slow	VIIs*

Notes: See Table 3.2-1 for Notes; *Xerorthents soil is not rated under the Revised Storie Index
Source: NRCS, 1989

SEISMICITY

Seismic hazards at the Flats site are similar to those of the March's Point site due to their close proximity. The closest active faults or fault zones are the same as those found for the March's Point site. The Puget Sound fault zone is the closest known fault zone, located approximately 8.3 miles south of the Flats site.

SOURCE: USGS 1/9 Arc Second, Digital Elevation Model, 2011; Microsoft aerial photograph, 7/9/2010; AES, 2013

Figure 3.2-3

Topography of the Fidalgo Bay Resort Flat Site

Skagit County is classified as Zone 3 in the IBC, which means that there is a strong probability of a major earthquake resulting in an effective peak ground acceleration rate between twenty and thirty percent (USGS, 2010).

Soil liquefaction may also occur in seismic conditions. However, as described above for the March's Point site, the surrounding vicinity, which includes the Flats site, has a low susceptibility to liquefaction (WSDNR, 2004).

VOLCANIC HAZARD

As detailed in **Section 3.2.1**, future volcanic activity that may affect the project site is most likely confined to Mount Baker. However, no hazard of pyroclastic flow from Mount Baker exists for the project site due to its removed distance.

MINERAL RESOURCES

No identified mineral resources (i.e., gravel or sand) exist within the March's Point site other than the soils identified above (WSDNR, 2001).

3.3 WATER RESOURCES

This section identifies and discusses the existing water resources on the March's Point and Flats sites. Specific areas discussed include watershed setting, floodplain, groundwater resources, surface water quality, and drinking water quality.

3.3.1 SETTING

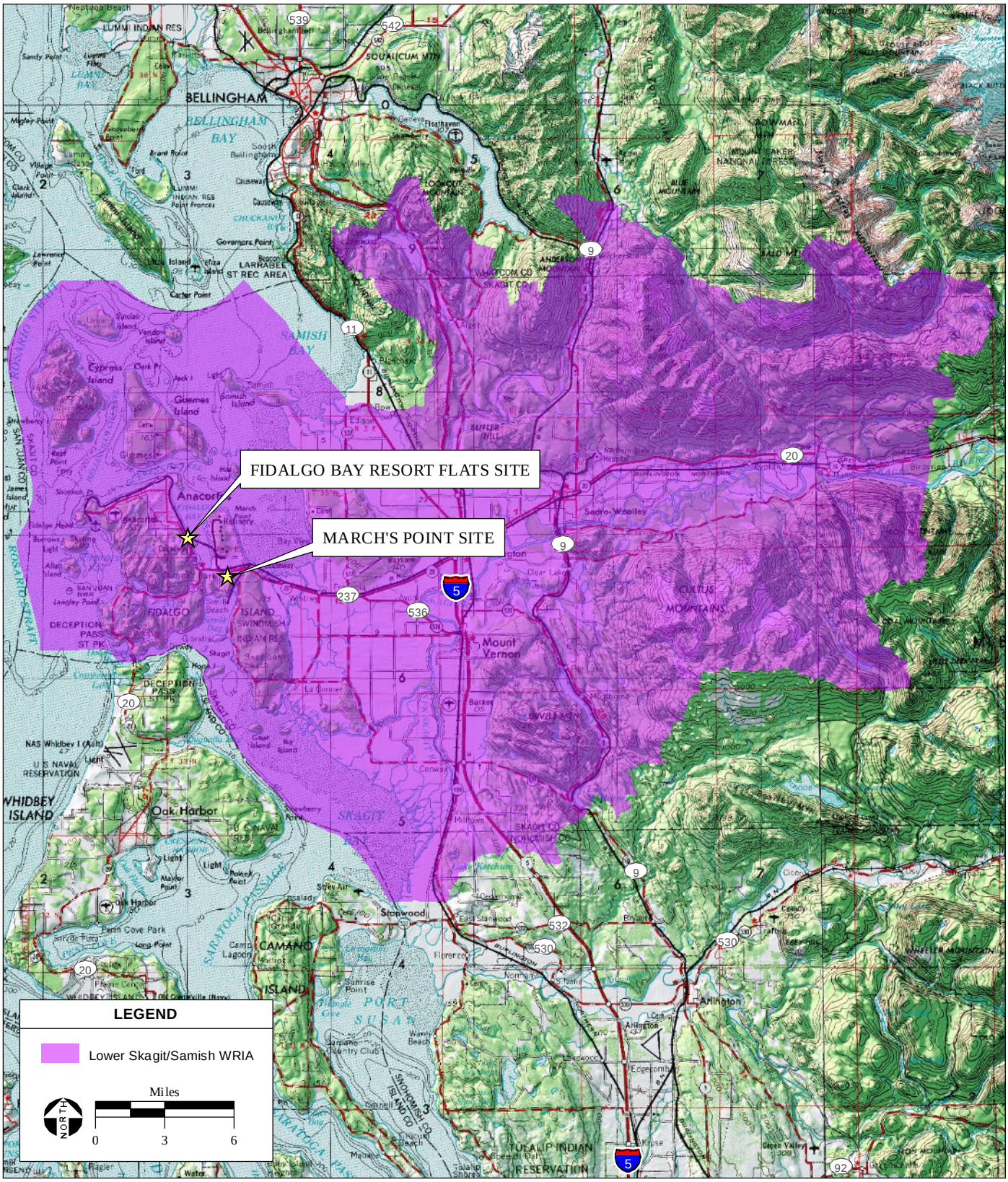
WATERSHED SETTING

March's Point Site

The March's Point site lies within the western portion of the Lower Skagit/Samish Water Resource Inventory Area watershed basin (WRIA 03) (Ecology, 2005b) (**Figure 3.3-1**), and Puget Sound hydrologic subregion, as well as the Strait of Georgia cataloging unit (no. 17110002). The Puget Sound is classified as a fjord system of flooded glacial valleys with one major and one minor connection with the Strait of Juan de Fuca. The major connection is through Admiralty Inlet where approximately 98 percent of the total tidal exchange flows though; Deception Pass provides the other two percent of the tidal exchange. Deception Pass is situated approximately 5.5 miles southwest of the March's Point site. A system of saltwater estuaries within the Sound is contained within three major basins supplied with water from the many tributaries of the Olympic and Cascade Mountain watersheds. These watersheds are highly seasonal with a peak monthly discharge rate of approximately 367,000 cubic feet per second (cfs), and a mean annual discharge rate of 41,000 cfs (Ecology, 2005b). The Puget Sound encompasses a water area of roughly 1,020 square miles.

The Strait of Georgia is located immediately northwest of the project sites, adjoins to the Puget Sound, and separates Vancouver Island from Washington and the British Columbia mainland. It is approximately 150 miles in length and has a maximum width of 34 miles. Haro and Rosario Straits mark the southern terminus of the Strait of Georgia approximately 32 miles and 11.5 miles west of the site, respectively. The mainland coast is marked by many inlets for the Strait of Georgia, including the Fraser River, which supplies roughly 80 percent of the freshwater flow. Mean depth within the Strait of Georgia is approximately 510 feet with a maximum depth of 1,380 feet.

Annual rainfall in Skagit County ranges from 26 inches in the City of Anacortes to more than 60 inches near the City of Concrete to the east (Skagit County, 2011). Most of the precipitation falls during the winter, and substantial snowfall is limited to higher elevations. Although very close to sea level, the City of Anacortes (City) receives approximately 4.5 inches of snowfall annually.



SOURCE: FEMA Q3 Flood Data, 1996; FEMA FIRM for Skagit County, 1985; AES, 2013

Figure 3.3-1

Lower Skagit/Samish Water Resource Inventory Area Watershed Basin

Weaverling Spit Site

Similar to the March's Point site, the Flats site) is located within the western portion of WRIA 03 (**Figure 3.3-1**). The Flats site is also within the Puget Sound hydrologic subregion as well as the Strait of Georgia cataloging unit (no. 17110002). See **Section 3.3.1** Watershed Setting above.

FLOODPLAIN

March's Point Site

Executive Order (EO) 11988 pertaining to floodplain management states that each federal agency shall "provide leadership and shall take action to reduce the risk of flood loss." In order for the BIA to carry out its responsibility, the order requires determination whether a project is located within a floodplain and consideration of alternative project locations within a floodplain. If the project must reside on a floodplain, the agency must minimize any potential impacts. The Federal Emergency Management Agency (FEMA) is responsible for predicting the potential for flooding in most areas. FEMA routinely performs this function through the update and issuance of Flood Insurance Rate Maps (FIRMs), which depict various levels of predicted inundation. As shown on FIRM number 5301510225C (**Figure 3.3-2**), the March's Point site is located in Flood Zone C (FEMA, 2009). Zone C is designated for those lands which are located above a 500 year floodplain. The 100-year and 500-year floodplains correspond to a 1% and 0.2% annual chance of a flood, respectively.

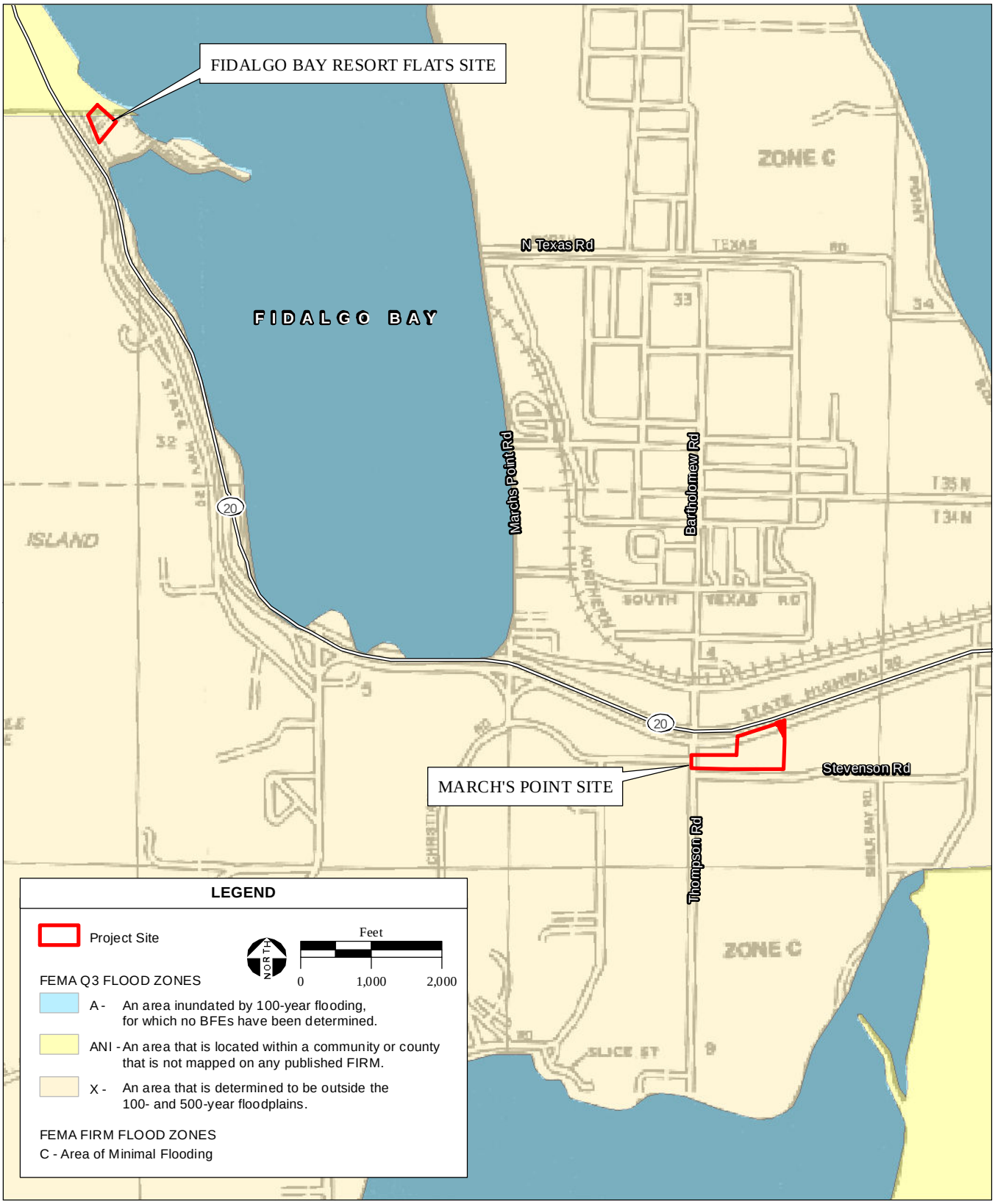
Fidalgo Bay Resort Flats Site

As shown on FIRM number 5303170080A, the Flats site is located in Flood Zone X (FEMA, 2003). Zone X is designated for those lands which are located outside of the 500 year floodplain.

GROUNDWATER RESOURCES

Groundwater provides water supply for agricultural, municipal, and individual domestic water systems throughout Skagit County. Alluvial and recessional outwash aquifers are present throughout various regions of the Skagit River Valley. Aquifer thicknesses range from 200 to 450 feet in the Skagit River Valley and water is predominantly unconfined with exception to areas where the aquifer is exposed at land surface or not fully saturated by the surrounding aggregate. Precipitation is the main process of water recharging the aquifers within the vicinity of the project sites (USGS, 2009b).

Groundwater levels in the Lower Skagit River Basin have remained relatively stable over the past 30 years, with typical seasonal fluctuations, but no significant long-term trends (USGS, 2009b). Abundant rainfall (26 to over 60 inches per year) and snowmelt during the spring and summer generally recharge the basin to capacity each spring. During drought conditions, increased drawdown occurs during summer months with less recovery in winter months. Post-drought levels have historically rebounded to approximately the same as pre-drought conditions.



SOURCE: FEMA Q3 Flood Data, 1996; FEMA FIRM for Skagit County, 1985; AES, 2013

Figure 3.3-2
FEMA Flood Zones

One existing, no-operational, domestic groundwater well is located in the southwest corner of the March's Point site. It is approximately 15-30 feet to groundwater at both the March's Point site and the Flats site (PBS&J, 2008).

3.3.2 WATER QUALITY

SURFACE WATER

Regulatory Setting

The Federal Clean Water Act (CWA), 33 U.S.C. Section 1301(a)(2), sets forth national goals that waters shall be "fishable, swimmable" (CWA Section 101 (a)(2)). The CWA addresses both point and non-point sources of pollution (Sections 402 and 319, respectively). It requires that a National Pollution Discharge Elimination System (NPDES) permit be obtained for all discharges from point sources into "Waters of the U.S." The CWA also directs states to establish water quality standards and to review and update them on a triennial basis (Section 303(c)).

As a result of the 1972 Federal Water Pollution Control Act (FWPCA), the United States Environmental Protection Agency (EPA) established the NPDES program. Later, the 1987 Clean Water Act amendments to the FWPCA extended the scope of the NPDES program. NPDES is a national program for regulating and administering permits for discharges to receiving waters, including non-point sources. In some states, the EPA has delegated permitting authority to the regional water quality agency, in this case the Washington State Department of Ecology (Ecology). However, the EPA retains authority to regulate discharges to waters on tribal lands. The goals and policies relating to water quality standards for surface waters of the State of Washington are summarized to characterize the water quality issues in the project area. In 2003, Ecology proposed a major revision of the State of Washington water quality standards. The EPA has only partially approved the revised surface water quality standards proposed by Ecology. As a result, the State will use the 2003 standards for the parts that the EPA has approved, and the prior 1997 standards for the revised parts that the EPA has not yet approved (Ecology, 2005b).

The surface water quality standards for Washington include both narrative and numerical water quality objectives. The water quality objectives for Fidalgo Bay and its surrounding areas are to protect the use designations, including aquatic life spawning and rearing habitat, primary contact recreational use, and a variety of water supply and miscellaneous uses (Ecology, 2011a). The water quality objectives are summarized below in **Table 3.3-1**.

Section 303(d) of the CWA requires states to periodically prepare a list of all surface waters in their respective jurisdictions for which beneficial uses of the water – such as for drinking, recreation, aquatic habitat, and industrial use – are impaired by pollutants. These include water bodies that do not meet state surface water quality standards and are not expected to improve within the next two years.

TABLE 3.3-1
WASHINGTON STATE WATER QUALITY OBJECTIVES FOR WRIA 03

Constituent	Water Quality Objective
Fecal Coliform	Fecal coliform organism levels must not exceed a geometric mean value of 100 colonies /100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained for calculating the geometric mean value exceeding 200 colonies /100 mL.
Dissolved Oxygen (DO)	For waters designated as aquatic life spawning and rearing habitat, the 1-Day minimum level for dissolved oxygen is 8.0 mg/L When the D.O. is lower than 8.0 mg/L due to natural conditions, then human actions considered cumulatively may not cause the D.O. of that water body to decrease more than 0.2 mg/L.
Total Dissolved Gas	Total dissolved gas shall not exceed 110% of saturation at any point of sample collection.
Temperature	The 7-day average of the daily maximum (7-DADMax) temperatures shall not exceed 17.5°C (63.5°F). When the water body's temperature is warmer than 17.5°C (63.5°F) due to natural conditions, then human actions considered cumulatively may not cause the 7-DADMax temperature of that water body to increase more than 0.3°C (0.54°F).
pH	pH shall be within the range of 6.5 to 8.5 with a human-caused variation within the above range of less than 0.5 units.
Turbidity	Turbidity shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10% increase in turbidity when the background turbidity is more than 50 NTU.
Toxicity	Toxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department.
Radioactive Substances	Deleterious concentrations of radioactive materials for all classes shall be as determined by the lowest practicable concentration attainable and in no case shall exceed: 1/12.5 of the values listed in WAC 246-221-290 or EPA Drinking Water Regulations for radionuclides.
Aesthetics	Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.

Notes: mL = milliliters; mg/L = milligrams per liter; NTU = Nephelometric Turbidity Units
Source: Ecology, 2011a

States establish a priority ranking of these impaired waters for purposes of developing plans that include Total Maximum Daily Loads (TMDLs). These plans describe how an impaired water body will meet water quality standards through the use of TMDLs. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards and an allocation of that amount to the pollutant's sources.

The antidegradation provisions of the State of Washington Administrative Code (WAC 173-200-030), in compliance with the CWA, state that existing beneficial uses of water bodies (fishing, recreation, drinking) shall be protected and maintained. The WAC further states that all substances discharged into water bodies shall be provided with all known, available, and reasonable methods of prevention, control and treatment by new sources before discharge. Non-point pollution shall be provided with all known, available, and reasonable best management practices for control and reduction.

Stormwater discharges from industries and construction sites are regulated by Ecology, with oversight by the EPA, under Phase I NPDES general construction permits. These permits require the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). SWPPPs for construction sites address erosion and sediment control, and containment of fuels and solvents. SWPPPs for industrial facilities identify, prevent, and control the contamination of stormwater discharges from spills and leakage of industrial chemicals and fuels.

Disposal of treated wastewater may also contribute to the impairment of surface waters. The EPA regulates wastewater disposal on tribal lands with consideration given to water quality standards established by local agencies. Wastewater effluent discharge to surface waters requires an NPDES permit consistent with the local agency water quality objectives including monitoring requirements.

Surface Water Quality

The primary surface water bodies within the vicinity of the project sites are the Padilla Bay, Puget Sound-Similk Bay, Fidalgo Bay, Lower Skagit River, and an unnamed seasonal stream to the south and southwest of the March's Point site.

Padilla Bay stretches eight miles from north to south and is located approximately 1.2 miles northeast of the March's Point site. Padilla Bay is designated for research and education through the National Estuarine Research Reserve System and is a primarily saltwater estuary at the terminus the Skagit River (NERRS, 2011). The Padilla Bay Reserve is jointly managed by the National Oceanic and Atmospheric Administration (NOAA) and Ecology (NERRS, 2011). The Skagit River deposits large amounts of sediment into Padilla Bay, making it relatively shallow with several miles of mud flats during low tide events. Water quality within Padilla Bay is generally well within State standards. However, elevated turbidity and fecal coliform levels have been observed during heavy rain events. These elevated levels are characteristic of estuaries which receive drainages from nearby and livestock and agricultural properties (SST, 2009).

The Swinomish Channel of Padilla Bay, east of the March's Point site, is listed on the Washington 303(d) list as Category 2: Waters of Concern for fecal coliform and dissolved oxygen (Ecology, 2008). The Ecology Category 2: Waters of Concern are defined as "waters where there is some evidence of a water

quality problem, but not enough to require production of a water quality improvement project (also known as a TMDL) at this time."

Approximately one mile northwest of the March's Point site and adjacent to the Flats site is the shallow embayment of Fidalgo Bay. Fidalgo Bay encompasses 1,575 acres of salt marshes, tide flats, mudflats, and sand and gravel beaches. The City marks the western boundary of Fidalgo Bay while March Point to the immediate north of the March's Point site and east of the Flats site indicates the eastern extent. In April of 2008, 650 acres of Fidalgo Bay were given Aquatic Reserve status by the Washington State Department of Natural Resources (DNR). This designation entails a 90-year term and the implementation of restoration and research activities guided by its published management plans (Samish DNR, 2010). The water of the Fidalgo Bay surrounding the Flats site has been listed on the Washington 303(d) list as Category 1: Waters.

There are also two surrounding areas within the Fidalgo and Padilla bays that have been listed on the Washington 303(d) list as Category 5: Polluted Waters. The first area is located in Fidalgo Bay east of the Flats site. The second area of Category 5 water, located in Padilla Bay northeast of the March's Point site, was also assigned the Category 5 listing. The Category 5 classification is the highest category and is assigned to polluted waters to indicate that water quality standards have been violated for one or more pollutants and that a water quality improvement project (TMDL) is required.

The Lower Skagit River is listed on the Washington 303(d) list as Class A, excellent waters. The south fork of the Skagit River was previously added to the 1996/1998 CWA Section 303(d) list of impaired water for elevated levels of fecal coliform, but has since been removed. Implementation of a nutrient management program, reduction of failing septic systems, and an updated wastewater treatment plant have reduced fecal coliform to levels within water quality standards (EPA, 2009).

In a 2005-2010 study conducted by the Samish Indian Nation Department of Natural Resources (Samish DNR), various water quality indicators and pollutants were monitored over a five-year period in order to assess the water quality and possible sources of contaminants in Fidalgo Bay. Nearly all of the outfalls into Fidalgo Bay experienced fecal coliform levels in violation of Ecology standards. The Samish DNR has been working alongside the Skagit County Health Department and Skagit Conservation District to assist landowners in developing mitigation strategies to reduce the concentrations of fecal coliform found in water on their properties which eventually flow in Fidalgo Bay. Other indicators, such as dissolved oxygen, pH, temperature, and nutrient levels were generally within the water quality standards of Washington State (Samish DNR, 2010).

DRINKING WATER QUALITY

Under the mandate of the Safe Drinking Water Act, the EPA defines National Primary Drinking Water Regulations (primary standards). These are legally enforceable standards that apply to public water

systems. These standards are established to protect human health by limiting the levels of contaminants in drinking water. The EPA also defines non-enforceable National Secondary Drinking Water Regulations (secondary standards) that regulate contaminants that cause cosmetic and aesthetic effects, but not health effects. The EPA recommends that these secondary standards be met but does not require systems to comply with them. Both primary and secondary drinking water standards are expressed as either Maximum Contaminant Levels (MCLs), which define the highest level of a contaminant allowed in drinking water, or Maximum Contaminant Level Goals (MCLGs), which define the level of a contaminant below which there is no known or expected risk to health.

The City is the proposed water service provider for both alternative project sites. In 2010 the City water system produced 5,046 million gallons (MG) of water with authorized consumption of 4,631 MG (City of Anacortes, 2010a). The majority of the water supply within the City service area is provided via the Skagit River (City of Anacortes, 2010). The existing water supply characteristics for both the Thompson Road and the Flats Sites are described in **Section 3.10,** Public Services.

3.4 AIR QUALITY

This section describes existing conditions related to air quality for the proposed project. The general and site-specific description of air quality contained herein provides the environmental baseline by which direct, indirect, and cumulative environmental effects are identified and evaluated in **Section 4.0**.

3.4.1 REGULATORY CONTEXT

NATIONAL AMBIENT AIR QUALITY STANDARDS

The Federal Clean Air Act (CAA) of 1970, as amended, establishes air quality standards for several pollutants. These pollutants are termed "criteria" pollutants because the United States Environmental Protection Agency (EPA) has established specific concentration threshold criteria based upon specific medical evidence of health effects or visibility reduction, soiling, nuisance, and other forms of damage. These national ambient air quality standards (NAAQS) are divided into primary standards and secondary standards. Primary standards are designed to protect the public health and secondary standards are intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage. Ambient air quality standards are presented in **Table 3.4-1**.

The Federal government has established NAAQS to define levels of air quality that protect the public health and welfare from the known adverse effects of air pollutants. Standards were developed for carbon monoxide (CO), lead (Pb), particulate matter 10 or 2.5 microns in size (PM_{10} or $PM_{2.5}$), sulfur dioxide (SOx), ozone (precursors NOx and ROG), and nitrogen dioxide (NOx). These pollutants are commonly referred to as criteria air pollutants (CAPs) and have been identified by the EPA as being detrimental to human health. CAPs are used as indicators of regional air quality.

Areas are designated attainment, nonattainment, or maintenance by the EPA depending on weather the area is below or exceed the established NAAQS. Non-attainment areas must take steps towards attainment within a specific period of time. Once an area reaches attainment for particular criteria pollutant, then the area is redesignated attainment or maintenance. The CAA places most of the responsibility on states to achieve compliance with the NAAQS. States, municipal statistical areas, air basins, and counties that contain areas of non-attainment are required to develop a State Implementation Plan (SIP), which outlines policies and procedures designed to bring the state into compliance with the NAAQS. The project area is in attainment for all CAPs.

HAZARDOUS AIR POLLUTANTS

In addition to the above-listed criteria pollutants, Hazardous Air Pollutants (HAP) is group of air bourn chemical pollutants of concern. Sources of HAPs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, cigarette smoke, and motor vehicle exhaust. Cars and trucks release at least forty different HAPs. The most important, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and

acetaldehyde. Health effects of HAPs can include cancer, birth defects, and neurological damage. Many of the compounds contained in environmental tobaccos smoke (ETS) have been defined by the EPA as HAPs.

TABLE 3.4-1
NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutants		Primary		Secondary		Violation Criteria
		ppm	$\mu g/m^3$	ppm	$\mu g/m^3$	
Ozone	8 hours	0.75	157	0.075	157	The 3-year average of the annual 4th highest daily 8-hour maximum is not to be above 0.075 $\mu g/m^3$
Carbon Monoxide	8 hours	9	10,000	-	-	If exceeded on more than 1 day per year
	1 hour	35	40,000	-	-	If exceeded on more than 1 day per year
Nitrogen Dioxide	Annual average	0.053	-	0.053	-	Not to be above 0.053 ppm in a calendar year.
	1 hour	0.100	-	-	-	The 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor is not above 0.100 ppm.
Sulfur Dioxide	Annual average	0.03	-	-	-	Not to be above 0.03 ppm in a calendar year.
	24 hours	0.14	-	-	-	If exceeded on more than 1 day per year
PM_{10}	24 hours	-	150	-	150	Not to be above 150 $\mu g/m^3$ on more than three days over three years with daily sampling
$PM_{2.5}$	Annual arithmetic mean	N-	15	-	15	The 3-year average from a community-oriented monitor is not above 15 $\mu g/m^3$.
	24 hours	-	35	-	35	The 3-year average of the 98th percentile for each population-oriented monitor within an area is not above 35 $\mu g/m^3$.
Lead	Rolling – Month Average	-	0.15	-	0.15	Not to be above 0.15 $\mu g/m^3$.
	Quarterly Average	-	1.5	-	1.5	-

Note 1-hour NO2 standard was implemented in January 2011.
PM10 = particulate matter 10 microns in size; PM2.5 = particulate matter 2.5 microns in size.
Source: EPA, 2011.

State Implementation Plan

Air quality regulators in nonattainment areas must set forth the state's strategy for achieving federal air quality standards by a specific timeline. These steps are consolidated within a State Implementation Plan (SIP) as mandated by the CAA. The SIP is not a single document, but a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The SIP for Washington is officially entitled *A Plan for the Implementation, Maintenance and Enforcement of National Ambient Air Quality Standards in the State of Washington* and is a number of documents that set forth the State's strategies for achieving Federal air quality standards. Ecology is responsible for implementation of the SIP in Washington. Since the project area is in attainment for all CAPs, the State of Washington SIP does not include items for the region.

FEDERAL GENERAL CONFORMITY

Under the General Conformity Rule; recently updated in 2010, the lead agency with respect to a federal action is required to demonstrate that the proposed federal action conforms to the applicable SIP before the action is taken. There are two phases to a demonstration of general conformity:

- The Conformity Review process, which entails an initial review of the federal action to assess whether a full conformity determination is necessary, and
- The Conformity Determination process, which requires that a proposed federal action be demonstrated to conform to the applicable SIP.

The Conformity Review requires the lead agency to compare estimated emissions to the applicable general conformity *de minimus* threshold(s). If the emission estimates from step one is below the applicable threshold(s), then a general conformity determination is not necessary and the full Conformity Determination is not required. If emission estimates are greater than *de minimus* levels, the lead agency must conduct a formal Conformity Determination. Because the project area is in a region of attainment for all CAPS, no *de minimus* threshold exists.

FEDERAL CLASS I AREAS

Title 1, Part C of the CAA was established, in part, to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value. The CAA designates all international parks, national wilderness areas, and memorial parks larger than 5,000 acres and national parks larger than 6,000 acres as "Class I areas." The CAA prevents significant deterioration of air quality in Class I areas under the Prevention of Significant Deterioration (PSD) program. The PSD Program protects Class I areas by allowing only a small increment of air quality deterioration in these areas by requiring assessment of potential impacts on air quality related values of Class I areas.

Any major source of emissions within 100 kilometers (km) (62.1 miles) from a federal Class I area is required to conduct a pre-construction review of air quality impacts on the area(s). A "major source" for

the PSD program is defined as a facility that will emit (from direct stationary sources) 250 tpy of regulated pollutant. For certain industries, these requirements apply to facilities that emit (through direct stationary sources) 100 tpy or more of a regulated pollutant. Mobile sources (i.e. vehicle emissions) are by definition not stationary sources and are therefore not subject to the PSD program. The nearest federal Class I area is Olympic National Park located approximately 61 miles southwest of the project site,

GLOBAL CLIMATE CHANGE

Federal

Climate change is a global phenomenon attributable to the sum of all human activities and natural processes.

In 1997, the Council on Environmental Quality (CEQ) circulated an internal draft memorandum (CEQ, 1997a) on how global climate change should be treated for the purposes of the National Environmental Policy Act (NEPA). The CEQ draft memorandum advised federal lead agencies to consider how proposed actions subject to NEPA would affect sources and sinks of green house gases (GHGs). During the same year, CEQ released guidance on the assessment of cumulative effects in NEPA documents (CEQ, 1997b). Consistent with the CEQ draft memorandum, climate change impacts were offered as one example of a cumulative effect.

The following are the most recent regulatory actions taken by the EPA:

- On July 23, 2009, EPA published a final "rule which proposes to establish the criteria for including sources or sites in a Registry of Recoverable Waste Energy Sources (Registry)," as required by the Energy Independence and Security Act of 2007. Waste energy can be used to produce clean electricity. The clean electricity produced by waste energy would reduce the need for non-renewable forms of electricity production, thus reducing greenhouse gas (GHG) emissions.

- On September 15, 2009, EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) proposed a new national program that would reduce GHG emissions and improve fuel economy for all new cars and trucks sold in the United States. EPA proposed the first national GHG emissions standards under the Clean Air Act, and NHTSA proposed an increase in the Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act.

- In response to the FY2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110–161), EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. Signed by the Administrator on September 22, 2009, the rule requires that suppliers of fossil fuels and industrial GHGs, manufacturers of vehicles and engines outside of the light duty sector, and facilities that

emit 25,000 metric tons or more of GHGs per year to submit annual reports to EPA. The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change.

- On September 30, 2009, EPA proposed new thresholds for greenhouse gas (GHG) emissions that define when Clean Air Act permits under the New Source Review and title V operating permits programs would be required. The threshold was set at 25,000 metric ton of GHG emissions.

- In February, 2010 the CEQ Chair released a memorandum, *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*. The memorandum provides guidance on how project-related GHG emission should be analyzed in NEPA documents. The Draft Guidance provides that a NEPA climate change analysis shall provide quantification and mitigation to reduce GHG emissions. The guidance also provides that 25,000 metric tons of GHG emissions per year may be a helpful guideline to assist lead agencies in making informed decisions on climate change impacts resulting from a project subject to NEPA. The guidance notes that the 25,000 metric tons is not an indicator of a threshold of significant effects, but rather, it is an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving emissions of GHGs.

State

Executive Order 07-02

The Washington Climate Change Challenge, signed by Governor Christine O. Gregorie in February 2007, established goals for reducing GHG emissions, creating jobs and reducing fuels spending. It was the basis for creating the Climate Advisory Team to recommend ways to reduce greenhouse gas emissions. EO 07-02 also directed the state to assess steps required to prepare for the impacts of climate change on water supply, public health, agriculture, forestry and coastal areas.

House Bill 2815

House Bill 2815(HB 2815) was passed in 2008 as part of the Governor's Climate Change Framework. HB 2815 is codified in Revised Code of Washington 70.235 (RCW 70.235). RCW 70.235 requires that the state shall limit emissions of GHG to achieve the following emission reductions for Washington:

- By 2020, reduce overall emissions of GHG in the state to 1990 levels;
- By 2035, reduce overall emissions of GHG in the state to twenty-five percent below 1990 levels;
- By 2050, the state will do its part to reach global climate stabilization levels by reducing overall emissions to fifty percent below 1990 levels, or seventy percent below the state's expected emissions that year.

Executive Order 09-05

Governor Gregorie signed Executive Order 09-05 (EO 09-05) *Washington's Leadership on Climate Change* on May 21, 2009. EO 09-05 directs Ecology to:

- Continue to work with six other Western states and four Canadian provinces in the Western Climate Initiative to develop a regional emissions reduction program design.
- Advise the federal government and Washington's congressional delegation on designing a national program that reflects state priorities.
- Work with companies that emit 25,000 metric tons or more each year to develop emission reduction strategies.
- Work with businesses and interested stakeholders to develop recommendations on emission benchmarks by industry to make sure 2020 reduction targets are met.
- Work with TransAlta to reduce emissions from the company's coal-fired power plant near Centralia by more than half.
- Work with Department of Natural Resources to develop forestry offset program and other financial incentives for the forestry and the forest products industry.
- Evaluate low-carbon fuel standard or alternative requirements to reduce carbon emissions from the transportation sector.
- Join with WSDOT, other West Coast states and the private sector to make alternative fuels, including electricity for plug-in vehicles, available along the West Coast highway and adjoining metropolitan centers.
- Working with the larger regional transportation councils (RTC), develop regional transportation plans that will increase transit options, and reduce greenhouse gas emissions.
- Address the impacts of climate change, including rising sea levels and the risks to water supplies.

3.4.2 EXISTING AIR QUALITY

REGIONAL TOPOGRAPHY AND METEOROLOGY

The project area for air quality includes the lower elevations along the northeastern slope of the Olympic Mountains extending eastward along the Strait of Juan de Fuca from near Port Angeles to Whidbey Island and then northward into the San Juan Islands. The Olympic Mountains and the extension of the Coastal Range on Vancouver Island shield this area from winter storms moving inland from over the ocean, which can prevent pollutant from being transported east. This project area is the driest area in western Washington with an average annual precipitation ranges from about 26 inches. Another factor which distinguishes this belt from other localities in the Puget Sound region is the rate of rainfall. Snowfall is light in the project area adjacent to the water, increasing with distance from the water and rise in terrain.

The project area receives slightly more sunshine and has less cloudiness than other localities in Puget Sound. During the latter half of the summer and early fall, fog banks from over the ocean and Strait of Juan de Fuca result in considerable fog and morning cloudiness in the lower elevations. The average July

maximum temperature ranges from 65° F near the water to 70° or 75° F inland, and the minimum temperature is near 50° F. Maximum temperatures seldom exceed 90° F. In January, maximum temperatures are in the 40's and minimums in the lower 30's.

REGIONAL AIR QUALITY

Sources of Emissions

Emissions are estimated and documented through the combined effort of Ecology and the Northwest Clean Air Agency (NWCAA). Emissions for the NWCAA region, which includes Skagit, Whatcom, and Island counties, are presented in the 2010 NWCAA *Emission Inventory for Island, Skagit & Whatcom counties* (NWCAA, 2010).

Table 3.4-2 summarizes estimated 2010 emissions of criteria air pollutants from major categories of air pollutant sources. For each pollutant, estimated emissions are presented for Skagit County. The dominance of the Skagit's urban area is readily apparent with 67.0 percent of CO being emitted by on-road vehicles. The 5.0 percent of the CO emissions from woodstoves and fireplaces is representative of a rural area.

TABLE 3.4-2
SKAGIT COUNTY 2010 EMISSIONS INVENTORY SUMMARY

Category	CO	SO_2	VOC	NO_x	$PM_{2.5}$	PM_{10}
	Tons per Year					
Industry	1,358	9775	2,123	3,873	271	877
Residential Fuel Use	40	14	6	96	8	8
Woodstoves, Fireplaces, Inserts	2,018	5	750	37	272	273
Agricultural and Rangeland Burning	99	-	14	4	15	16
Residential Outdoor Burning	288	0	82	17	61	67
Agricultural Tilling and Harvesting	-	68	-	-	119	598
On Road Mobile Emissions Sources	30,093	68	2,430	3,475	59	83
Railroads	30	18	11	219	7	7
Land-based Nonroad Mobile, except Rail Road	8,440	62	1,008	616	70	74
Paved and Unpaved Road Dust	-	-	-	-	20	511
Recreational Marine Vehicles	2,259	5	819	85	13	14
Total	**44,625**	**10,015**	**7,243**	**8,422**	**915**	**2,528**

Source: NWCAA, 2010.

NAAQS Designations

As shown in **Table 3.4-3**, the NWCAA region is in attainment for all CAPs under the NAAQS.

TABLE 3.4-3
NWCAA ATTAINMENT STATUS

Pollutant	NAAQS
Ozone	Attainment
PM_{10}	Attainment
$PM_{2.5}$	Attainment
CO	Attainment
NO_2	Attainment
SO_2	Attainment
Pb	Attainment

Notes: [1] The project site is not within the maintenance areas (refer to **Figure 3.4-1**).
Source: NWCAA, 2010.

Hazardous Air Pollutants

In the vicinity of the project sites, HAPS are primarily emitted by mobile sources, such as diesel trucks and airplanes. Other sources of HAP emissions in the region include the refinery complex located approximately one mile north of the March's Point site and one mile east of the Flats site, bulk gasoline distributers, dry cleaners, and paint stripping and miscellaneous surface coating operations.

Climate Change

Primary sources of GHG emissions in the NWCAA region include vehicles, refinery, trucks, airplanes, natural gas dispensing stations, and electricity generation facilities; however, there are many other source of GHG emissions in the NWCAA Region.

According to the United Nations Intergovernmental Panel on Climate Change (IPCC) and the EPA, temperatures in Washington State could increase by about 5ºF in winter and summer and by about 4ºF in spring and fall over the next 100 years. Precipitation is projected to change little in the spring, summer, and fall and to increase by about 10% in winter. The frequency of extreme hot days in summer is expected to increase along with the general warming trend. A recent study issued by the U.S. Department of Energy predicts similar climatic changes for the region.

SENSITIVE RECEPTORS

Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors.

The nearest residential sensitive receptors at the March's Point site are residences located approximately 100 feet south along Stevenson Road. The nearest school to the March's Point site is the Fidalgo Elementary School located 1.35 miles southwest on Gibralter Road. The nearest hospital is Island Hospital Physical Therapy located 4 miles northwest of the March's Point site on Seafarers Way, Anacortes.

The nearest residential sensitive receptor to the Flats site are the condominium residents located along Fidalgo Bay Road approximately 140 feet northwest of the site. The nearest school to the Flats site is the Saint Mary's School located 0.65 miles southwest on Gibralter Road. The nearest hospital is Island Hospital Physical Therapy located 1.6 miles northwest of the Flats site on Seafarers Way, Anacortes.

3.5 BIOLOGICAL RESOURCES

This section describes the regulatory setting, the methodology, and the existing biological resources that occur within the March's Point site and the Flats site. The assessment of biological resources is based on the biological surveys conducted to document the existing habitat types on-site, including potential waters of the U.S., and to assess the potential for occurrence or presence of federally listed species or their habitat. The following discussion of existing biological resources provides the basis from which potential environmental consequences were identified and measured.

3.5.1 METHODOLOGY

PRELIMINARY RESEARCH AND DATA GATHERING

Background information was obtained from the following sources:

- U.S. Geological Survey (USGS) 7.5 minute Anacortes North, WA topographic quadrangle;
- Color aerial photography in the vicinity of the March's Point site and Flats site (AES, 2009);
- Washington State Department of Fish and Wildlife (WDFW) Priority Habitat and Species Report maps in the vicinity of the March's Point site and Flats site (WDFW, 2013; **Appendix J**);
- U.S Fish and Wildlife Service (USFWS) critical habitat mapper (USFWS, 2010);
- List of proposed federal endangered and threatened species, critical habitat, candidate species, and species of concern in Skagit County (County) (USFWS, 2011; **Appendix J**);
- Table documenting whether any potentially occurring state listed species and species of concern occur within the March's Point site and the Flats site based on state listed species documented on the 2012 State Listed Species in Skagit County (2012) (WNHP, 2013) (**Appendix J**);
- Biological letter report that evaluates whether state and federal rare plants documented within the County (WNHP, 2010) occur within the March's Point site (AES, 2011a; **Appendix J**); and
- Wetlands delineation report for the March's Point site (*Delineation of Waters of the United States: Samish Indian Nation-Thompson Site*; AES, 2011b) (**Appendix J**).

Biological surveys were conducted within the March's Point site and the Flats site on October 21 and 22, 2009, May 25 and 26, 2010, and September 22 and 23, 2010. Biological surveys consisted of walking transects in north to south directions to document biological communities and evaluate whether potential habitat for special status species has the potential to occur within the March's Point site and the Flats site.

A table summarizing federal listed special status species reported in the County (USFWS, 2011) and the special status species with designated critical habitat mapped in the vicinity of the March's Point site the Flats site (USFWS, 2010) is provided in **Appendix J**. Special status species include the federally listed endangered, threatened, and candidate species, and species of concern documented on the USFWS (2011) list. Habitat requirements for each special status species were assessed and compared to the type and quality of habitats observed during the biological surveys of the March's Point and Flats sites. The table

provides a rationale as to whether the special status species have the potential to occur within either of the March's Point or Flats sites. Several special status species were eliminated due to the lack of suitable habitat or site location occurring outside the known elevation or geographic ranges for the species. Special status species without the potential to occur in the vicinity of the March's Point site or the Flats site are not discussed further.

3.5.2 REGULATORY SETTING

FEDERAL ENDANGERED SPECIES ACT

The USFWS and the National Marine Fisheries Service (NMFS) implement the federal Endangered Species Act (FESA) of 1973 (16 USC Section 1531 *et seq*.). Under the FESA, threatened and endangered species on the federal list and their habitats (50 CFR Subsection 17.11, 17.12) are protected from "take" (i.e., activities that harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect), as well as any attempt to engage in any such conduct, unless Section 7 consultation is initiated and a Biological Opinion with incidental take provisions is rendered. Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present within the project site or vicinity, and determine whether the proposed project would have a potentially significant impact upon such species. Under the FESA, habitat loss is considered an impact to the species.

Critical Habitat

The USFWS designated the bull trout (*Salvelinus confluentus*)-Coastal-Puget Sound Distinct Population Segment (DPS) as threatened on November 1, 1999 (64 FR 58910). The bull trout Coastal-Puget Sound DPS encompasses all Pacific coast drainages[1] within the State of Washington, including Puget Sound; it is separated from other populations of bull trout by the Columbia River basin to the south and the crest of the Cascade Mountain Range to the east. The USFWS (2004) *Draft Recovery Plan for the Coastal-Puget Sound Distinct Population Segment of Bull Trout* (*Salvelinus confluentus*) identifies polychlorinated biphenyls (PCB) in Padilla Bay and Fidalgo Bay as pollutants not meeting standards for the Puget Sound bull trout marine foraging, migration, overwintering habitat even though no local populations of bull trout exist. Potential impacts during construction activities could result from discharge of hazardous materials associated with increased PCBs (USFWS, 2004).

The NMFS designated critical habitat for the Puget Sound Chinook salmon (*Oncorhynchus* (=*Salmo*) *shawytscha*) Evolutionary Significant Unit (ESU) on September 2, 2005 (70 FR 52536). The Indian lands specifically excluded from this critical habitat are those defined in the Secretarial Order, including: lands held in Trust by the U.S. for the benefit of any Indian Tribe; fee lands, either within or outside the reservation boundaries, owned by the tribal government; and fee lands within the reservation boundaries owned by individual Indians. This critical habitat designation is not applicable to either the Thompson

[1] See Critical Habitat and Essential Fish Habitat section below for a description of the hydrologic connectivity of the Thompson Road Site to the waters of Padilla Bay and Puget Sound.

Road site or the Flats site because they are owned by the Samish Tribe (70 FR 52536) and both sites are located above the extreme high water line of the shoreline.

MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) conserves and manages fishery resources off the coasts of the U.S., anadromous species, and Continental Shelf fishery resources of the U.S., including the conservation and management of highly migratory species through the implementation and enforcement of international fishery agreements. The NMFS enforces the MSA, and regulates commercial and recreational fishing and the management of fisheries resources. The Sustainable Fisheries Act of 1996 amended the MSA to include new fisheries conservation provisions by emphasizing the importance of fish habitat in regards to the overall productivity and sustainability of U.S. marine fisheries (Public Law 104-267). The revised MSA mandates the identification and protection of essential fish habitat (EFH) for managed species during the review of projects conducted under federal permits that have the potential to affect such habitat. Federal agencies are required to consult with NMFS on all actions and proposed actions that are authorized, funded, or undertaken by the agency, which may adversely affect EFH (MSA 305.b.2). Adverse effects can be direct (contamination or physical disruption), indirect (loss of prey or reduction in species fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Four Fishery Management Plans (FMP) occur in California, Oregon, and Washington. The FMPs identify EFH for groundfish, coastal pelagic species, Pacific salmon, and Pacific highly migratory fisheries.

Essential Fish Habitat

The March's Point site and the Flats site occur within the designated ranges of the following EFHs for Chinook salmon: Upper Columbia Spring-Run, Snake River Fall-Run, Snake River, and Puget Sound. Drainages within the March's Point and Flats sites are located within the 1-mile designated range of the EFH for bull trout Coastal-Puget Sound DPS.

MIGRATORY BIRD TREATY ACT

Most bird species (especially those that are breeding, migrating, or of limited distribution) are protected under federal regulations. Under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Subsection 703-712), migratory bird species, their nests, and their eggs are protected from injury or death, and any project-related disturbances during the nesting cycle. As such, project-related disturbances must be reduced or eliminated during the nesting cycle.

BALD AND GOLDEN EAGLE PROTECTION ACT

In 1940, the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250) was enacted (and later amended) which prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald and golden eagles, including their parts, nests, or eggs. The Bald and Golden Eagle Protection Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to

sell, purchase to barter, transport, export, or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Bald and Golden Eagle Protection Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

WETLANDS AND WATERS OF THE U.S.

The U.S. Army Corps of Engineers (USACE) has primary federal responsibility for administering regulations that concern waters of the U.S. (including wetlands), under Section 404 of the Clean Water Act. Section 404 of the Clean Water Act regulates the discharge of dredge or fill material into waters of the U.S. The USACE requires that a permit be obtained if a project proposes to place structures within, over, or under navigable waters and/or to discharge dredge or fill material into waters below the ordinary high-water mark. The USACE has established a series of nationwide permits (NWP) that authorize certain activities in waters of the U.S. The U.S. Environmental Protection Agency (USEPA) administers Sections 401 (Water Quality Certification) and 402 (National Pollutant Discharge Elimination System) of the Clean Water Act on Tribal lands.

The federal regulations implementing the Clean Water Act define waters of the U.S. as:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands; or
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use or degradation of which could affect interstate or foreign commerce including any such waters.

3.5.3 SETTING – MARCH'S POINT SITE

HABITAT TYPES

Habitat types in the March's Point site include: nonnative annual grassland, riparian, snowberry (*Symphoricarpos albus*) patch, ruderal/disturbed, manmade drainage ditch, and roadside ditch. Dominant vegetation within each habitat type is discussed below. Habitat types by acreages are shown in **Figure 3.5-1**. Photographs of the habitat types are illustrated in **Figure 3.5-2**.

Nonnative Annual Grassland

Nonnative annual grassland occurs throughout most of the March's Point site. The nonnative annual grassland is routinely mowed. Dominant vegetation in the nonnative annual grassland includes: orchard grass (*Dactylis glomerata*), velvet grass (*Holcus lanatus*), Johnsongrass (*Sorghum halipense*), red fescue (*Festuca rubra*), and Robert geranium (*Geranium robertianum*). Ornamental landscape trees occur within the nonnative annual grassland on the western portion of the March's Point site.

SOURCE: AEX Aerial Photograph, 9/15/2007; AES, 2011

Figure 3.5-1
Habitat Types and Wetland Features

PHOTO 1: View eastward of riparian vegetation surrounding a roadside ditch (DCH 2) from the southern boundary of the March's Point site.

PHOTO 2: View westward of manmade drainage ditch (DCH 1) from northeast side of the March's Point site.

PHOTO 3: View northward of snowberry patch from the southeastern portion of the March's Point site.

PHOTO 4: View southward of manmade drainage ditch (DCH 1) that flows south to north through the eastern portion of the March's Point site.

SOURCE: AES, 2013

Figure 3.5-2
Site Photographs

Riparian

A narrow riparian corridor surrounds a roadside ditch (DCH 2) that occurs along the southeastern boundary of the March's Point site. Dominant vegetation in the riparian corridor includes: willow (*Salix* sp.), Oregon grape (*Berberis aquifolium*), American speedwell (*Veronica Americana*), chain speedwell (*Veronica catenata*), rose (*Rosa* sp.), and trailing blackberry (*Rubus ursinus*).

Snowberry Patch

A snowberry patch occurs within the southeastern portion of the March's Point site. Dominant vegetation in the snowberry patch includes: snowberry, trailing blackberry, and red huckleberry (*Vaccinium parviflorum*).

Ruderal/Disturbed

Ruderal/disturbed areas occur within the March's Point site. These areas include dirt roads, graded driveways, remnant housing pads, and debris piles. Dominant vegetation in the ruderal/disturbed areas includes the same species noted in the nonnative annual grassland.

Manmade Drainage Ditch

One manmade drainage ditch (DCH 1) occurs within the March's Point site. Dominant vegetation in the vicinity of the manmade drainage ditch includes: chain speedwell, buttercup (*Ranunculus occidentalis*), miner's lettuce (*Claytonia perfoliata*), common sheep sorrel (*Rumex acetocella*), and monkeyflower (*Mimulus guttatus*).

Roadside Ditch

Three roadside ditches (DCHs 2, 3, and 4) occur within the March's Point site. Dominant vegetation in the vicinity of the roadside ditches includes: trailing blackberry, common sheep sorrel, velvet grass, Johnsongrass, and teasle (*Dipsacus* sp.).

WILDLIFE

Birds foraging within the March's Point siteinclude: song sparrow (*Melospiza melodia*) and red-tailed hawk (*Buteo jamaicensis*). Birds observed flying over the March's Point site include: common loon (*Gavia immer*), double-crested cormorant (*Phalacrocorax auritus*), great blue heron (*Ardea herodias*), and turkey vulture (*Cathartes aura*). No bird nests were observed within the March's Point site.

POTENTIAL WATERS OF THE U.S.

A delineation report was prepared for a study area that includes the March's Point site (AES, 2011b; **Appendix J**). The USFWS Wetlands Online Mapper (2007a) does not identify any wetland features within the March's Point site. Potential wetlands and other waters of the U.S. in the March's Point site include three roadside ditches. These features may be considered waters of the U.S. subject to USACE jurisdiction.

SPECIAL STATUS SPECIES

For the purposes of this assessment, special status species have been defined to include those species that are federally listed as endangered or threatened under the FESA (or formally proposed and/or candidates for listing) and those listed as species of concern on the USFWS (2011) list. Special status species with the potential to occur within the March's Point site are discussed below. While other state listed species may have potential to occur within the March's Point site and its vicinity, these species generally receive no specific protection on Tribal trust land and are not necessarily afforded protection by the FESA. An evaluation of rare plants (WNHP; 2010) has been included in the baseline research and is documented in a biological letter report that includes the March's Point site (**Appendix J**; AES, 2011a). While state listed generally receive no specific protection on Tribal trust land and are not necessarily afforded protection by the FESA, a review of state listed animals (WNHP, 2013) with the potential to occur in Skagit County was included in the baseline research. A discussion of state listed animals (WNHP, 2013) and an evaluation as to whether these species have the potential to occur within the March's Point site is provided in a table (**Appendix J)**. No state listed species has the potential to occur within the March's Point site.

Federally Listed Endangered, Threatened, or Candidate Species

The March's Point site does not provide habitat for any federally listed endangered, threatened, or candidate species. No federally listed endangered, threatened, or candidate species have the potential to occur within the March's Point site.

Federal Species of Concern

The March's Point site provides potential roosting habitat for Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), long-eared myotis (*Myotis evolatis*), and long-legged myotis (*Myotis volans*) in the ornamental landscape trees within the nonnative annual grassland. These species have the potential to occur within the March's Point site; however, they were not observed during multiple site visits by biologists as described in **Section 3.5.1**.

Migratory Birds

Migratory birds and other birds of prey, protected under 50 CFR 10 of the MBTA, have the potential to nest in the ornamental landscape trees and forage within the nonnative annual grassland within the March's Point site. The nesting season for raptors and other migratory birds occurs between March 1 and September 15. Several birds were observed foraging during the biological surveys of the March's Point site. No birds were observed nesting during the biological surveys of the March's Point site.

CRITICAL HABITAT AND ESSENTIAL FISH HABITAT

The USFWS (2011) list identifies critical habitat as occurring within Skagit County for marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), and bull trout Coastal-

Puget Sound DPS. The March's Point site does not occur within designated critical habitat for these species (USFWS, 2010). A critical habitat map is provided as **Figure 3.5-3**. Because bull trout Coastal-Puget Sound DPS is a federally listed species documented to occur on the USFWS list, the USFWS Western Washington Fisheries Division (Chan, 2011) requested that this species be evaluated. The bull trout are included in this analysis because March's Point site has a hydrological connection to designated critical habitat. Specifically, the manmade drainage ditch (DCH 1) exits the northeastern boundary of the March's Point site, continues northeastward, drains northward through a culvert beneath SR-20 and extends northward for approximately 0.15 miles until in drains into a highly channelized drainage comprised of sparse riparian vegetation. The highly channelized drainage continues eastward for approximately 0.9 miles until it drains to Padilla Bay. Padilla Bay is over 18 miles north of Puget Sound. The USFWS indicated that the nearest bull trout population is known to forage near the eastern shoreline of Puget Sound. Bull trout are not known to forage, migrate, or overwinter within Fidalgo Bay or Padilla Bay (USFWS, 2004).

The March's Point site occurs within the designated range of the following EFHs for Chinook salmon, Upper Columbia Spring-Run EFH, Snake River Fall-Run EFH, Snake River EFH, and Puget Sound EFH. The March's Point site occurs within the designated range of the EFH for bull trout DPS.

3.5.4 SETTING – FIDALGO BAY RESORT FLATS SITE

HABITAT TYPES

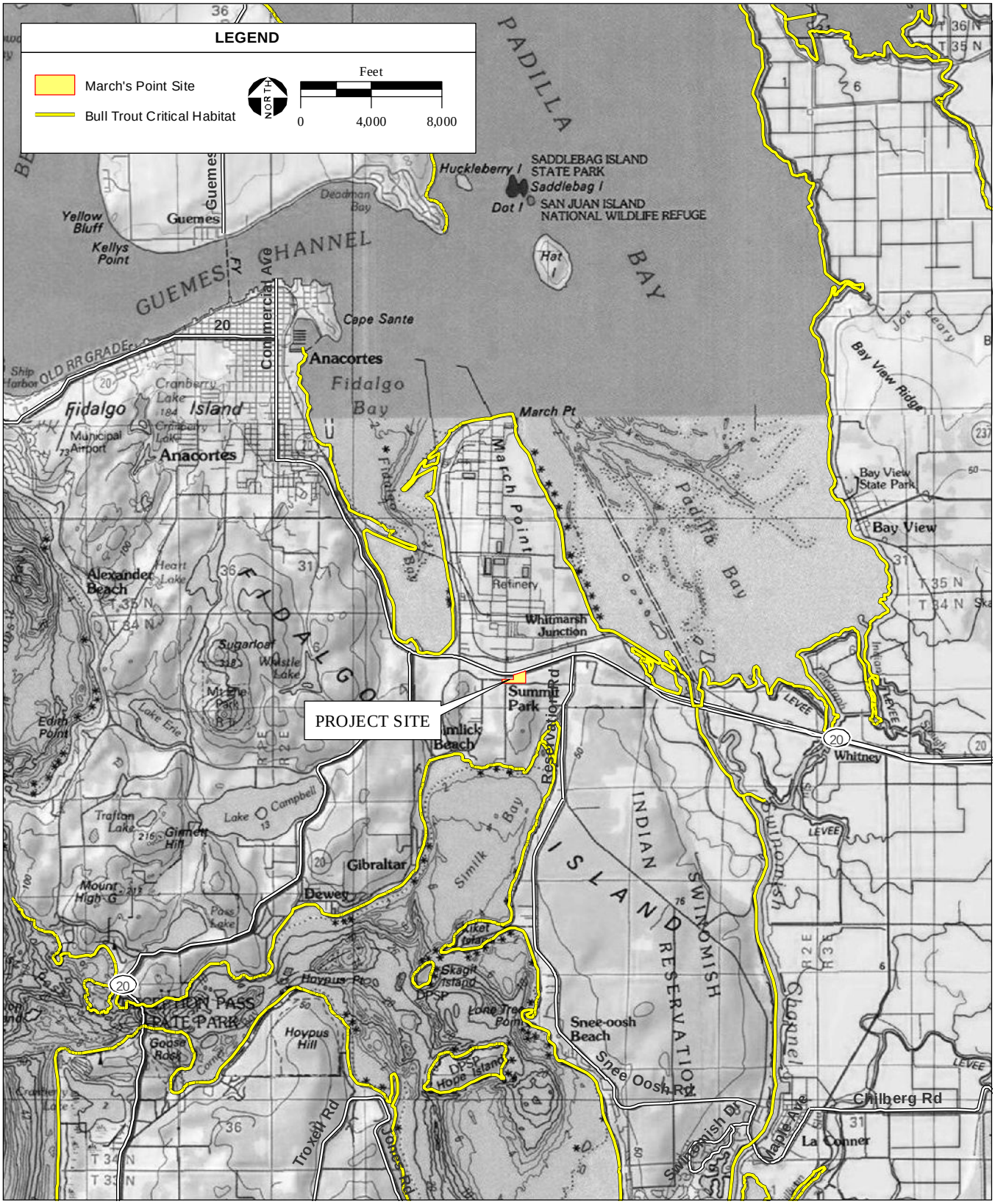
Habitat types in the Flats site include coniferous forest and ruderal/disturbed areas. Dominant vegetation within each habitat type is discussed below.

Coniferous Forest

The northwestern portion of the Flats site is comprised of a relatively small patch of coniferous forest. Dominant overstory vegetation includes western red cedar (*Thuja plicata*) and bigleaf maple (*Acer macrophyllum*). Dominant understory vegetation includes serviceberry (*Amelanchier alnifolia*), woodland strawberry (*Fragaria fresco*), rose, snowberry, Solomon's plume (*Smilacina racemosa*), yerba buena (*Satureja douglasii*), ocean spray (*Holodiscus discolor*), common St. John's wort (*Hypericum perforatum*), honeysuckle (*Lonicera involucrata*), red huckleberry, silver weed cinquefoil (*Potentilla anserina*), Himalayan blackberry (*Rubus armeniacus*), bitter sweet nightshade (*Solanum dulcamara*), fringecup (*Tellima grandiflora*), stinging nettle (*Urtica dioca*), honesty (*Lunaria annua*), and hawthorn (*Crataegus monogyna*).

Ruderal/Disturbed

The majority of the Flats site is comprised of ruderal/disturbed areas. Ruderal/disturbed areas include a paved parking lot and a mowed, leveled grassland that is maintained as a lawn. Dominant vegetation includes grass (*Poa* sp.) with sparsely planted ornamental landscape trees.



SOURCE: USFWS Critical Habitat Surveys of Skagit County, WA, 2000,2006,2010; "Anacortes North, WA" USGS 7.5 Minute Topographic Quadrangle, T34N, R2E, Section 4, Williamette Baseline & Meridian; AES, 2013

Figure 3.5-3
Critical Habitats

Manmade Drainage Ditch

A manmade drainage ditch occurs along the southeastern boundary of the Flats site. Dominant vegetation along the bed and banks of the manmade drainage ditch includes trailing blackberry.

WILDLIFE

Birds observed flying in the vicinity of the Flats site include common loon, great blue heron (*Ardea herodias*), American crow (*Corvus brachyrhynchos*), and migratory waterfowl. No bird nests were observed within the Flats site.

POTENTIAL WATERS OF THE U.S.

The USFWS Wetlands Online Mapper (2007a) identifies the portion of the ruderal/developed areas that consists of the paved parking lot as Palustrine Emergent Seasonally Flooded (PEMC). This is a remnant feature that no longer exists. Historical imagery identifies the presence of the parking lot on aerial photographs as early as 1998 (GoogleEarth, 2011). The manmade drainage ditch within the Flats site is a potential waters of the U.S. that may be subject to USACE jurisdiction.

SPECIAL STATUS SPECIES

For the purposes of this assessment, special status species have been defined to include those species that are federally listed as endangered or threatened under the FESA (or formally proposed and/or candidates for listing) and those listed as species of concern on the USFWS (2011) list. Special status species with the potential to occur within the Flats site are discussed below. While other state listed species may have potential to occur within the Flats site and its vicinity, these species generally receive no specific protection on Tribal trust land and are not necessarily afforded protection by the FESA. A review of state listed animals (WNHP, 2013) with the potential to occur in Skagit County has been included in the baseline research and an evaluation as to whether these species have the potential to occur within the Flats site is provided in a table (**Appendix J**). The Flats site provides habitat for the following state listed species: common loon (*Gavia immer*), bald eagle (*Haliaeetus leucocephalus*), and Brandt's cormorant (*Phalacrocorax penicillatus*) (refer to discussion of migratory birds).

Federally Listed Endangered, Threatened of Candidate Species

The Flats site does not provide habitat for any federally listed endangered, threatened, or candidate species. No federally listed endangered, threatened, or candidate species have the potential to occur within the Flats site.

Federal Species of Concern

The Flats site provides potential roosting habitat for Pacific Townsend's big-eared bat, long-eared myotis, and long-legged myotis in the trees within the coniferous forest (Bat Conservation International, 2011). These species were not observed during the biological surveys of the Flats site.

The Flats site provides a low potential for the bald eagle (*Haliaeetus leucocephalus*) to nest in the trees within the coniferous forest given the proximity of the site to disturbed areas. The Flats site is surrounded by Fidalgo Bay Road to the west, residential development to the north, and an RV park to the south. The bald eagle is protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250) and the MBTA. The USFWS (2007b) *National Bald Eagle Management Guidelines* provide recommendations to avoid disturbing bald eagles. Recommendations differ based on whether similar construction activities are present within one mile of an active nest and whether the construction activities associated with a project are visible to the active nest. Several bald eagle nests are documented on the priority habitat map (WDFW, 2013) within one mile of the Flats site. The nearest nest site is documented approximately 1,000 feet southeast of the Flats site. This species was not observed during the biological surveys of the Flats site, although this species has the potential to occur in the vicinity. The nesting season for bald eagle in the Pacific Northwest is from January 1 through August 15 (USFWS, 2007b).

Migratory Birds

Migratory birds and other birds of prey, protected under 50 CFR 10 of the MBTA, have the potential to nest in the trees in the coniferous forest within the Flats site. The nesting season for raptors and other migratory birds occurs between March 1 and September 15. No birds were observed nesting during the biological surveys of the Flats site.

CRITICAL HABITAT AND ESSENTIAL FISH HABITAT

The USFWS (2011) list identifies critical habitat as occurring within Skagit County for marbled murrelet, northern spotted owl, and bull trout Coastal-Puget Sound DPS. The Flats site does not occur within designated critical habitat for these species (USFWS, 2010). Because bull trout Coastal-Puget Sound DPS is a federally listed species documented to occur on the USFWS Western Washington Skagit County list, USFWS Western Washington Fisheries Division (Chan, 2011) requested that this species be evaluated. The bull trout are included on the list because the Flats site occurs adjacent to Fidalgo Bay. Fidalgo Bay is designated as critical habitat. Fidalgo Bay is over 15 miles north of Puget Sound. The USFWS indicated that the nearest bull trout population is known to forage near the eastern shoreline of Puget Sound. Bull trout are not known to forage, migrate, or overwinter within Fidalgo Bay (USFWS, 2004).

The Flats site occurs within the designated range of the following EFHs for Chinook salmon: Upper Columbia Spring-Run, Snake River Fall-Run, Snake River, and Puget Sound. The Flats site occurs within the designated range of EFH for bull trout DPS.

3.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section describes the cultural resources and paleontology setting within the March's Point site and the Flats site, the analytical methodology for assessing these environmental elements, and the regulatory environment for cultural resources and paleontology. The assessment of cultural and paleontological resources is based on a cultural resources study and National Register of Historic Places (NRHP) evaluation of the properties.

The cultural resources reports, *Samish Indian Nation Fee-To-Trust Project, Cultural Resources Report, March's Point Site* and *Samish Indian Nation Fee-To-Trust Project, Cultural Resources Report, Fidalgo Bay Resort Flats*, were submitted to Washington State Department of Archaeology and Historic Preservation (DAHP) (also known as the State Historic Preservation Office [SHPO]) for review as confidential appendices to this document. In August 2012 the DAHP provided concurrence with the Bureau of Indian Affairs' (BIA) determinations.

The following discussion of existing resources provides the basis from which potential environmental consequences were identified and measured.

3.6.1 SETTING – MARCH'S POINT AND FIDALGO BAY RESORT FLATS SITES

PREHISTORY

The Northwest Coast of what became the United States was first occupied by humans at the end of the Pleistocene when the glaciers receded between the period of 12,000 to 10,000 years before present (BP). Evidence of the earliest occupation of the region is found at archaeological sites on inland river terraces. Between the period of circa 6,000 and 2,500 BP, people in the Northwest Coast expanded the types of resources they procured. Additionally, technology advanced in tandem to account for processing and storing these types of resources. Evidence for procurement of marine resources appears and shell middens become common after 4,000 BP. The period of 2,500 BP to European contact (AD 1790) on the Northwest Coast represents fully developed cultures that appear much like those documented in the ethnographic record. These cultures were reliant on marine resources located closer to the coast, while groups further inland were dependent upon hunting, gathering, and freshwater fishing (Nelson, 2006).

ETHNOGRAPHY

The project area is located within the traditional territory of the Samish Indian Nation (Cascadia Archaeology, 2010; Nelson, 2006; Suttles, 1990). The Samish traditionally followed a semi-mobile life spending the winter in villages and separating into smaller groups during the summer months. Early accounts of the Samish indicate winter villages were present on the Fidalgo, Samish and Guemes islands (Ruby and Brown, 1992, Samish Indian Nation, 2002). Summers were spent gathering resources, primarily fish and shellfish, at seasonal camps located on, but not limited to, Lopez, Cypress, Blakely, and San Juan Islands (Samish Indian Nation, 2002; Nelson 2006).

Ethnographic accounts of the Samish provide data regarding their political and social organization. Several accounts indicate that villages were headed by informal chiefs. These leaders were frequently wealthy men whose influence usually did not reach beyond the boundaries of their village. Regional organization among distinct groups provided support during times of conflict, but the evidence suggests this remained informal and intervillage organization did not exist on a formal level. Socially stratification among the Samish was more formal than the political organization (Suttles 1990:464-465).

History

The fur trader Charles Barkley first discovered the Strait of Juan de Fuca in 1787 and George Vancouver explored Hood Canal and the Puget Sound in 1792. Within the next decade many Spanish explorers moved through the area. The Fraser River was not discovered until 1808 by fur trader Simon Fraser of the North West Company. At the time, it seemed the indigenous people had not yet encountered Europeans, although they had some metal objects likely obtained through diffusion of European material culture (Suttles 1990:470-471).

In 1827 the Hudson's Bay Company established Fort Langley on the Fraser River, which instigated trade of materials, labor, and wives between the native and European people. Fort Victoria was established in 1843 and quickly became a center for Indian trade. Native people travelled from as far as Alaska to trade at Ft. Victoria (Suttles 1990:470-471).

The Treaty of Washington, signed in 1846, imposed new political boundaries upon the traditional groups of the Northwest Coast. The traditional territory of the larger Coast Salish, of which the Samish belong, was divided into Canada and the United States. The Samish ended up on the American side of the border. In 1858 gold was discovered on the Fraser River bringing an influx of Euro-American miners into the area. The same year the Oblate order of Christians established their base on Vancouver Island. They established two Oblate schools in the area and in the following years converted many native peoples into Christianity. By the 1870s, local canneries employed men as fisherman, and women and children worked in the canning process. Agriculture was also adopted and by 1880 successful farmers were present on many of the reserves (Suttles 1990:471).

The industry in the area shifted to fishing and lumber after it was determined in that Anacortes would not be the final stop of the transcontinental railroad. During the early 1900s, fish-processing plants employed hundreds of area people, most of which closed by the 1960s. Only Trident Seafoods, Sugiyo, and Seabear remain in business today. During the same time, Anacortes was the site of five sawmills and six shingle mills. Eventually, the logging industry in Anacortes would include wood mills, pulp mills, and box mills. Today, the regional economy is dominated by tourism, technology firms, and oil refineries owned by Shell and Texaco (City of Anacortes, 2004).

3.6.2 MARCH'S POINT SITE

RECORDS AND LITERATURE SEARCH

A records search and literature review for this study were completed to (1) determine whether known cultural resources had been recorded within or adjacent to the study area and if the parcel was subject to survey in the past; (2) assess the likelihood of unrecorded cultural resources based on archaeological, ethnographic, and historical documents and literature; and (3) review the distribution of nearby archaeological sites in relation to their environmental setting.

The records search revealed that the area immediately adjacent to the northern limit of the March's Point site Area of Potential Effect (APE), which fronts on State Route 20 (SR-20), had been subject to a pedestrian survey and shovel probes (SP) in the past with negative results (Luttrell, 2006). Emerson and McKenney (2004) also did not identify any prehistoric or historic resources during survey or shovel testing.

One historic structure, built in 1900, was present within the APE. However, this structure did not retain sufficient integrity to be recommended eligible for the NRHP and was viewed as an attractive nuisance and safety hazard, and demolished by the Tribe. An additional two historic structures were identified as adjacent to the APE but also did not retain integrity and were recommended not eligible for the NRHP. Luttrell (2006) recovered three historic-modern objects from the upper levels of shovel tests. The artifacts were determined to be isolated and did not represent significant buried cultural deposits. Two historical buildings were present within the APE, both of which have undergone renovations which reduced their level of integrity. Neither structure was recommended eligible for the NRHP. A review of the General Land Office (GLO) plats did not reveal any historic-era resources within the project area. The records search also revealed that 13 cultural resources have been recorded within a two-mile radius of the APE. However, no prehistoric or historical resources have been previously documented within the APE.

FIELD SURVEY

A pedestrian survey of the March's Point site was conducted by archaeologists in transects no greater than 10 meters apart (**Appendix C**). All rodent burrows encountered along pedestrian transects were inspected for cultural material. The ground surface was scraped clear of vegetation periodically using a hoe or trowel to fully investigate the ground surface. A drainage ditch located in the northeast portion of the parcel provided a view of an extended stratigraphic profile. This profile was generally similar to the stratigraphy observed in the shovel test probes discussed below. Dark brown to very dark grayish brown loam, with few rocks, was noted to a depth of approximately 30 cm below surface (cmbs) overlying a stratum of mottled clay (Gley 1 6/10Y). Neither the pedestrian survey nor examination of the extended ditch profile revealed the presence of any prehistoric cultural resources.

In addition to the visual inspection of the parcel, two transects of shovel probes, oriented east to west, were excavated. Each shovel probe was roughly 40 cm in diameter. All soil was sieved through a ¼ inch mesh screen. The shovel probes yielded charcoal flecks, a very small amount of shell (exclusively along the northern margin adjacent to SR-20), and historic/modern debris. None of the observed materials, however, indicate the presence of intact subsurface archaeological deposits. A total of four shovel probes were positive for cultural material. However, the artifacts are not representative of intact cultural deposits. The pedestrian survey identified two historic/modern cultural resources within the project site as well as two noted finds. Upon examination both noted finds were found to lack any clear associations and integrity.

3.6.3 FIDALGO BAY RESORT FLATS SITE

RECORDS AND LITERATURE SEARCH

A records search revealed that portions of the Flats site APE have been previously subject to cultural resources studies including shovel testing and pedestrian survey by Cascadia Archaeology (2010), Wessen (2008), and Campbell (2003). The result of these surveys was the recordation of a previously unknown prehistoric shell midden and one prehistoric-age cultural resource within the APE. An additional three cultural resources are located within ½-mile of the project area.

FIELD SURVEY

A field survey of the site was performed that included pedestrian survey and auger probes. The northern portion was covered in grass and the surveyed transects were no greater than 10 meters. In the south, a portion of the parcel was paved, which prevented a visual inspection of the ground surface. The project area was disturbed by rodents, which created dirt piles that were inspected for cultural materials. No evidence of cultural material was observed in any of the dirt piles or rodent holes. No cultural resources were observed during the course of the pedestrian survey. The shoreline adjacent to the project area was also inspected closely; although it was partially obscured by gravel fill and erosion control materials. The few areas of shoreline that were available for inspection did not reveal any cultural material. Midden was observed at one location nearby

A total of 16 auger probes were excavated in order to define the presence or absence of buried cultural deposits. All auger probes were excavated until culturally sterile soil was observed. The results of this investigation show three positive auger tests for charcoal, shell or historical-modern debris. However, none of the materials indicate the presence of intact subsurface cultural deposits.

3.6.4 REGULATORY BACKGROUND

NATIONAL REGISTER OF HISTORIC PLACES

The National Historic Preservation Act of 1966 (NHPA; as amended through 2004) authorizes the NRHP, a program for the preservation of historic properties ("cultural resources") throughout the nation. The

eligibility of a resource for listing in the NRHP is determined by evaluating the resource using criteria defined in 36 CFR 60.4 as follows:

> *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and*
>
> *a) that are associated with events that have made a significant contribution to the broad patterns of our history;*
> *b) that are associated with the lives of persons significant in our past;*
> *c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
> *d) that have yielded, or may be likely to yield, information important to prehistory or history.*

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP.

All properties change over time. Therefore, it is not necessary for a property to retain all of its historic physical features or characteristics in order to be eligible for listing on the NRHP. The property must, however, retain enough integrity to enable it to convey its historic identity; in other words, to be recognizable to a historical contemporary. The National Register recognizes seven aspects or qualities that, in various combinations, define integrity (NPS, 1990). These seven qualities are listed below:

1. **Location** – the place where the historic property was constructed or the place where the historic event occurred.
2. **Design** – the combination of elements that create the form, plan, space, structure, and style of a property.
3. **Setting** – the physical environment of a historic property.
4. **Materials** – the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. **Workmanship** – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. **Feeling** – a property's expression of the aesthetic or historic sense of a particular period of time.
7. **Association** – the direct link between an important historic event or person and a historic property.

To retain historic integrity a property will always possess some, and usually most, of these aspects. In order to properly assess integrity, however, significance (why, where, and when a property is important) must first be fully established. Therefore, the issues of significance and integrity must always be considered together when evaluating a historic property.

NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT

The Native American Graves Protection and Repatriation Act (NAGPRA), 25 USC 3001 *et seq.*, provides a process for museums and Federal agencies to return Native American cultural items – human remains, funerary objects, sacred objects, or objects of cultural patrimony – to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on Federal and Tribal lands, and penalties for noncompliance and illegal trafficking.

ARCHAEOLOGICAL RESOURCES PROTECTION ACT OF 1979

The Archaeological Resources Protection Act of 1979 (ARPA) (PL 96-95; 16 U.S.C. 470aa-mm), provides for the protection of archaeological resources and sites which are on public and Indian lands, and fosters increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before October 31, 1979. ARPA also provides for penalties for noncompliance and illegal trafficking.

NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) requires that federal agencies take all practical measures to "preserve important historic, cultural, and natural aspects of our national heritage." NEPA's mandate for considering the impacts of a federal project on important historic and cultural resources is similar to that of Section 106 of the NHPA, and the two processes are generally coordinated when applicable. Section 800.8(a) of NHPA's implementing regulations provides guidance on coordination with NEPA.

3.6.5 NATIVE AMERICAN CONSULTATION

In accordance with Section 106 of the NHPA, a letter was sent to the Washington Governor's Office of Indian Affairs (GOIA) on September 6, 2011, to request information on Native American tribal contacts to complete the consultation process.

3.6.6 PALEONTOLOGICAL RESOURCES

Paleontological resources are defined as the traces or remains of prehistoric plants and animals. Such remains often appear as fossilized or petrified skeletal matter, imprints, or endocasts, and reside in sedimentary rock layers. Paleontological resources are considered important for their scientific and educational value. Fossil remains of vertebrates are considered significant. Invertebrate fossils are considered significant if they function as index fossils. Index fossils are those that appear in the fossil record for a relatively short and known period of time, allowing geologists to interpret the age range of the geological formations in which they are found.

Because of the severe and recent glacial activity in the Puget Sound region, there is a very low probability that paleontological resources are present at either the March's Point or Flats sites. No paleontological resources were observed during the field investigations of the two sites. The literature review also did not indicate the presence of any fossils nearby.

3.7 SOCIOECONOMIC CONDITIONS

This section addresses the existing socioeconomic conditions of the project sites and surrounding regions. The general and site specific profiles of socioeconomic conditions described in this chapter provide the environmental baseline by which direct, indirect, and cumulative environmental effects are identified and measured in **Chapter 4.7**.

3.7.1 SOCIOECONOMIC CHARACTERISTICS OF THE SAMISH INDIAN NATION

As shown in **Table 3.7-1**, the Samish Indian Nation (Tribe) had a total enrollment of approximately 1,362 members in 2010, which represents the most recent data available for the Tribe. Approximately 627 members of the tribal service populations were under the age of 16, approximately 1,879 members were of working age (between 16 and 64), and approximately 218 members were age 65 or older (Samish Indian Nation, 2013).

TABLE 3.7-1
SAMISH INDIAN NATION DEMOGRAPHIC ESTIMATES

Demographics	Total
Tribal Enrollment	1,362
Tribal Service Population	2,724
Under Age 16	627
Age 16-64	1,879
Age 65 and over	218
Unemployment Rate	20%
Employed but below the poverty line	294
Source: Samish Indian Nation, 2013.	

The 2010 unemployment rate for the Tribe was approximately 20 percent. This figure is approximately three times higher than the surrounding Skagit County's 2005 unemployment rate of 5.2 percent (Samish Indian Nation, 2010; Census Bureau, 2005). As of October 2011, the unemployment rate in Skagit County had risen to 8.9 percent (Washington State Employment Department, 2011). Of those employed on the reservation, six percent fell below the poverty line in 2005. As the Tribe grows and the younger demographic matures, the economic needs, including the need for employment, are expected to rise as well.

3.7.2 SOCIOECONOMIC CHARACTERISTICS OF SKAGIT COUNTY

POPULATION

Regional

Using information provided in the 2010 U.S, Census data, as shown in **Table 3.7-2**, the population of Skagit County was approximately 116,901 people (U.S. Census Bureau, 2010). The 2010 population of the City of Anacortes (City) was approximately 20,332 people or 17.4 percent of Skagit County's total

population (U.S. Census Bureau, 2010). The population of the State of Washington was approximately 6,724,540 people.

TABLE 3.7-2
REGIONAL POPULATION ESTIMATES

Location	Population		
	2000	2005	2010
State of Washington	5,894,121	6,261,282	6,724,540
Skagit County	103,475	112,176	116,901
City of Anacortes	14,602	15,932	20,332

Source: U.S. Census Bureau, 2010

Population Trends

The population of Skagit County grew from 103,475 people in 2000 to 112,176 people in 2005, an increase of approximately 8.4 percent (U.S. Census Bureau, 2009a). Between 2005 and 2010, Skagit County's population expanded to 116,901, an increase of about 4.1 percent. The population of the City of Anacortes increased by 9.1 percent from 14,602 residents in 2000 to 15,932 residents in 2005 (U.S. Census Bureau, 2009b). Between 2005 and 2010, Anacortes saw a population increase of approximately 4,400 residents, or 21 percent. Overall, the State experienced approximately 6.9 percent growth between 2000 and 2010.

HOUSING

The State of Washington had an estimated 2,885,677 housing units in 2010, of which approximately 256,601 units, or 8.9 percent, were vacant (U.S. Census Bureau, 2010). In the same year, a slightly larger percentage of housing units in Skagit County remained vacant. As shown in **Table 3.7-3**, in 2010, there were estimated to be 51,473 housing units in Skagit County, of which 11.5 percent were vacant (U.S. Census Bureau, 2010). Between 2005 and 2010, the City of Anacortes had an average of 8,725 housing units, of which 11.5 percent were vacant (U.S. Census Bureau, 2009b; 2010). Between 2000 and 2010, vacancy rates in both Skagit County and Washington remained roughly the same. Over the next five years, vacancy rates saw a marked increase in both regions. In the same period, the estimated number of housing units followed an inverse trend.

TABLE 3.7-3
REGIONAL HOUSING ESTIMATES

Location	2000		2005		2010	
	Total Units	% Vacant	Total Units	% Vacant	Total Units	% Vacant
State of Washington	2,451,075	7.3	2,651,645	7.6	2,885,677	8.9
Skagit County	42,681	9.0	46,476	8.9	51,473	11.5
City of Anacortes	6,873	7.5	--[1]	--[1]	10,577	-14.6

Notes: [1]1 year estimates for 2005 housing data is not available for the City of Anacortes.
Source: U.S. Census Bureau, 2009c; U.S. Census Bureau, 2010

EMPLOYMENT

As shown in **Table 3.7-4**, in 2009 the State of Washington had a labor force of 3,438,309 people, of which 9.5 percent (327,954 people) of the labor force was unemployed (U.S. Census Bureau, 2009c). Skagit County had approximately 58,837 people in its labor force and a 9.8 percent unemployment rate in 2009. The City of Anacortes had an average of approximately 7,446 people in its labor force and a 4.8 percent unemployment rate between 2005 and 2009 (U.S. Census Bureau, 2005-2009), which represents the most recent data available. The larger Mount Vernon-Anacortes Metropolitan area had a civilian labor force of approximately 58,468 people in 2009, of which 327,954 or 10.1 percent were unemployed (U.S. Department of Labor, 2011). Economic trends, particularly employment can be difficult to observe in a small sample such as Anacortes; we can better estimate recent unemployment trends by looking at the larger Mount Vernon-Anacortes Metropolitan area, given they have similar economic profiles. Between 2007 and 2009, the Skagit County civilian labor force has increased by approximately 2.8 percent per year; the labor force in the Mount Vernon-Anacortes area rose approximately 2.1 percent in 2008 and leveled off in 2009 (U.S. Census Bureau, 2009c; U.S. Department of Labor, 2011). The labor force is generally defined as employed workers and unemployed workers actively looking for work.

TABLE 3.7-4
REGIONAL LABOR FORCE ESTIMATES (2009)

Location	Civilian Labor Force	Unemployed	Unemployment Rate
State of Washington	3,438,309	327,954	9.5%
Skagit County	58,837	5,791	9.8%
City of Anacortes[1]	7,446	355	4.8%
Mount Vernon-Anacortes Metro Area	58,468	5,909	10.1%

Notes: [1]Represents average labor force data from 2005-2009
Source: U.S. Census Bureau, 2009c; U.S. Census Bureau 2005-2009; U.S. Department of Labor, 2011

Table 3.7.5, shown below, breaks down employment in Anacortes and Skagit County by industry.

As seen in **Table 3.7.6**, the top four industries by employment in both Skagit County and the City of Anacortes are: Educational Services, Health Care and Social Assistance; Retail Trade; Arts, Entertainment, Recreation, Accommodation and Food Services; and Manufacturing (U.S. Census Bureau, 2009c). In both economies, Educational Services, Health Care, and Social Assistance employ approximately double the workforce of the next three industries, all of which employ about the percentage of the workforce. Though construction is not in the top four industries, the industry has a relatively large presence in the city of Anacortes, employing about 645 workers or 9.1 percent of the local economy, compared to 7.6 percent of broader state economy (U.S. Census Bureau, 2005-2009). This indicates the local economy has substantial resources and infrastructure to draw from in future construction projects. The largest employers in Skagit County, many of which fall into the above industries, are listed in **Table 3.7-6** below. Although the Swinomish Tribe does not appear on **Table 3.7-6** below, it reportedly employs

250 people, as well as an additional 300 at the Swinomish Northern Lights Casino Hotel (Swinomish, 2011). After the expanded facility opens, employment at the Swinomish Northern Lights Casino Hotel is expected to increase by 100 workers (Swinomish, 2011).

TABLE 3.7-5
EMPLOYMENT BY INDUSTRY (ANACORTES AND SKAGIT COUNTY PROFILES)

	Skagit County Profile 2009		City of Anacortes Profile 2009[1]	
Industry	**Number of Employees**	**% of Employment**	**Number of Employees**	**% of Employment**
Agriculture, Forestry, Fishing, Hunting and Mining	2,490	4.7%	163	2.3%
Construction	3,867	7.3%	645	9.1%
Manufacturing	5,781	10.9%	893	12.6%
Wholesale Trade	1,657	3.1%	152	2.1%
Retail Trade	7,743	14.6%	806	11.4%
Transportation, Warehousing, and Utilities	3,344	6.3%	490	6.9%
Information	852	1.6%	129	1.8%
Finance, Insurance, Real Estate, Rental and Leasing	2,495	4.7%	407	5.7%
Professional, Scientific, Management, and Administrative and Waste Management Services	3,725	7.0%	498	7.0%
Educational Services, Health Care and Social Assistance	10,746	20.3%	1,351	19.1%
Arts, Entertainment, Recreation, Accommodation and Food services	5,884	11.1%	841	11.9%
Public Administration	2,381	4.5	351	4.9
Other Services	2,081	3.9	365	5.1

Notes: [1]Represents average labor force data from 2005-2009
Source: U.S. Census Bureau 2009c, American Community Survey; U.S. Census Bureau 2005-2009

INCOME

According to the U.S. Census Bureau, in 2009, the median household income for Skagit County was $62,814, compared with $56,548 for the State of Washington (U.S. Census Bureau, 2009c). Between 2005 and 2009 the average median household income in the City of Anacortes was $57,288, which was higher than comparable five year estimates for both County and the State over the same period (U.S. Census Bureau, 2005-2009).

PROPERTY TAX

The March's Point site is located on Skagit County tax parcels P19917, P19919, and P19920. According to the Skagit County Assessor's Office, the total 2011 annual property tax for the parcels was $20,192.02. The Flats site is located on portions of Skagit County tax parcels P33269, P33271, and P33272. The total 2011 annual property tax for these parcels was $27,496.

TABLE 3.7-6
LARGEST EMPLOYERS IN SKAGIT COUNTY

Rank	Employer Name	Number of Workers
1	Skagit County	1642
2	Skagit Valley Hospital	1028
3	Mount Vernon School District	820
4	Skagit Valley College	729
5	Draper Valley Farms	550
6	Sedro-Woolley School District	525
7	Burlington-Edison School District	470
8	Puget Sound Refinery	400
9	Regence BlueShield	385
10	Janicki Machine	382
11	Anacortes School District	353
12	United General Hospital	350
13	Tesoro West	335
14	City of Mount Vernon	302
15	Brown and Cole	301
16	Wal-Mart	275
17	Costco	263
18	Snelson Companies Inc.	240
19	Skagit Gardens	210
20	Fred Meyer	200

Source: Center for Economics and Business Research, 2011

SCHOOLS

Anacortes School District serves the City, thereby including all students in the immediate vicinity of the project sites. The School District is comprised of five standard public schools, all located west of the project sites off of SR-20. The School District consists of one high school, one middle school, and three elementary schools (Anacortes School District, 2010). The district also includes one preschool and kindergarten, one alternative high school, and a K-12 'home education partnership' that heavily involves parents in a loosely structured educational environment. Fidalgo Elementary schools students from kindergarten to sixth grade and is approximately 1.3 miles from the March's Point site; Anacortes Middle School, educating students through seventh and eighth grade, is approximately 4.1 miles away; and Anacortes High School educates students from ninth through twelfth grade 4.4 miles from the March's Point site. The second-closest school district in Mount Vernon is roughly ten miles away.

3.7.3 ENVIRONMENTAL JUSTICE

REGULATORY SETTING

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, as amended, directs federal agencies to develop an Environmental Justice Strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. The Council

on Environmental Quality (CEQ) has oversight responsibility of the federal government's compliance with Executive Order 12898 and the National Environmental Policy Act (NEPA). The CEQ, in consultation with the U.S. Environmental Protection Agency (EPA) and other agencies, has developed guidance to assist federal agencies with their NEPA procedures so that environmental justice concerns are effectively identified and addressed.

According to guidance from the CEQ (1997b) and EPA (1998), agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by a proposed action and, if so, whether there may be disproportionately high and adverse environmental effects to those populations. Communities may be considered "minority" under the executive order if one of the following characteristics apply:

- The cumulative percentage of minorities within a Census tract is greater than 50 percent (primary method of analysis).
- The cumulative percentage of minorities within a Census tract is less than 50 percent, but the percentage of minorities is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (secondary method of analysis).

According to EPA, either the county or the state can be used when considering the scope of the "general population." A definition of "meaningfully greater" is not given by the CEQ or EPA, although the latter has noted that any affected area that has a percentage of minorities above the state's percentage is a potential minority community and any affected area with a minority percentage double that of the state's is a definite minority community under Executive Order 12898. Communities may be considered "low-income" under the executive order if one of the following characteristics applies:

- The median household income for a Census tract is below the poverty line (primary method of analysis).
- Other indications are present that indicate a low-income community is present within the Census tract (secondary method of analysis).

In most cases, the primary method of analysis will suffice to determine whether a low-income community exists in the affected environment. However, when a Census tract income may be just over the poverty line or where a low-income pocket within the tract appears likely, the secondary method of analysis may be warranted. Other indications of a low-income community under the secondary method of analysis include limited access to health care, overburdened or aged infrastructure, and dependence on subsistence living.

AFFECTED ENVIRONMENT

To determine whether a proposed action is likely to have disproportionately high and adverse effects on a population, agencies must identify a geographic scale for which they will obtain demographic information. Census tracts are a small, relatively permanent statistical subdivision of a county delineated by a local committee of Census data users for the purpose of presenting data. Census tracts are designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time of establishment. Therefore, statistics of Census tracts provide a more accurate representation of a community's racial and economic composition.

Skagit County Census tracts that were analyzed include Census Tract 9501, which contains the March's Point site, Census Tract 9506, which includes the Flats site, and Census tracts that are adjacent or relatively close to these sites, including: Census Tracts 9502, 9503, 9504, 9505, and 9507.

RACE

The following races are considered minorities under the executive order:

- American Indian or Alaskan Native
- Asian or Pacific Islander
- Black, not of Hispanic origin
- Hispanic

Populations of two or more races and populations classified as "Other" were also considered to be minority races for the purpose of the environmental justice analysis.

The U.S. Census Bureau's American Community Survey five-year estimate data for 2005 through 2009 represents the most current racial data available by Census tract. Since the data was reported, the racial composition of the Census tracts is not expected to have changed substantially. Conservative assumptions will be applied to any borderline situations where a minor change in racial composition could affect the minority status of a Census tract. **Table 3.7-7** displays the population of each minority race by Census tract in the vicinity of the March's Point site.

As shown in **Table 3.7-7**, each of the Census tracts in the vicinity of the project site are characterized by a minority population below 21 percent of the overall population. The minority population in the project area is below the 50 percent threshold; as such, no minority communities have been identified in the vicinity of either of the potential project sites. However, the project itself would directly affect members of the Samish Indian Nation. To ensure a conservative analysis, the Tribe is considered to be a minority community that would be impacted by the Proposed Action.

TABLE 3.7-7
MINORITY POPULATION ESTIMATES – MARCH'S POINT SITE AND NEARBY CENSUS TRACTS

Census Tract	Total Population	White (alone)	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Other Race	Two or More Races	Hispanic or Latino (of any race)	Total Minority Population	Percent Minority
City of Anacortes	16,802	15,045	247	108	397	25	26	319	635	1,757	10.5%
Skagit County	116,152	92,253	740	1,633	2,294	172	43	2,128	16,889	23,899	20.6%
9501	866	816	0	10	12	2	0	17	9	50	5.8%
9502	4,833	4,577	10	36	75	2	8	31	94	256	5.3%
9503	2,380	2,179	18	3	29	5	9	21	116	201	8.4%
9504	6,935	6,329	29	47	161	3	14	127	225	606	8.7%
9505	1,913	1,633	130	10	47	0	0	61	32	280	1.7%
9506	1,448	1,281	15	3	43	3	0	39	64	167	11.5%
9507	2,574	2,164	45	40	84	12	0	68	161	410	15.9%

Source: U.S. Census Bureau, 2005-2009.

INCOME

The U.S. Census Bureau's American Community Survey five-year estimate data for 2005 through 2009 represents the most current household income data available by Census tract. The use of older income data is expected to result in a conservative estimate of income, given that income levels tend to rise over the years due to inflation. **Table 3.7-8** displays the median household income and poverty income limit for each identified Census tract as a primary level of analysis. It also shows the percentage of people and families whose income for the past twelve months fell below the poverty level as a secondary level of analysis. A low-income community is defined as a Census tract where the median household income falls below the poverty limit.

TABLE 3.7-8
ESTIMATED HOUSEHOLD INCOME – PROJECT SITE AND NEARBY CENSUS TRACTS

Census Tract	Median Household Income	Average Household Size	Poverty Threshold	% of Population in Poverty[1]
City of Anacortes	$57,279	2.31	$17,098	7.6
Skagit County	$53,094	2.62	$17,098	12.4
9501	$50,781	2.18	$17,098	9.1
9502	$65,484	2.42	$17,098	6.7
9503	$65,625	2.23	$17,098	6.7
9504	$63,481	2.49	$17,098	4.3
9505	$48,948	2.50	$17,098	9.1
9506	$33,899	1.87	$13,991	17.8
9507	$43,669	2.22	$17,098	11.4

Notes: [1]Based on income reported in the last 12 months
Source: U.S. Census Bureau, 2005-2009; U.S. Census Bureau, 2010

As shown in **Table 3.7-8**, the median household income of each Census tract surveyed in the vicinity of the March's Point site, as well as the Flats site, was greater than the poverty threshold. The poverty threshold for each Census tract was determined from the average household size of the Census tract (U.S. Census Bureau, 2010). The poverty threshold assumes average household size is conservatively rounded up to the nearest person. None of the identified Census tracts have a median household income less than the determined poverty thresholds and no Census tract had more than 18 percent of its population below the poverty level; therefore, no low-income communities have been identified in the vicinity of the project site.

3.8 TRANSPORTATION/CIRCULATION

This section describes the existing environmental conditions for the March's Point site and the Flats site. The general and site-specific description of transportation and circulation contained herein provides the environmental baseline by which direct, indirect, and cumulative environmental effects are identified and measured in **Chapter 4.0**.

3.8.1 EXISTING CIRCULATION NETWORK

MARCH'S POINT SITE

The March's Point site is bordered by State Route 20 (SR-20) to the north, Stevenson Road to the south, and Thompson Road to the west.

The major roadways located in the vicinity of the Proposed Project site are described below:

SR-20 is an urban principal highway as classified by the Washington State Department of Transportation (WSDOT). Adjacent to the project site in the vicinity of Thompson Road, the roadway consists of 4 lanes with 12-foot travel lanes and 4-to 10-foot paved shoulders. It serves as an east/west route from Interstate-5 to the ferry terminal located in the western portion of the City of Anacortes (City). The speed limit is posted at 55 mph.

Stevenson Road is classified by the City as a two-lane local roadway. The total pavement width is approximately 21 feet. The posted speed limit is 35 mph.

Thompson Road is a two-lane local roadway. The total pavement width varies from 22 to 24 feet, with 3- to 4-foot gravel shoulders. The speed limit is posted at 35 mph.

Summit Park Road is classified by the City as a two-lane local roadway, with a pavement width of approximately 22 feet. The posted speed limit is 35 mph.

Reservation Road is a two-lane roadway with 11-foot travel lanes and 4- to 7-foot paved shoulders. This roadway is classified by the City as a minor arterial between SR-20 and Stevenson Road. Reservation Road continues to the south through the Swinomish Tribal Reservation to the City of La Conner. The speed limit is posted at 35 mph.

FLATS SITE

The Flats site is bordered by Fidalgo Bay Road to the west and the marine waters of Fidalgo Bay to the east.

As classified by WSDOT, *SR-20* is an urban principal highway. Neighboring the project site, the roadway consists of 4 lanes with 12-foot travel lanes and 4- to 10-foot paved shoulders. The speed limit is posted at 55 mph. Within the commercial/retail area of the City, two travel lanes with a two-way center left turn lane, curbs, gutters, sidewalks and parking are provided on both sides of the street. Bicycle lanes are provided on the east side of the street. The curb-to-curb pavement width is 60 feet. The speed limit is posted at 30 mph.

Fidalgo Bay Road is a two-lane local roadway. The total pavement width is approximately 24 feet. The posted speed limit is 25 mph.

Weaverling Road is classified by the City of Anacortes as a two-lane local roadway. The total pavement width is approximately 24 feet. The speed limit is posted at 25 mph.

30th Street is a two-lane local roadway with parking, curb and gutter on both sides of the street. The curb-to-curb pavement width is approximately 44 feet. There is no posted speed limit sign. The pavement is in fair to good condition.

34th Street is a two-lane local roadway with curbs, gutters and sidewalks on the north side of the street. Gravel/grass shoulders are provided on the south side of the street. There is no posted speed limit sign. The pavement is in fair condition with small patches in poor condition in the vicinity of V Avenue.

R Avenue is a four-lane minor arterial between the SR-20 Spur and 22nd Street with curbs, gutters and sidewalks on both sides of the street and 1- to 4-foot paved shoulders. A landscaped median with breaks to allow for left turns and refuge are provided a various intersections. Travel lanes are 11 to 12 feet in width. The speed limit is posted at 35 mph.

The geometry and control of study intersections located in the vicinity of the March's Point and Flats sites are shown in Figures 6 and 7 of the Traffic Impact Study (TIS) (**Appendix D**).

3.8.2 LEVEL OF SERVICE STANDARDS

Traffic congestion is generally measured in terms of level of service (LOS). Peak hour LOS at critical off-site and driveway intersections was determined using the methodology described in the 2000 Highway Capacity Manual (HCM) (Transportation Research Board, 2000). In accordance with the manual intersections are rated between LOS A and F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The LOS at intersections is measured in terms of average delay per vehicle in seconds. For unsignalized intersections, the LOS is determined by the worst approach at the intersection (i.e. the intersection leg with the most delay, usually the minor leg). For signalized intersections, the LOS is determined as an average delay for all the entering vehicles. The LOS intersection criteria are listed in **Table 3.8-1**.

TABLE 3.8-1
INTERSECTION LEVEL OF SERVICE CRITERIA

Level of Service	Control Delay (Seconds Per Vehicle)	
	Unsignalized Intersections	Signalized Intersections
A	≤10	≤10
B	>10 - ≤15	>10 - ≤20
C	>15 - ≤25	>20 - ≤35
D	>25 - ≤35	>35 - ≤55
E	>35 - ≤50	>55 - ≤80
F	>50	>80

Source: TIS, 2011 (**Appendix D**).

EXISTING CONDITIONS – STUDY INTERSECTIONS

The operational conditions of the following study intersections were evaluated:

March's Point Site

1. SR-20/Thompson Road
2. SR-20/Reservation Road
3. Summit Park Road/Thompson Road/Project Site Driveway
4. Stevenson Road/Thompson Road
5. Stevenson Road/Reservation Road

Flats Site

1. SR-20 Spur/R Avenue
2. SR-20/ SR-20 Spur
3. SR-20 Spur/Fidalgo Bay Road
4. SR-20 Spur West Bound (WB) Exit/Fidalgo Bay Road
5. 34th Street/R Avenue
6. 30th Street/ R Avenue

Traffic counts were collected in August 2011 during the afternoon (PM) peak hour. Figures 6 and 7 in the TIS shows lane geometry and traffic controls at existing intersection and Figures 8 and 9 in the TIS shows the existing traffic volumes (**Appendix D**). Existing PM peak-hour traffic delays and LOS, for the existing March's Point site study intersections are shown in **Table 3.8-**2. As shown in **Table 3.8.2** all study intersections at the March's Point site operate at an acceptable LOS.

PM peak-hour traffic delays and LOS, for the existing Flats site study intersections is shown in **Table 3.8-3**. As shown in **Table 3.8.3** all study intersections at the Flats site operate at an acceptable LOS, with the exception of SR-20 Spur and Fidalgo Bay Road.

TABLE 3.8-2
EXISTING PM PEAK HOUR CONDITIONS- MARCH'S POINT SITE

Intersections	Traffic Control	Existing PM Peak Traffic	
		Delay	LOS
SR-20/Thompson Road	S	12	B
SR-20/Reservation Road	S	14	B
Summit Park Road/Thompson Road/Project Site Driveway	U	WB – 9	A
		SB Left – 7	A
Stevenson Road/Thompson Road	U	WB – 9	A
		NB Left – 7	A
Stevenson Road/Reservation Road	U	EB – 10	B
		SB Left – 8	A

Notes: U = unsignalized; S = signalized.
Source: TIS, 2011, (**Appendix D**).

TABLE 3.8-3
EXISTING PM PEAK HOUR CONDITIONS – FLATS SITE

Intersections	Traffic Control	Existing PM Peak Traffic	
		Delay	LOS
SR-20 Spur/R Avenue	S	36	D
SR-20/SR-20 Spur	S	31	C
SR-20 Spur/Fidalgo Bay Road	U	**EB – 77**	**F**
		WB – 70	**F**
		NB Left – 11	B
		SB Left – 11	B
SR-20 Spur WB Exist/Fidalgo Bay Road	U	WB -9	A
Weaverling Road/Fidalgo Bay Road	U	WB – 9	A
		SB Left – 7	A
34th Street/R Avenue	U	EB – 24	C
		WB – 21	C
		NB Left – 9	A
		SB Left – 9	A
30th Street/R Avenue	U	EB – 19	C
		WB – 22	C
		NB Left -9	A
		SB Left – 9	A

Notes: U = unsignalized; S = signalized; **Bold** = unacceptable LOS.
Source: TIS, 2011, (**Appendix D**).

3.8.3 TRANSIT SERVICES

Bus transit is provided to the area by the Skagit Transit. Currently, Skagit Transit operates Route 410, Route 49, and Route 513 West in the vicinity of the project sites. Route 410 provides transit from the downtown area of the City to the March Point Park and Ride stop, located 0.5 mile to the west of the March's Point site. Route 513 West also provides service to the March's Point Park and Ride.

3.8.4 BIKE AND PEDESTRIAN FACILITIES

Bike and pedestrian facilities are limited immediately adjacent to the March's Point site with no sidewalks or bike paths along SR-20, Thompson Road or Fidalgo Bay Road. The Tommy Thompson Trail system is located adjacent to the Flats site, connecting the City downtown area to the project vicinity.

3.9 LAND USE

This section contains a discussion of the regional land use setting and a discussion of the framework by which land use is guided and regulated in the area. This section also describes the existing land uses for the site and adjacent properties.

3.9.1 REGIONAL SETTING

The City of Anacortes (City) encompasses approximately 15.4 square miles, 14.4 square miles of uplands and one square mile of water, with 12 miles of shoreline. Elevation in the City ranges from sea level to 600 feet above mean sea level (amsl) in the southwest quadrant and to 1,270 feet amsl at the top of Mt. Erie (City of Anacortes, 2010). City population is estimated to be 15,778 (U.S. Census Bureau, 2010). According to the City's Comprehensive Plan, the City has a limited growth capacity of 19,300 people, expected to be reached by the year 2016. If the City decides to build residential developments in commercial marine zones, the population capacity would increase to 20,300, and this is projected to be achieved by 2019.

3.9.2 SETTING – MARCH'S POINT SITE

The March's Point site is currently undeveloped and is zoned and designated as "Light Manufacturing (1)" (LM1). The LM1 zoning is intended to accommodate industrial uses that do not need water access or proximity to the central business district of Anacortes or to the Commercial Avenue corridor (City of Anacortes, 2010). Under this designation permitted uses include auto, truck, motorcycle, and recreational vehicles (RV) sales and service; parks and playgrounds, public and private, and retail sales when the goods are related to items being serviced on-site. Additional uses that are permitted under Section 17.19 of the Municipal Code, and upon approval by the planning commission and city council include: single family homes, grocery stores, marinas and associated uses, office buildings, and public and private recreational facilities, (City of Anacortes, 2011c). Refer to **Table 3.9-1** for goals and policies related to land use in areas designated for manufacturing and commercial marine uses within the City.

TABLE 3.9-1
CITY OF ANACORTES GOALS AND POLICIES-2010

Land Use Element	
Goal	**Goals and Policies for Manufacturing Areas**
1	Heavy manufacturing development should be contained in those general areas presently designated for Heavy Manufacturing in the existing zone ordinance. Manufacturing is defined as those industrial or manufacturing activities which are engages in the production of articles or a product from raw or prepared materials by giving them new forms and qualities. Heavy manufacturing is manufacturing which in the production process creates a potential hazard or a nuisance to other uses. **Policies:** • Encourage coordination and cooperate with other entities within the County which are involved in manufacturing development. • Where appropriate, follow a policy of utilizing Planned Manufacturing District classifications in the Zoning Ordinance which would allow for development of Light Manufacturing uses in a

Land Use Element	
	manner compatible with surrounding uses.
3	Encourage multiple business manufacturing development, providing a more stable economic base through diversity, as opposed to a single large manufacturing industry. Policies: • Through land use designations and performance standards, provide opportunity for mutual benefits for various businesses which co-locate. • Allow mixed use residential/light manufacturing development in some zones where workers (and their families) can live and work in the same facility as long as provision is made for compatibility among uses.
4	Develop policies for manufacturing areas which will provide the City and the developers with consistent expectations with regard to performance standards and contract obligations. Policies: • Provide manufacturing development performance standards in the zoning ordinance for impacts such as noise, glare, emissions, and periodically review such standards and their application to assure clarity and consistency in City expectations and enforcement. • Manufacturing activities and developments should be designed and operated to minimize adverse impacts to surrounding areas and the community as a whole. • The shipment or movement of hazardous and nuisance materials within or through the City should be managed by the City.

Goal	**Goals and Policies for Commercial Marine Areas**
1	Preserve the CM areas for commercial enterprise where orientation to the waterfront and waterway areas is of prime importance to marine, commercial and tourist activities. CM areas include all CM zones as set out in the Zoning Ordinance whether designated CM, CM1, or CM2. **Policies:** • Encourage commercial activities that are environmentally clean and labor intensive. • Encourage City and Port cooperation in the development of CM areas. • Encourage retail and commercial enterprise that will enhance the marine-oriented and aesthetic qualities of the waterfront. • Allow residential uses in certain CM zones through the conditional use process only if a specific project is determined not to displace or diminish the underlying purpose of the zone.
2	Require a public access element in all development plans abutting shoreline where appropriate. **Policies:** • Public access and pedestrian access to the shoreline shall be required. • CM areas that are unplatted should be encouraged to provide public access areas such as fishing piers, waterfront roads, street-end parks, view parks, public areas for beach walking, transient moorage. • Conditional Use permits should require the same public access conditions as those required of retail and commercial development.
3	The zoning ordinance for Commercial Marine should strongly encourage marine, commercial and tourist developments that are water and waterview-dependent, destination oriented, and enhance the marine values inherent in the district such as physical and visual access to waterways and shoreline. **Policies:** • Public access should be included in all development plans where economically feasible and safe. Unregulated public access is access for all persons at all times, regulated public access is access for all persons at all times; regulated public access is access for all persons paying fee for use of facilities such as restaurants, shops, motels, or access which is limited by time, location and activities. • Encourage marinas with boat and marine equipment as well as services. • Encourage boat repair facilities. • Encourage boatel, motel and hotel accommodations to enhance the marine-oriented activities. • Encourage recreational equipment rentals and sales. Encourage specialty shops and eating establishments.

Land Use Element

- Encourage City and Port cooperation in the development of transient moorage for moderately sized cruise ships; moorage buoys should be included in appropriate locations.

4 The zoning ordinance for Commercial Marine 1 may allow limited residential development, provided the residential development is integrated with and contributes to marine, commercial and tourist developments that are water and waterview-dependent, destination oriented, and that enhance the marine values inherent in the district.

Policies:

- Any residential development must be consistent with the marine character of the waterfront.
- Residential development should be limited to areas above the first floor and be coordinated in design and scale with the overall mixed use development in order to preserve the underlying CM purpose.
- Encourage any residential development to provide public amenities such as view corridors, public plazas, and walkways in coordination with the overall marine, commercial and tourist development.
- Encourage provision of landscape features for any residential development and coordination between the landscaping for the residential development and the overall marine, commercial and tourist development.
- Support the development of public access to Fidalgo Bay and linkages between the Railroad Corridor/Linear Park and Cap Sante Marine/Harbor by offering incentives which would attract private investment.
- Any project shall be economically advantageous in the long run to the City.

5 Performance standards and regulatory incentives should be developed for the CM areas to promote desirable development and public amenities.

Policies:

- Assure economic benefit to the City,
- Encourage preservation of unique and/or historical features and marine views.
- Provide adequate on-site parking that is, to the maximum extent feasible, landward of the principle structure(s) away from the shoreline or in a parking garage, including underground if possible.
- Assure adequate vehicle and pedestrian circulation and access to and from the areas.
- CM area should provide adequate buffer areas and/or sight screening where appropriate.
- In the CM1 zone, the City may allow limited residential development which may consist of multi-family dwellings, provided the residential development is integrated with a mixed-use marine, commercial and tourist development through conditional use and planned unit development through conditional use and planned unit development processes, perhaps with a development agreement.
- Residential development in the CM Zone shall be by conditional use, not exceed R4A densities (18 units per acre), and be an integral part of a mixed use neighborhood; vacation rental type of arrangements are encouraged. Tidelands may not be included for purpose of density calculations. Affordable housing provision(s) shall be part of any such residential development, either on-site or off-site.
- Development in Commercial Marine areas should be designed to minimize adverse impacts to the marine habitats, shorelines and surrounding areas.
- Development approved through the conditional use process may not cover more than 50% of the upland area with buildings.
- To preserve the underlying commercial marine purpose of CM, CM1 and CM2 zones, all residential units shall be located above the ground floor, with the ground floor reserved for non-residential commercial marine uses.
- Residential units in the CM, CM1 and CM2 zones shall be located and constructed so as to minimize conflict between residential and more intensive non-residential uses.

6 Review other areas in the City that may be appropriate for the CM designation, giving consideration to existing land uses.

Source: City of Anacortes, 2010.

The March's Point site is currently grassland, with minor ruderal/disturbed areas including dirt roads, graded driveways, remnant housing pads, and piles of metal and wood. Land uses surrounding the project site include car sales and service centers and an oil refinery complex to the north; the Summit Park Bible Church, a mini-storage facility, and an electrical utility substation to the west; a volunteer fire station, three residences and a boat manufacturing facility to the south; and open space and a U-Haul business to the east. The properties immediately surrounding the project site to the west, north, and east are within the City limits and are zoned and designated as LM1. Lands to the south and southeast of the project are within the unincorporated portion of Skagit County, and are zoned and designated as "Industrial Forest – Natural Resource Lands" (IF-NRL), which is intended to ensure that forest lands of long-term commercial significance are conserved and managed to provide sustainability.

3.9.3 SETTING –FIDALGO BAY RESORT FLATS SITE

The Flats site is composed of 2.4 acres of cleared, undeveloped land, and a row of gravel pads and utility hook-ups for RVs. The RV pads are currently part of the Tribal owned Fidalgo Bay Resort. The site gently slopes to the east, towards Fidalgo Bay. In the City's Comprehensive Plan, the Flats site is zoned as a "Commercial Marine" (CM) area. Under Section 17.21 of the Municipal Code, this area is intended primarily to provide the public with improved waterfront use, enjoyment and accessibility by providing for a variety of water-related commercial developments, recreational activities, services, facilities, accommodations and amenities (City of Anacortes, 2011c). Refer to **Table 3.9-1** for goals and policies related to land use in Commercial Marine designated areas within the City.

The area immediately surrounding the site is also zoned Commercial Marine. Fidalgo Bay borders the north and northeast portions of the site and the area across the bay is dominated by the industrial Tesoro Refinery. The Tribally owned Fidalgo Bay Resort is located directly to the east and southeast of the project site and includes pads and utility hook-ups for RVs, several rental cabins, and a two-story clubhouse. A multi-unit waterfront condominium is situated immediately northwest of the Flats site.

3.9.4 REGULATORY SETTING

Once the Federal government acquires the land in trust for the Tribe, the property would not be subject to State or local land use regulations. Only Tribal land use regulations are applicable on trust lands. However, the Tribal Government desires to work cooperatively with local and State authorities on matters related to land use.

FEDERAL

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), passed in 1972, is administered by the National Oceanic and Atmospheric Administration's (NOAA) Office of Ocean and Coastal Resource Management (OCRM) and provides for the management of the nation's coastal resources and balances economic

development with environmental conservation. The CZMA states that each federal activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner that is consistent to the maximum extent practicable with the enforceable policies of approved state management programs, in this case, the State of Washington Shoreline Management Act and City of Anacortes Shoreline Master Program, which are described below. The term "maximum extent practicable" means federal activities, including development projects directly affecting the coastal zone of states with approved management programs, must be fully consistent with such programs unless compliance is prohibited due to the requirements of existing law applicable to the agency's fundamental operations.

STATE OF WASHINGTON

Growth Management Act

The Washington State Growth Management Act (GMA) (Chapter 36.70A RCW) was adopted to control uncoordinated and unplanned growth within the State of Washington. The GMA requires State and local governments to manage growth in Washington by identifying and protecting critical areas and natural resource lands, designating urban growth areas, preparing comprehensive plans, and implementing them through capital investments and development regulations.

The GMA requires each county within the State of Washington to adopt a comprehensive plan to help guide more efficient land use planning within the State. Each county's comprehensive plan was to be developed with the coordination and consultation of each city within the county's jurisdiction. The passage of the GMA significantly changed local planning requirements. County comprehensive plans (CCP) are required to take into consideration the following:

- Plan for a 20-year population forecast provided by the Washington Office of Financial Management (WOFM) and distribute this forecast equitably and realistically throughout the county.
- Collectively identify urban growth areas for each city and town using service standards and land development suitability as measures; and,
- Draft plans which, at a minimum, include land use, transportation, housing, utilities, capital facilities, and rural elements.

Shoreline Management Act

In November 1972, the State of Washington enacted the Shoreline Management Act (SMA) (RCW 90.58) with the intent to manage and protect the state's shoreline area resources by planning for reasonable and appropriate uses. The SMA provides a planning and regulatory program by which local government develops policies and guidelines and provides jurisdictional specific permitting systems for development within the SMA management area. In this case, the City of Anacortes has developed policies in regards to the SMA management area, as described below.

LOCAL

As noted previously, the alternative sites (March's Point and Flats sites) are located within the City and are currently subject to City plans and ordinances discussed below.

Comprehensive Growth Management Plan

The City addressed the State GMA by developing a new Comprehensive Plan in 1993 and new Development Regulations in 1994. The City's Comprehensive Plan is designed to provide general policy guidance for the growth and development and is expected to be updated annually (City of Anacortes, 2010).

Applicable Goals and Policies

The Land Use element of the City's Comprehensive Plan provides policy guidance for the uses of land, including existing and future land use, City zoning, and areas of urban growth. However, as noted above, once the Federal government acquires the land in trust for the Tribe, the property would not be subject to State or local land use regulations. Following are general City goals relating to land use within the City. **Table 3.9-1** includes goals and policies specific to land use within Manufacturing (March's Point site) and Commercial Marine (Flats site) designated areas. In addition, general City goals related to land use are provided below:

General City Goals:

- Goal 2: Improve the image of Anacortes as a marine oriented City by encouraging, protecting and enhancing marine views from public places, public access (particularly along the waterfront), and marine habitats and resources by encouraging marine water-dependent and water-related businesses and activities.
- Goal 3: Promote compatible land uses and improve visual appearance in each and every zoning district.
- Goal 4: Keep a reasonable balance between housing, manufacturing, commercial/retail, open space and other land uses within the community.
- Goal 5: Encourage the development of a balanced and adequate employment and revenue base necessary for provision of needed services.
- Goal 7: There shall be periodic and regular review of the City Comprehensive Plan and Zoning Ordinance; see Appendix E of the City Comprehensive Land Use Plan. Additionally, the City Council and/or the Planning Commission may from time to time initiate Comprehensive Plan and Zoning Ordinance Amendments.

City of Anacortes- Design and Improvement Standards

Both the March's Point and Flats sites are located on currently undeveloped lots within the City, subject to the City of Anacortes Municipal Codes presented in **Table 3.9-2.**

TABLE 3.9-2
CITY OF ANACORTES MUNICIPAL CODE

Applicable Municipal Codes
Title and Chapters
15- Buildings and Construction 15.20, Building Permits 17- Zoning 17.05, Concurrency 17.19, Light Manufacturing 1 Use District (LM1) 17.21, Commercial Marine District (CM) 17.41, Landscaping Requirements 17.46, Parking 17.54, Standards - General
Source: City of Anacortes, 2010.

March's Point Site

As noted previously, the March's Point site is located in a Light Manufacturing 1 Use District (LM1). The LM1 covers activities with the SR-20/March's Point industrial zone. **Table 3.9-3** describes the minimum setbacks, lot coverage, and building height for the LM1 zoning.

TABLE 3.9-3
CITY OF ANACORTES SETBACKS, LOT COVERAGE AND BUILDING HEIGHT STANDARDS

Zone	Minimum Setbacks				Maximum Lot Coverage	Maximum Building Height (feet)
	Front (feet)	Side		Rear (feet)		
		Street (feet)	Interior (feet)			
Light Manufacturing 1	10	10	10	10	NA	35 feet for residential structures. 50 feet for non-residential structures

Notes: NA = Not Applicable.
Source: Anacortes Municipal Codes 17.19.060 and 17.19.080

Fidalgo Bay Resort Flats Site

As noted previously, the Flats site is located in a Commercial Marine (CM) designated area. The CM land use designation is established in recognition of the unique and irreplaceable nature of certain marine sites within the City, and creates a special commercial district providing for the establishment of such uses as marinas, boat docking facilities, and other commercial enterprises where orientation to navigable waterways and tourism trade is of prime importance. **Table 3.9-4** describes the minimum setbacks, lot coverage, and building height for the CM zoning.

TABLE 3.9-4
CITY OF ANACORTES SETBACKS, LOT COVERAGE AND BUILDING HEIGHT STANDARDS

Zone	Minimum Setbacks				Maximum Land Coverage	Maximum Building Height (feet)
	Front (feet)	Side		Rear (feet)		
		Street (feet)	Interior (feet)			
Commercial Marine	NA	20 ft. from ROW	NA	NA	50%	35 feet

Notes:
-No minimum setback requirements from the property line, except ten feet where the property line adjoins a different zone which has required property line setbacks.
-No minimum lot area is assigned for CM district. It is the intent of this title that each enterprise or use be located on a site commensurate with its use and sufficient to meet the requirements for off-street parking, loading and unloading, and setback requirement of the district.
-Maximum density is twenty-eight units per gross acre for a residential development approved as a conditional use.
- Height limit within the CM district is thirty-five feet. This limit can be exceeded by a vote of the city council up to a maximum of fifty feet upon demonstration that the excess height would not be adverse to the established policies, standards, and uses in the general vicinity and would enhance one or more of the policies or standards.
NA = Not Applicable. ROW= Right of Way
Source: City of Anacortes, 2011c

Shoreline Master Program

The City of Anacortes Shoreline Master Program (SMP) (September 2010), as required under the State of Washington SMA, described above, provides guidance of uses and development within the City shoreline area. Shorelines include the waters within the City limits together with the lands underlying them and all lands extending landward 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark together with any associated wetlands (City of Anacortes, 2010). The SMP is consistent with local plans and policy documents, including the Anacortes Comprehensive Plan.

Development within the City shoreline management area may be required to obtain a Substantial Development Permit, a Shoreline Conditional Use Permit, a Shoreline Variance, or a Letter of Exemption.

The Flats site is located along a stretch of Fidalgo Bay is has an SMP designation of Urban (City of Anacortes, 2010). This Urban designation provides for commercial, industrial, residential, and recreational uses. Urban designations are noted for areas of the City that currently support or are planned for general commercial or industrial development.

Existing and planned uses in the Urban designation represent a variety of water-oriented and nonwater-oriented uses. Existing site zoning allows for retail businesses, professional offices, hotels, restaurants, personal service shops, recreational uses, marinas, and residential uses.

SMP Policies

- **Policy 5.10.1** - Give priority to water-oriented uses over non-water-oriented uses. First priority should be given to water-dependent uses. Second priority should be given to water-related uses

and third priority to water-enjoyment uses. Non-water-oriented uses shall only be allowed if they are part of mixed used developments where the primary use is (1) water-dependent or (2) water-related, or (3) in conjunction with a water-enjoyment use on sites where there is no access to water.

- **Policy 5.10.2 -** Encourage uses that enhance ecological functions and/or enhance opportunities for the public use and enjoyment of the shoreline; new development shall not cause a net loss of shoreline ecological functions.
- **Policy DR**-5.10.3 – A limited range of non-water-oriented development, open to the general public, while not preferred, may also be authorized as a conditional use provided said development:
    a. Conforms with the criteria set forth for conditional uses in Section 3.1 of the SMP;
    b. Is designed and located in a manner that capitalizes on shoreline views and is compatible with water-oriented uses;
    c. Makes provisions for the public access and enjoyment consistent with the SMP; and
    d. Is part of a mixed-use development or the parcel is separated from the water.

Urban Growth Areas

The State GMA requires that the City's planning goals and policies be consistent with the GMA and the county-wide planning policies (CPPs). The CPPs in Skagit County are established by agreement among the cities and towns. The GMA requires rapidly growing counties and cities to develop comprehensive land use plans that identify UGAs. UGAs are urban rings of more intense development around each city. Every five years counties and cities are required to re-evaluate their UGA and planning policies. Cities can propose to extend UGAs to accommodate new growth.

The City's Comprehensive Plan includes a critical area provision that enhanced protections for City parks, forest lands, significant habitats, and wetlands (City of Anacortes, 2010). According to the agreement between Skagit County and the City, the CPP's outlined in **Table 3.9-5** apply to the urban growth areas within the City. Approximately, 2,873 acres of residential land, 949 acres of industrial and manufacturing land, and 582 acres of commercial/business land are designated for urban development within the Comprehensive Plan (City of Anacortes, 2010). Specifically, these areas of urban growth allocate approximately 618 acres for LM1 uses, including the March's Point site, and 314 acres for CM uses, including the Flats site.

TABLE 3.9-5
CITY OF ANACORTES-SKAGIT COUNTY, 2000
COUNTY-WIDE COMPREHENSIVE PLAN POLICIES

Appendix D- City of Anacortes 2010 Comprehensive Plan
Urban Growth
Encourage urban development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner. 1. Urban growth shall be allowed only within cities and towns, their designated UGA's and within any non-municipal urban growth areas already characterized by urban growth, identified in the County Comprehensive Plan (CCP) with a Capital Facilities Plan meeting urban standards. The County shall have the ability to make minor adjustments to the UGA population and/or commercial/industrial land allocations in its final Comprehensive Plan, provided if the proposed adjustment for any individual UGA exceeds a 10% increase or decrease in the population or commercial/industrial land shown in the following tables then the County shall follow the process included in the Memorandum of Agreement on the Process for Developing and Adopting Countywide Planning Policies (CPP) (February, 1992) for adoption of Countywide Planning Policies (CPP) before adopting the proposed adjustment. 2. Cities and towns, their urban growth areas, and non-municipal urban growth areas designated pursuant to CPP 1.1, shall include areas and densities sufficient to accommodate as a target 80% of the County's 20 year population projection. 3. Urban growth areas shall provide for urban densities of mixed uses and shall direct development to neighborhoods which provide adequate and accessible urban governmental services historically and typically delivered by cities, and includes storm and sanitary sewer systems, domestic water systems, street cleaning services, public transit services, and other public utilities associated with urban areas and normally not associated with nonurban areas. 4. Urban growth areas shall include greenbelt, open space, and encourage the preservation of wildlife habitat areas. 5. Cities shall encourage development, including greenbelt and open space areas, on existing vacant land and in-fill properties before expanding beyond their present corporate city limits towards urban growth boundaries. 6. Annexations beyond urban growth areas are prohibited. 7. Development within established urban growth boundaries shall conform to urban development standards. 8. All growth outside the urban growth boundary (UGB) shall be rural in nature as defined in the Rural Element, not requiring urban governmental services except in those limited circumstances shown to be necessary to the satisfaction of both the County and the affected city to protect basic public health, safety and the environment, and when such services are financially supportable at rural densities and do not permit urban development.

Source: Skagit County, 2000.

3.9.5 AGRICULTURE

REGULATORY SETTING

Farmland Protection Policy Act

The 1981 Congressional report, *Compact Cities: Energy-Saving Strategies for the Eighties*, identified the need for Congress to implement programs and policies to protect farmland and combat urban sprawl and the waste of energy and resources that accompanies sprawling development. The report indicated that much of the sprawl was the result of programs funded by the Federal Government. With this in mind, Congress passed the Agriculture and Food Act of 1981, which contained the Farmland Protection Policy Act (FPPA) (7 U.S.C. Section 4201). The FPPA is intended to minimize the impact federal programs

have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that federal programs are administered to be compatible with state and local units of government, and private programs and policies to protect farmland (NRCS, 2004).

The Natural Resource Conservation Service (NRCS) is responsible for the implementation of the FPPA and categorizes farmland in a number of ways. These categories include: prime farmland, farmland of statewide importance, and unique farmland. Prime farmland is considered to have the best possible features to sustain long-term productivity. Farmland of statewide importance includes farmland similar to prime farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Unique farmland is characterized by inferior soils and generally needs irrigation depending on climate.

The Land Evaluation and Site Assessment is a numeric rating system used by the NRCS to evaluate the relative agricultural importance of farmlands. This evaluation is completed on Form AD 1006, the Farmland Conversion Impact Rating (FCIR) Form. A FCIR Form was completed by NRCS for both the March's Point site and the Flats site, and is included in **Appendix F** of the Draft EIS.

MARCH'S POINT SITE CONDITIONS

The U.S. Department of Agriculture (USDA) performs a state-by-state census of agriculture every five years. The National Agriculture Statistical Service (NASS) collects census data from a list of all known potential agriculture operators. The census reports on various statistics relating to crop yields, farm acreage, and farm economics. According to the *2007 Census of Agricultural Crop Report*, a total of 108,541 acres in Skagit County were used for farming purposes (USDA, 2009).

The NRCS characterizes the project site as being "Prime Farmland if drained" (**Appendix F**); however, there are currently no farming operations on the site or infrastructure that would support land cultivation.

FIDALGO BAY RESORT FLATS SITE

The Flats site is currently composed primarily of grasslands. The Flats site contains a xerorthent soil type, which is not considered suitable for prime farmland (**Appendix F**). A discussion of the xerorthent soil type is provided in **Section 3.2**.

3.10 PUBLIC SERVICES

This section addresses existing public services relating to the March's Point site and the Flats site. The issues that are addressed in this section include: water supply, wastewater, solid waste, energy, telecommunications, natural gas, law enforcement, fire protection, and emergency medical services (EMS).

3.10.1 SETTING – MARCH'S POINT SITE

WATER SUPPLY

Skagit County (County) is primarily served by public water agencies; however, many residences still rely on wells as their source of water. A review of Federal and Washington State well databases found 27 wells within one mile of the March's Point site, with no domestic wells located on the site itself (Ecology, 2003). The well log for a domestic well adjacent to the March's Point site at 697 Stevenson Road indicates an average static water level around 30 feet.

The nearest water supply utility to the March's Point site is the City of Anacortes (City). The City supplies water to approximately 56,000 residences and businesses. In addition to its own municipal requirements, the City provides wholesale water to the Town of La Conner, the City of Oak Harbor, the Swinomish Tribal Community, and the Skagit County Public Utilities District (PUD) (City of Anacortes, 2000) The City water supply has been owned and operated by the City of Anacortes since 1919 and is identified by the Washington Department of Health No. 02200C. The City Water Treatment Plant (WTP) is staffed by ten full-time positions. Seven of these positions are senior staff members who hold Water Treatment Plant Operator (WTPO)-II certificates. There are two other operators working towards their certificates as well. There is also a secretary position at the WTP.

The source of the City's WTP water is the Skagit River. The WTP has an estimated output of 17 million gallons per day (mgd) of potable water although it is rated for 42 mgd (LaBlanc, 2013). Recent upgrades included replacing and upsizing existing intake pumps, emergency backup power system, and construction of a new pretreatment system and its associated components. The City WTP has instantaneous water rights of 54.94 mgd through a Memorandum of Agreement for Skagit River water rights in 1996 (MOA, 1996). The water supply system currently has four 150 horsepower (hp) intake pumps, eight 400 hp vertical turbine pumps, two 150 hp variable output pumps, and several hundred miles of pipeline. There are also three reservoirs connected to the City water system with a combined capacity of seven million gallons. Two of these reservoirs each have two million gallon capacities and are located along Skyline and 29th Street; the third reservoir has a three million gallon capacity and is located on Whistle Lake Road. While the March's Point site is not currently connected to the City water service, water mains in the area include a 24-inch diameter water pipe line located north of the project site cross SR-20 and a 14-inch diameter pipe line to the south of the March's Point site along Stevenson Road.

WASTEWATER SERVICE

Municipal wastewater service in the area is provided by either connection to the City Wastewater Treatment Plant (WWTP) or through individual private septic systems. The City owns and operates the WWTP, which became operational in 1992 with both primary and secondary treatment capabilities. Wastewater is transported via 23 pump stations located across the City to the WWTP located on T Avenue. The nearest pump station to the March's Point site is located approximately 0.2 miles to the north on Bartholomew Road. Existing excess capacity is currently available in gravity lines, mains and lift stations in the vicinity of the March's Point site (Franz, 2013). A NPDES permit (no. WA-002025-7) allows the WWTP to release treated water into the Guemes Channel via pipes located west of the Port of Anacortes Pier 2 (WWTP, 2009). Estimated peak capacity for the WWTP is 4.5 mgd, with average daily flows in 2012 of around 2.05 mgd (Franz, 2013). The City has no plans for expanding the WWTP as excess treatment capacity is sufficient for the foreseeable future (WWTP, 2009). The nearest existing sewer line to the March's Point site is at the intersection of Thompson Road and Summit Park Road.

SOLID WASTE SERVICE

Ecology manages solid waste at the state level and approves local solid waste management plans. The Skagit County Department of Public Works prepares and updates the local solid waste management plan for the County. The current plan is the 2005 Skagit County Comprehensive Solid Waste Management Plan (CSWMP), with amendments added in 2008. The City agreed to participate in the development of the CSWMP and is part of the Solid Waste Advisory Committee (SWAC). The CSWMP is consistent with the Washington State Solid Waste Management Plan issued in 1994. Guidelines for the development and maintenance of the solid waste management plan are found in Washington Solid Waste Management, Reduction and Recycling Act, Chapter 70.95 of the Revised Code of Washington. Enforcement of solid waste regulations at the local level is shared among several departments of the County and the cities. Local County agencies involved in solid waste management include the City Public Works Department, Solid Waste System Governance Board, and Health Department. The Skagit County SWAC also plays an important advisory role in the County's solid waste management system.

Waste from Washington is generally placed in landfills in state or exported to one of three landfills in Oregon. In 2003, one million tons of solid waste were exported. Current capacity at Washington landfills will last until 2052 (Ecology, 2005a). The County generates approximately 19,270 tons of municipal solid waste per month. Waste is collected via municipal programs, private haulers, and residential "self-hauls" and is taken to transfer stations in located in Mt. Vernon, Clear Lake, and Marblemount. In 2010, the County generated an estimated 231,200 tons of municipal solid waste (Skagit County, 2005). The statewide recycling rate goal is 50% of total volume; in 2003, the County had an estimated recycling rate of 32%.

Local Solid Waste Collection

Solid waste collection in the project area is provided by the City Solid Waste Division (SWD). The SWD operates a solid waste collection system consisting of a fleet of five service trucks. The waste crew is staffed by four full-time employees who haul approximately 654 tons of refuse and perform 1,600 dumpster pickups per month (City of Anacortes, 2011b). Residentially services also include pick-ups of 25,000 garbage cans and 950 pre-paid garbage bags each month.

Waste collected within the City is transported to the Skagit County Recycling and Transfer Station (RTS) where recyclables are processed and waste is transferred via rail to the Roosevelt Landfill in Klickitat County. Roosevelt Landfill is located off SR-14 north of the town of Roosevelt, approximately 200 miles southeast of the Skagit County Transfer Station. The landfill currently has a current permitted capacity of 120 million tons and a 40 year expected trash receiving life (Klickitat County, 2000).

ELECTRICITY, NATURAL GAS AND TELECOMMUNICATIONS

Puget Sound Energy (PSE) provides electricity to properties in the vicinity of the project sites. PSE is regulated by the Washington Utilities and Transportation Commission (WUTC) and is obligated to serves its customers subject to WUTC rates and tariffs. PSE is the largest energy utility in the State of Washington and serves over 1 million electric customers within a 4,500 square mile service area. There are 354 substations, 13,000 miles of power lines, 10,000 miles of power cable, and over 330,000 power poles (PSE, 2011). The nearest electrical lines to the March's Point site are found along Thompson and Stevenson Roads, adjacent to the west and south of the site.

Natural gas is provided to the area by Cascade Natural Gas (CNG), which operates and maintains facilities in the City, surrounding communities of Mt. Vernon and La Conner, and other communities within Washington and Oregon. CNG's 385 employees serve approximately 250,000 customers. The project sites lay within the Mt. Vernon Service Area (CNG, 2011). BP Gas also supplies natural gas near the March's Point site via the Olympic Pipe Line Company with 16-inch diameter gas lines located on the south side of Stevenson Road, approximately 360 feet south of the March's Point site.

Many private companies provide telephone, internet, and cable services to properties within the vicinity of the project site. Prominent companies which offer these telecommunication services include Comcast, Clear, Wave Broadband, and AT&T.

LAW ENFORCEMENT

Pursuant to the Revised Code of Washington (RCW) Chapter 10.92, either federal or state law enforcement officers may exercise jurisdiction over tribal lands in the State of Washington. In order for the state to have jurisdiction on tribal lands, the sovereign tribal government and all local government law enforcement agencies that are to have jurisdiction on tribal lands must enter into an interlocal agreement

pursuant to RCW chapter 39.34 (State of Washington, 2008). The Skagit County Sheriff's Office and the Anacortes Police Department (APD) currently exercise jurisdiction on the project sites. In addition to patrol and coroner services, the Sheriff's Office maintains K-9 units, a SWAT Team, and a Crisis Response Team. The main sheriff station is located in Mt. Vernon. Crime statistics for the County are found in **Table 3.10-1**.

TABLE 3.10-1
SKAGIT COUNTY CRIME 2010

Crime	Number of Incidents
Violent Crime	116
Homicide	0
Forcible Rape	25
Robbery	13
Aggravated Assault	78
Property Crime	1,443
Burglary	490
Larceny Theft	878
Motor Vehicle Theft	75
Arson	12
Total	***3,130***

Source: FBI, 2010

The APD serves approximately 16,000 citizens in an area spanning roughly 15 square miles. Patrol and emergency response services are provided 24 hours a day, 7 days a week. There are currently 25 commissioned police officers and six non-commissioned support staff employed by the department (APD, 2011).

The APD police station is located approximately 4.0 miles northwest of the March's Point site. The project site is located within the March's Point service area. In 2010, the APD responded to 10,528 calls for service. The average response time for calls to the project site is estimated to be a maximum of approximately ten minutes (Small, Pers. communication, 2011).

The Corrections Division of the Skagit County Sheriff's Office manages jail facilities and correctional programs. The Skagit County jail staffs 28 Corrections Deputies and four Corrections Sergeants which are responsible for providing safe and secure housing for inmates in custody. The staff is also responsible for the movement of inmates outside of the jail, including medical appointments and court appearances. Additionally, five Corrections Deputies and one Corrections Sergeant handle peripheral duties, such as jail billing, medical liaison, court security, and the Jail Alternatives Program. The jail is currently equipped with 180 beds; however, the facility was originally designed to house only 83 inmates, as such, the core of the jail (laundry, food services, medical, etc.) is still designed for a capacity of 83. Therefore,

the jail is on booking restrictions due to overcrowding and does not accept misdemeanors (Skagit County Sheriff, 2005).

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The Anacortes Fire Department (AFD) provides fire suppression services to an area of 14 square miles including the project sites. The AFD also provides advanced life support emergency medical services to 84 square miles, including the City and on both Fidalgo and Guemes Islands. Other services provided by the AFD include public education, fire prevention, limited rescue delivery, and operations level hazardous material response (AFD, 2010).

The nearest fire station to the March's Point site is AFD Station Three, located approximately 1 mile to the east at 9029 Molly Lane. AFD Station Three is currently staffed with 2 firefighter/paramedics through a 12-hour day shift. AFD Station Three is only staffed between 8 am and 9 pm (AFD, 2010). AFD Station One and Station Two are staffed full time. AFD Station One, located approximately 4.5 miles to the northwest is the largest and houses the administrative staff along with two ambulances, a rescue vehicle, two pumper engines, a ladder engine, and a command vehicle. Station One is staffed by three firefighter/paramedics per shift. AFD Station Two is located approximately 8 miles northwest of the March's Point site, housing two firefighting apparatus. Station Two is staffed by two firefighter/paramedics per shift. In 2010, the AFD staff consisted of three chief officers, 19 career firefighters, 10 volunteer firefighters, and one administrative support person (AFD, 2010).

The Mt. Erie Volunteer Fire Department (Mt. Erie VFD), also called the Skagit County Fire Protection District 11, is a class eight rural fire department covering an area of 15 square miles along the southern end of Fidalgo Island. Mt. Erie VFD is overseen by three commissioners and is staffed by 25 volunteer firefighters. Two fire stations are operated by the Mt. Erie VFD, with Station 2 being the closest to the March's Point site, located approximately three miles to the southwest. Station 2 houses two Class A fire engines, a brush engine, and also houses one engine owned by the Washington State Department of Natural Resources to allow for immediate response readiness to unexpected fires. The estimated response times for service calls to the project are a maximum of 3 minutes during the day and 8 minutes during the evening and night (Kennedy, pers. communication, 2011).

The Summit Park Volunteer Fire Department (Summit Park VFD) also has equipment stored at a station approximately 1,500 feet east of the March's Point site at 8652 Stevenson Road. Additionally, the Summit Park VFD operates a fire station at 9575 Padilla Road approximately one mile east of the March's Point site. Both of these stations are in the County and would provide support to the AFD if necessary through mutual aid agreements.

The nearest hospital, Island Hospital, is located 3.6 miles northwest of the March's Point site at 2601 M Avenue. Island Hospital is a 43-bed, tax-supported, medical-surgical facility that also serves Fidalgo

Island, north Whidbey Island, San Juan County, and western Skagit County. An array of medical services is provided by the hospital, including prenatal care, critical/emergency services, diagnostic imaging, and rehabilitation. The Island Hospital Emergency Department includes an emergency room and a Level III trauma center. Incoming Med Flights from the nearby islands are typically achieved with a 10-15 minutes flight time, and the hospital is also capable of stabilizing patients for departing flights to nearby specialized facilities (Island Hospital, 2011).

Skagit County Medic One provides emergency services in Skagit County including 911 dispatching, ambulance contract oversight, inter-facility transfers, and emergency management. The estimated response time to the March's Point site is 15 minutes (Medic One, 2011).

3.10.2 SETTING – FIDALGO BAY RESORT FLATS SITE

WATER SUPPLY

There are currently eight-inch diameter water distribution lines operating at around 140 psi running along Fidalgo Bay Road immediately west of the Flats site (Nemeth, Pers. Communication, 2011). Additional information for City water supply is provided under the description of the March's Point site. There are no domestic water wells on the Flats site, however approximately 28 identified wells have been identified within 1 mile of the Flats site.

WASTEWATER SERVICE

The Flats site currently has an existing wastewater service connection provided through the City. The nearest sewer line is a four-inch diameter forcemain immediately west of the Flats site. Wastewater conveyance, treatment, and disposal are identical to that described under the March's Point site.

SOLID WASTE SERVICE

Solid waste disposal information for the Flats site is the same as described for the March's Point site.

ELECTRICITY, NATURAL GAS AND TELECOMMUNICATIONS

Electrical, natural gas, and telecommunications providers are the same as those given for the March's Point site. The nearest electrical lines are found immediately west of the Flats site along Fidalgo Bay Road.

LAW ENFORCEMENT

APD law enforcement services for the Flats site are the same as those described above for the March's Point site. The nearest police station is the APD Station 1.7 miles northwest of the Flats site.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

Fire protection and emergency medical services for the Flats site are the same as those described for March's Point site. The nearest fire station to the Flats site is the AFD Main Station on 13th Street, located approximately 1.2 miles to the northwest. The nearest emergency room is located at the Island Hospital, located 1.5 miles northwest of the Flats site.

3.11 NOISE

This section describes the existing environmental conditions for both the proposed project site and the alternative site at the Flats Site. The general and site-specific description of the noise setting contained herein provides the environmental baseline by which direct, indirect, and cumulative environmental effects are identified and measured in **Chapter 4.0**.

3.11.1 ACOUSTICAL BACKGROUND AND TERMINOLOGY

Sound is defined as any pressure variation in air that the human ear can detect, and is technically described in terms of loudness (amplitude) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighing network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in dB.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq) over a given time period (usually one hour). The Leq is the foundation of the Day-Night Average Level (Ldn) noise descriptor, and shows very good correlation with community response to noise.

Table 3.11-1 contains definitions of acoustical terminology used in this section. **Table 3.11-2** shows examples of noise sources and there effects on humans, which correspond to various, sound levels. The Ldn is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were louder than daytime exposures. Because Ldn represents a 24-hour average, it tends to mask short-term variations in the noise environment. Ldn-based noise standards are commonly used to assess noise effects associated with traffic, railroad, and aircraft noise sources.

TABLE 3.11-1
ACOUSTICAL TERMINOLOGY

Terms	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ration of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronnewtons per square meter)
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	Sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network, which de-emphasizes very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, Leq	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after adding 5 dB to measurements taken in the evening (7 to 10 p.m.) and 10 dB to measurements taken between 10 p.m. and 7a.m.
Day/Night Noise Level, Ldn	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 dB to levels measured in the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Source: FHWA, 2011.	

TABLE 3.11-2
TYPICAL A-WEIGHTED SOUND LEVELS

Common Noises	Noise Level (dBA)	Effect
Rocket launching pad	180	Irreversible hearing loss
Carrier deck jet operation/Air raid siren	140	Painfully loud
Thunderclap	130	Painfully loud
Jet takeoff (200 feet)/Auto horn (3 feet)	120	Maximum vocal effort
Pile driver/Rock concert	110	Very loud
Garbage truck/Firecrackers	100	Very loud
Heavy truck (50 feet)/City traffic	90	Very annoying and hearing damage (8-hours of exposure)
Alarm Clock (2 feet)/Hair dryer	80	Annoying
Noisy restaurant/Freeway traffic/Business office	70	Telephone use difficult
Air conditioning unit/Conversational speech	60	Intrusive
Light auto traffic (100 feet)	50	Quiet
Living room/Bedroom/Quiet office	40	Quiet
Library/soft whisper (15 feet)	30	Very Quiet
Broadcasting studio	20	Very Quiet
	10	Just Audible
Threshold of hearing	0	Hearing begins
Source: WSDOT, 2010.		

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people fall into three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Human reaction to a new noise can be estimated through comparison of the new noise to the existing ambient noise level within a given environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will likely be judged by the recipients. With regard to increases in A-weighted noise levels, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected
- A 10-dBA change is subjectively heard as approximately a doubling in loudness and can cause adverse response

Noise effects on humans can be physical or behavioral in nature. The mechanism for chronic exposure to noise leading to hearing loss is well established. The elevated sound levels cause trauma to the cochlear structure in the inner ear, which gives rise to irreversible hearing loss. Though not considered a health effect similar to those noted above, noise pollution also constitutes a significant factor of annoyance and distraction in modern artificial environments:

- The meaning listeners attribute to the sound influences annoyance; if listeners dislike the noise content, they are annoyed.
- If the sound causes activity interference (for example, sleep disturbance), it is more likely to annoy.
- If listeners feel they can control the noise source, it less likely to be perceived as annoying.

- If listeners believe that the noise is subject to third party control, including police, but control has failed, they are more annoyed.
- What is music to one is noise to another; the perceived unpleasantness of the sound causes annoyance.

Generally, most noise is generated by transportation systems, principally motor vehicle noise, but also including aircraft noise and rail noise. The level of traffic noise depends on three things: l) the volume of the traffic, 2) the speed of the traffic, and 3) the number of trucks in the flow of the traffic. Because noise is measured on a logarithmic scale, 70 dBA plus 70 dBA does not equal 140 dBA. Instead, two sources of equal noise added together have been found to result in an increase of 3 dBA. That is, if a certain volume of traffic results in a noise level of 70 dBA the addition of the same volume of traffic, or doubling would result in a noise level of 73 dBA (WSDOT, 2004). As stated above, three dBA is just audible; therefore, if the project doubles the traffic volume there would be an audible increase in the ambient noise level. The primary source of noise in the area is generated by traffic on SR-20.

Stationary point sources of noise, including stationary mobile sources, such as idling vehicles, attenuate (lessen) at a rate of six to nine dBA per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and noise barriers: vegetative, topographical, manufactured, etc.). Widely distributed noises, such as a large industrial facility or a street with moving vehicles would typically attenuate at a lower rate, approximately four to six dBA per doubling of distance.

3.11.2 REGULATORY SETTING

Noise standards used in this study include the Federal Highway Administration (FHWA) Noise Abatement Criteria (NAC) for the assessment of noise consequences related to surface traffic, and the noise impact criteria established by Washington State Department of Transportation (WSDOT) noise policy. These standards are discussed below.

FEDERAL NOISE ABATEMENT CRITERIA

The FHWA provides construction noise level thresholds in its Construction Noise Handbook, 2006, which are provided in **Table 3.11-3**.

The FHWA establishes NAC for various land uses that have been categorized based upon activity. Land uses are categorized on the basis of their sensitivity to noise as indicated in **Table 3.11-4**. The FHWA NAC is based on peak traffic hour noise levels.

TABLE 3.11-3
FEDERAL CONSTRUCTION NOISE THRESHOLDS

Noise Receptor Locations and Land-Uses	Daytime (7 am - 6 pm)	Evening (6 pm - 10 pm)	Nightime (10 pm - 7 am)
	dBA, Leq[1]		
Noise-Sensitive Locations: (residences, Institutions, Hotels, etc.)	78 or Baseline + 5 (whichever is louder)	Baseline + 5	Baseline + 5 (if Baseline < 70) or Baseline + 3 (if Baseline > 70)
Commercial Areas: (Businesses, Offices, Stores, etc.)	83 or Baseline + 5	None	None
Industrial Areas: (factories, Plants, etc.)	88 or Baseline + 5	None	None

Notes: [1] Leq thresholds were empirically determined (FHWA, 2006).
Source: FHWA Construction Noise Handbook, 2006.

Sensitive receptors with the potential to be impacted by the project alternatives include residential land uses; thus, Category B 67 dBA Leq noise standard would apply.

STATE OF WASHINGTON NOISE REGULATIONS

As discussed above, FHWA considers a traffic noise impact to occur if predicted peak-hour traffic noise levels "approach" or exceed the NAC or "substantially exceed" existing levels. WSDOT considers traffic noise impacts to occur if predicted peak-hour traffic noise levels "approach" 1 dBA of the NAC or "substantially exceed" existing levels by greater than 10 dBA resulting in at least 50 dBA Leq. Therefore, the values in **Table 3.11-3** should be reduced by 1 dBA in accordance with WSDOT guidance, thus the absolute criteria for Activity Category B would be 66 dBA.

Noise levels generated from construction and operation of a proposed project are evaluated against regulatory standards established by the State of Washington in Chapter 173-60 of the Washington Administrative Code (WAC). WAC 173-60 establishes maximum permissible environmental noise levels.

These levels are based on the environmental designation for noise abatement (EDNA), which is defined as "an area or zone (environment) within which maximum permissible noise levels are established." There are three EDNA designations (WAC 173-60-030) which roughly correspond to residential, commercial/recreational, and industrial/agricultural uses.

- Class A: Lands where people reside and sleep (such as residential).
- Class B: Lands requiring protection against noise interference with speech (such as commercial/recreational).

- Class C: Lands where economic activities are of such a nature that higher noise levels are anticipated (such as industrial/agricultural).

The term "noise-sensitive areas" used throughout this Environmental Impact Statement (EIS) is equivalent to Class A EDNA areas.

TABLE 3.11-4
FEDERAL NOISE ABATEMENT CRITERIA HOURLY A-WEIGHTED SOUND LEVEL DECIBELS \1\[1]

Activity Category	Activity Criteria[2] Leq (h), dBA[3]	Evaluation Location	Activity Category Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[4]	67	Exterior	Residential
C[4]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[4]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, shipyards, utilities (water resources, water treatment, electricity), and warehousing.
G	--	--	Undeveloped lands that are not permitted

Notes: [1] Either Leq(h) may be used on a project.
[2] Hourly A-weighted sound level, decibels (dBA).
[3] The leq() and l10(h) Activity Criteria values are for impacts determination only, and are not design standards for noise abatement measures.
[4] Includes undeveloped lands permitted for this activity category.
Source: FHWA, 2010.

Table 3.11-5 summarizes the maximum permissible noise levels received by Class A, B, or C within noise-sensitive areas (i.e. within a residence or school building) from a noise source from Class A, B, or C, such as the project alternatives (MRSC, 1975).

TABLE 3.11-5
MAXIMUM AMBIENT PERMISSIBLE NOISE LEVELS (dBA, Leq) BY CLASS

Noise Source	Receiving Property		
	Class A	Class B	Class C
Class A	55	57	60
Class B	57	60	65
Class C	60	65	70
Source: Washington State Noise Regulation 173-60-040, MRSC 1975			

The following are exempted within the WAC from the limits presented in **Table 3.11-5** (WAC 173-60-050):

- Construction noise (including blasting) between the hours of 7 a.m. and 10 p.m.
- Motor vehicles when regulated by 173-62 WAC ("Motor Vehicle Noise Performance Standards" for vehicles operated on public highways).

3.11.3 EXISTING NOISE AND VIBRATION LEVELS

Existing noise levels were measured at locations adjacent to sensitive noise receptors and where project-related noise has the potential to raise the ambient noise level (**Figure 3.11-1 and 3.11-2**). Measurement equipment consisted of Quest Sound Pro SE/DL sound level meters. An acoustical calibrator was used to calibrate the sound level meter before and after use. All instrumentation satisfies the Type II (precision) requirements. As shown in **Table 3.11-6**, measurements at Sites 1 and 2 where conducted over approximately 16 hour period and show the ambient noise levels in the vicinity of the project site. Noise measurement output files are provided as **Appendix I**.

TABLE 3.11-6
SUMMARY OF NOISE LEVEL MEASUREMENTS

Site	Date	Start Time	End Time	Noise Source	Receptor	Measure Noise Level (dBA Leq)
March's Point Site						
1	9/14/11 – 9/15/11	6:08 PM	10:41 AM	Vehicles on Stevenson Road	Residences	47.7
2	9/14/11 – 9/15/11	6:08 PM	10:41 PM	State Route 20	Residences	54.1
Flats Site						
A	11/21/11	5:00 PM	5:13 PM	RV Park	Condominium	69.5[1]
B	11/21/11	4:41 PM	4:55 PM	Vehicles on SR-20 and Fidalgo Road	Condominium	60.9

Notes: [1] Jets passed location during noise level measurement.
Source: **Appendix I**

SOURCE: AEX Aerial Photograph, 5/15/2009; AES, 2011

Figure 3.11-1
Noise Measurement Sites

SOURCE: Microsoft aerial photograph, 7/9/2010; AES, 2013

Figure 3.11-2
Noise Measurement Sites - Alternative Project Site

NOISE SENSITIVE RECEPTORS

Noise sensitive land uses are generally defined as land uses with the potential to be adversely affected by the presence of noise. Examples of noise sensitive land uses include residential housing, schools, and health care facilities. Existing noise sensitive receptors in the project area include residential housing.

The nearest sensitive noise receptors at the March's Point site are residences located along Stevenson Road approximately 100 feet south of the project site. The nearest school to the project site is the Fidalgo Elementary School located 1.35 miles southwest of the project site on Gibralter Road. The nearest hospital is Island Hospital Physical Therapy located four miles northwest of the project site on Seafarers Way, Anacortes.

The nearest noise sensitive receptors at the Flats site are condominium residents located along Fidalgo Bay Road approximately 140 feet northwest of the site. The nearest school to the Flats site is the Saint Mary's School located 0.65 miles to the southwest on Gibralter Road. The nearest hospital is Island Hospital Physical Therapy located 1.6 miles northwest of the Flats site on Seafarers Way, Anacortes.

VIBRATION NOISE LEVEL

There are no sources of vibration noise in the vicinity of the March's Point site or the Flats site.

3.12 HAZARDOUS MATERIALS

Hazardous materials are subject to numerous laws and regulations at several branches of the federal government. At the federal level, human exposure to chemical agents, and in some cases environmental and wildlife exposure to such agents, is regulated primarily by four regulatory agencies: the United States Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), and the Consumer Product Safety Commission (CPSC). The CPSC plays a limited role in regulating hazardous substances; it deals primarily with the labeling of consumer products. The FDA also plays a limited role in regulating hazardous substances; it primarily regulates food additives and contaminants, human drugs, medical devices, and cosmetics. In addition to these regulatory agencies, the U.S. Department of Transportation (DOT) regulates the interstate transport of hazardous materials. OSHA regulations are codified in 29 CFR Parts 70-71, 2200-2205, 2400, and 1910 and include provisions that require facilities to document the potential risk associated with the storage, use, and handling of toxic and flammable substances. Hazardous materials are subject to numerous laws and regulations at several levels of government. The primary legislation enacted to control the disposal of hazardous materials is the Resource Conservation and Recovery Act (RCRA) (codified in 42 United States Code [U.S.C.] section 6901 et seq). Under RCRA, materials are considered hazardous if they display one or more of the following characteristics: corrosively, flammability, reactivity, or toxicity (40 CFR section 261).

3.12.1 SETTING – MARCH'S POINT SITE

A reconnaissance level survey for hazardous materials was conducted at the March's Point site on September 14 and 15, 2011, by David Sawyer of Analytical Environmental Services (AES). No visible signs of hazardous materials involvement or gross contamination were observed on the site.

PREVIOUS INVESTIGATIONS

A Phase I Environmental Site Assessment (Phase I ESA) was conducted in 2008 that included historical research and regulatory agency database searches within radius parameters of the March's Point site (PBS&J, 2008). Additional information from the Skagit County Tax Assessor and Recorder records, and files from the EPA and Washington Department of Ecology (Ecology) were reviewed. As part of the 2008 Phase I ESA, a site reconnaissance of the site and adjacent properties was performed to the extent possible without trespassing on private property. The Phase I ESA was performed in accordance with the standard practice for American Society of Testing Materials (ASTM) Practice E 1527-05 ESAs, which specifies the appropriate inquiry requirements for the innocent landowner defense under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The purpose of the Phase I ESA was to identify environmental conditions and hazardous materials involvement that may pose a material risk to human health or to the environment, or may in any way affect the planned uses of the site.

The 2008 Phase I ESA did not find any obvious signs of hazardous materials involvement on the March's Point site. No recognized environmental conditions (RECs) were observed on the site. An oil stain approximately one (1) foot by three (3) feet was observed beneath the engine of a piece of heavy equipment stored on the property. This equipment is no longer stored on the Subject Property.

As part of the Phase I ESA, regulatory agency databases were searched on September 19, 2008 in an effort to identify current and past locations of hazardous materials generation, uses, or releases. The database search identified five listed sites one mile of the March's Point site. The first site is the Ford Frontier – Anacortes site located at 1260 Thompson Road; the site is across SR-20 north of the March's Point site. The Ford Frontier – Anacortes site is listed on both the state leaking underground storage tank (LUST) list and the Resource Conservation and Recovery Act (RCRA) list databases for documented underground storage tanks (USTs). Two USTs, used in the storage of waste oils, are located at the automobile dealership.

The second site indicated in the 2008 database search was the Venoil LLC situated at 9390 South March's Point Road approximately 0.15 mile northwest of the March's Point site. Waste oil is collected at the Venoil LLC site. The site is listed on the State Confirmed or Suspected Contaminant Site List (CSCL) list, the HAZNET list, and the RCRA list for oil fuel use and storage. Oil releases between 1992 and 2003 created violations and on-site inspections by the State of Washington.

The third site indicated in the database search was the Padilla Heights Road site, listed for contaminated groundwater. The Padilla Heights Road site is located approximately 0.97 mile east of the March's Point site at 9655 Padilla Heights Road. The site is listed on the CSCL list. Due to groundwater gradient, contaminants are not likely to migrate such a distance. Therefore it is unlikely that the Padilla Heights Road site would affect the March's Point site.

The CSCSL, EPA Corrective Actions (CORRACTS) list, and the Resource Conservation and Recovery Information System (RCRIS) database all list the Texaco Inc./Shell Opus Puget Sound Refinery site (Texaco) as a Large Quantity Generator (LQG). The refinery is located along Bartholomew Road, approximately 0.7 mile north of the March's Point site. Violations listed in the RCRIS database for the Texaco site listed petroleum products and non-halogenated solvents were released into the soil. Continual remedial actions are ongoing at the Texaco site. Due to surface and groundwater gradient, contaminants are not likely to migrate such a distance. Therefore it is not likely that the Texaco site would affect the March's Point site.

DATABASE REPORT

An updated project area database report (**Appendix G)**, was conducted by AES on November 15, 2011, for records of known storage tank sites and hazardous materials generation, storage, or contamination on or near the March's Point site. EDR uses a geographical information system (GIS) to plot locations of

past and current hazardous materials uses or releases. Databases were searched for sites and listings up to two miles from a point roughly equivalent to the center of the March's Point site. The complete list of reviewed databases is provided in the EDR report**,** and is summarized in **Table 3.12-1**. AES reviewed the updated database report to determine if any hazardous materials releases have occurred that would affect surface and/or subsurface conditions on the project site.

TABLE 3.12-1
ENVIRONMENTAL DATA RESOURCES SUMMARY OF AGENCY DATABASES

Database	Type of Record	Agency
NPL	National Priority List	EPA
CORRACTS[1]	RCRA[2] Corrective Actions	EPA
SPL	State equivalent priority	STATE
SCL	State equivalent CERCLIS[3] List	STATE
CERCLIS/NFRAP[4]	Sites currently or formerly under review by EPA	EPA
TSD	RCRA permitted treatment, storage, disposal facilities	EPA
LUST	Leaking Underground Storage Tanks	State Regulatory Commission
SWLF	Permitted as solid waste landfills, incinerators or transfer stations	State/Regional Regulatory Commission
DEED RSTR	Sites with deed restrictions	STATE
CORTESE[5]	State index of properties with hazardous waste	STATE
TOXIC PITS	Toxic pits cleanup facilities	STATE
WATER WELLS	Federal and State Drinking Water Sources	USGS/STATE
RCRA Viol	RCRA violations/enforcement actions	EPA
TRIS	Toxic Release Inventory Database	EPA
UST/AST	Registered underground or aboveground storage tanks	STATE
HIST UST	Historical UST Registered Database	STATE
RCRIS SQG[6]	Sites that generate hazardous materials	EPA
HAZNET	Hazardous Waste Information System	STATE
State CSCSL NFA	State Confirmed or Suspected Contaminant Site List No Further Action	STATE

Notes:
[1]CORRACTS: Corrective Action Report System, an EPA database of corrective actions taken at a RCRA regulated site.
[2]RCRA: Resource Conservation and Recovery Act
[3]CERCLIS: Comprehensive Environmental Response, Compensation and Liability Information System
[4]NFRAP: No Further Remedial Action Planned (archived CERCLIS sites).
[5]CORTESE: Based on input from 14 State databases.
[6]RCRIS SQG: Resource Conservation and Recovery Information System Small Quantity Generator. According to Federal guidelines, a SQG produces less than 1,000 kilograms/month of non-acutely hazardous wastes.
Source: Appendix G

The March's Point site was not listed on any regulatory agency database as having previous or current hazardous materials uses or releases. The sites referenced in the 2008 Phase I ESA were also listed in the updated database report, with the addition of the following sites:

The Golden Age Thompson Equipment site is located near the intersection of Thompson Road and Stevenson Road, southwest of the March's Point site. The Golden Age Thompson Equipment site is listed on the National Pollutant Discharge Elimination System (NPDES) list for a construction stormwater permit. No additional information regarding the Golden Age Thompson Equipment site was listed in the database report. Construction activities at the Golden Age Thompson Equipment site would affect the March's Point site.

The Country Corner Grocery Mart site listed for state documented USTs. The Country Corner Grocery Mart is located approximately 0.26 mile northeast at 7601 SR-20. Four USTs, used in the storage of fuel, are located at the gas station.

The Vintage Oil Inc. site is located at 7322 South March Point Road, approximately 0.29 mile northeast of the March's Point site. The Vintage Oil Inc. site is listed on the RCRA-NonGen database for previous handling of hazardous wastes. The site does not currently handle wastes and no violations have been noted. Due the operations at the Vintage Oil Inc. site, no current activities would affect the March's Point site.

The T Bailey Inc. site is located at 12441 Bartholomew Road, approximately 0.32 mile northwest of the March's Point site. The T Bailey Inc. site is listed on the FINDS database, Washington State Manifest list, HAZNET list, and the RCRIS database as a Small Quantity Generator (SQG). T Bailey Inc. is listed as a recycler of hazardous materials. Violations are listed between 2003 and 2011 with on-site inspections determining compliance with remediation activities. Due to surface and groundwater gradient, potential contaminants are not likely to migrate such a distance. Therefore it is not likely that the T Bailey Inc. site would affect the March's Point site.

The March Point Landfill site is listed in the CSCSL for organic/inorganic conventional contaminants, metals, methyl tertiary-butyl ether, non-halogenated solvents, petroleum, and pesticides. The March Point Landfill site is located approximately 0.66 miles northeast of the March's Point site. Ongoing cleanup and remediation activities are occurring on the March Point Landfill site. Due to groundwater gradient and ongoing cleanup activities the contaminants are not likely to migrate such a distance. Therefore it is not likely that the March Point Landfill site would affect the March's Point site.

The Similk Inc. Golf Course site is listed in the CSCSL for benzene and petroleum. The site is listed on both the state LUST and documented UST. The Similk Inc. Golf Course site is located at 1250 Christiansen Road approximately 0.76 miles west of the March's Point site. Ongoing cleanup and remediation activities are occurring on the Similk Inc. Golf Course site. Due to ongoing cleanup activities the contaminants are not likely to migrate such a distance. Therefore it is not likely that the Similk Inc. Golf Course site would affect the March's Point site.

3.12.2 SETTING – FIDALGO BAY RESORT FLATS SITE

A reconnaissance level hazardous materials survey of the Flats site was conducted on September 14 and 15, 2011, by David Sawyer of AES. No indication of hazardous materials or previous hazardous material storage was noted. AES interviewed the current owner's representative on previous and current hazardous materials uses and releases (Gage, pers. communication, 2011). He stated that he was unaware of any unauthorized hazardous materials being disposed on the Flats site.

DATABASE REPORT

A database report covering the Flats site (EDR, 2011b) (**Appendix G**) was conducted by AES on November 15, 2011 for records of known storage tank sites and hazardous materials generation, storage, or contamination. The Flats site was not listed on any regulatory agency database as having previous or current hazardous materials uses or releases. Several sites were identified in the EDR report (EDR, 2011b) (**Appendix G**). The Fidalgo Bay Resort, located immediately south of the Flats site, is listed as the location of a small scale petroleum spill in 2007. No remediation activities have been noted (EDR, 2011b). The Cove at Fidalgo Bay site is listed in the Facility Index System/Facility Identification Initiative Program Summary Report (FINDS). The Cove at Fidalgo Bay site is located approximately 0.05 miles south of the Flats site at 4501 Fidalgo Bay Road. No additional information regarding the Cove at Fidalgo Bay site was listed in the database report.

The Sadler Short Plat site is listed in the NPDES database for a stormwater construction permit. The Sadler Short Plat site is located approximately 0.17 mile northwest of the Flats site at 3804 Fidalgo Bay Road. No additional information regarding the Sadler Short Plat site was listed in the database report. Construction activities at the Sadler Short Plat site could affect the Flats site.

The Custom Plywood Mill site is listed in the CSCSL for metals, methyl tertiary-butyl ether, non-halogenated solvents, petroleum, and pesticides. The Custom Plywood Mill site is located approximately 0.76 miles northwest of the Flats site. Cleanup activities have started on the Custom Plywood Mill site. Due to groundwater gradient and ongoing cleanup activities the contaminants are not likely to migrate such a distance. Therefore it is not likely that the Custom Plywood Mill site would affect the Flats site

3.13 AESTHETICS

This section addresses the visual quality issues related to the project sites, including the regulatory setting. The existing visual character of the region and the alternative project sites are discussed, along with the sensitive visual receptors and sensitive aesthetic resources known to be present.

3.13.1 SETTING – MARCH'S POINT SITE

VIEWS AND VIEWSHEDS

Although the site is currently vacant and dominated by views of open field/pasture, the March's Point site has historically been used for residences, grazing, and orchards. Vegetation includes grasses, shrubs, and a few trees. There are no residences or other structures on the site, although a foundation and power pole remain from previous uses. The north side of the March's Point site Site is adjacent to State Route 20 (SR-20) and another, currently undeveloped property that is owned by the Samish Indian Nation (Nation). The eastern edge of the property fronts a recreational vehicle/boat storage facility. The southern and western edges of the property border on local roads. Although landform can be an important element of scenic quality, topography is not a significant feature on the site since it is generally flat. Generally, the topography ranges from 70 to 80 feet above mean sea level (amsl). The high point of the site is located at the southeast corner and the low point is situated at the northeast corner.

The immediate vicinity surrounding the March's Point site is dominated by low density industrial/commercial uses, rural residential development, and agricultural/pasture open space areas. There are three residences situated south of the site on Stevenson Road and the Summit Park Bible Church is located west of the site on the other side of Thompson Road. A Puget Sound Energy electricity substation is also located west of the site across Thompson Road. A petroleum refinery complex is located less than one mile north of the March's Point site. The project site and the area surrounding the site are zoned for Light Manufacturing 1(LM1). Neither Padilla Bay nor Fidalgo Bay is visible from the site because of topography, vegetation, and manmade development. Mt. Baker is located 40 miles to the northeast and is sometimes visible from the March's Point site.

The surrounding viewshed consists of two viewing corridors (**Figure 3.13-1**). Viewshed A is the view along the SR-20. Viewshed B is the view from the eastern most residence located south of the March's Point site. There are no identified designated scenic vistas for this area.

SOURCE: Microsoft aerial photograph, 7/9/2010; AES, 2013

Figure 3.13-1

Viewsheds from March's Point and Fidalgo Bay Resort Flat Sites

Criteria for Analysis

The visual experience within each viewshed is comprised of the following constituent elements:

1. Clarity in Line of Sight—the overall visibility of the object within the viewshed, influenced by such factors as trees, buildings, topography or any other potential visual obstruction within the viewshed.

2. Duration of Visibility—the amount of time the object is exposed to viewers within the viewshed. For example, a passing commuter will experience a shorter period of viewing time than a resident within the viewshed.

3. Proximity of the Viewer—the effects of foreshortening due to the distance of the viewer from the object will influence the dominance of the object in the perspective of the viewer within the viewshed.

4. Number of Viewers—the number of viewers anticipated to experience the visual character of the object in forward-oriented view (i.e., not through a rear-view mirror). A densely populated residential district, or a busy highway within the viewshed of the object would present more viewers than unpopulated areas.

Description of Viewsheds

Viewsheds and vistas are described by expressing the strength of the viewing experience, framed within the analytical criteria listed above. While the viewing experience is personal and subjective in nature, the application of the above criteria allows for an objective, baseline assessment of the visual environment and subsequent visual impacts.

Viewshed A (the SR-20 corridor) is primarily a commuter viewshed, experienced mainly by travelers along SR-20. Westbound travelers on SR-20 cannot see the March's Point site until they are directly north of it because the road alignment and off-site structures obscure views of the site. Views of the site from the SR-20 corridor are short in duration and dominated by commercial and industrial structures. Eastbound travelers on SR-20 also experience views of commercial and industrial uses which screen and obscure the site until the travelers are almost past it. Duration of these views from the SR-20 corridor is short and generally not within the forward line of sight for drivers.

Viewshed B is primarily a viewshed experienced by residents south of the March's Point site. Viewshed B shows the view of the March's Point site from residences south of Stevenson Road. Views are unobstructed by vegetation, structures, or topography. There are three single-family residences located immediately south of Stevenson Road and others situated further south of the March's Point site.

SHADOW, LIGHT AND GLARE

No significant lighting, shadow, or glare exists near the March's Point site, although lights from the refinery may be noticeable at times. The dominant industrial/commercial around the site lend few sources of light or glare during both daytime and nighttime. No buildings of significant size exist that would cast large shadows on surrounding properties.

COMMUNITY CHARACTER

Skagit County (County) consists of a mixture of urban and industrial/commercial areas, rural farmlands, parks, and forests. Urban areas in the County are rapidly expanding and the County is regarded as one of the fastest growing areas in the state (Skagit County, 2011). The County continues to expand Urban Growth Areas (UGA) to accommodate the growing population while preserving open and natural space. Within the County, the City of Anacortes (City) is composed of 12 miles of saltwater shoreline, five freshwater lakes and over 3,000 acres of forestlands and parks (City of Anacortes, 2010). While most residences are single-family, the growth of urban areas has meant more demand for multi-family and mixed-use development. Generally rural areas are characterized by forests, farming, scenic views of the Puget Sound, rivers and forests, mountains, and rural residential communities. Rural residential communities have historic roots in the forestry, farming, and fishing industries. These areas also attract residents and visitors for the scenic views and outdoor activities (City of Anacortes, 2010).

The March's Point site is designated as an urban growth area in the Skagit County Comprehensive Growth Management Plan (GMP) and described in more detail in the Land Use and Population: Population Growth Section (Skagit County, 2000). As intended by the Growth Management Act (GMA) and the Comprehensive Plan, the majority of new development should be concentrated within these designated urban growth areas to preserve natural rural areas (Skagit County, 2002). According to the City Comprehensive Plan, the March's Point site is zoned and designated as "Light Manufacturing (1)" (LM1), which is intended primarily to accommodate industrial type uses that do not need water access or proximity to the central business district or to the Commercial Avenue corridor. Under this designation permitted uses include auto, truck, motorcycle, and RV sales and service; parks and playgrounds, both public and private; retail sales when the goods are related to items being serviced on-site. Additional uses that are permitted upon approval by the planning commission and city council include a single family home, grocery stores, marinas and associated uses, office buildings, and public and private recreational facilities (City of Anacortes Municipal Code Section 17.19).

The March's Point site is currently undeveloped and the surrounding land uses can primarily be characterized by developed parcels, industrial/commercial buildings, and parking lots. The exception to this dominant land use are the residential units on the southern boundary of the site and the church on the western boundary.

REGULATORY SETTING

If the Federal government acquires the land in trust for the Nation, the property will not be subject to State or local land use regulations. Tribal land use regulations would be applicable on trust lands. However, the Nation desires to work cooperatively with local and State authorities to develop an aesthetically pleasing facility and to avoid potentially adverse effects to aesthetics. Following is a brief outline of the applicable local regulations were the land not taken into trust, but developed privately or publicly.

City of Anacortes Comprehensive Plan 2010

The following goals for aesthetics and visual resources are contained within the City of Anacortes Comprehensive Plan.

General City Goals:

Goal 1: Create and maintain a high quality of life and environment that maximizes the opportunity for all citizens to share the social, psychological, physical and economic benefits of Anacortes/Fidalgo Island; aesthetics and health are key components of quality of life.

Goal 2: Improve the image of Anacortes as a marine oriented City by encouraging, protecting and enhancing marine views from public places, public access (particularly along the waterfront), and marine habitats and resources by encouraging marine water-dependent and water-related businesses and activities.

Goal 3: Promote compatible land uses and improve visual appearance in each and every zoning district.

Goal 4: Keep a reasonable balance between housing, manufacturing, commercial/retail, open space and other land uses within the community.

3.13.2 SETTING – FIDALGO BAY RESORT FLATS SITE

VIEWS AND VIEWSHEDS

The Fidalgo Bay Resort Flats site (Flats site) consists of cleared and undeveloped land and a row of gravel pads and utility hook-ups for recreational vehicles (RVs). The site gently slopes to the east, towards Fidalgo Bay. The site is zoned "Commercial Marine (CM)", as described in more detail in **Section 3.9,** Land Use.

The areas immediately surrounding the site are residential and commercial. A multi-unit waterfront condominium is situated immediately north of the Flats site and the Tribal owned Fidalgo Bay Resort to the south. The Fidalgo Bay Resort includes pads and utility hook-ups for RVs, several rental cabins, and a two-story clubhouse. The area to the east, across Fidalgo Bay, is dominated by the petroleum refinery complex, an industrial use.

The surrounding viewshed consists of two viewing corridors (**Figure 3.13-1**). **Viewshed C** is the line of sight from the Tommy Thompson Trail to the east and **Viewshed D** is the line of sight from the condominium to the north. There are no identified designated scenic vistas for this area.

Criteria for Analysis

The elements that define the visual experience of the viewsheds are the same as those for the March's Point site above.

Description of Viewsheds

Viewshed C (Tommy Thompson Trail) is experienced at close proximity by individuals using the Tommy Thompson Trial for recreation. The Flats site is visible from both the north and south. Views are not obstructed by vegetation, structures, or topography and, given the slow speeds of travelers along the trail, views would be of a long duration.

Viewshed D (Condominium) is from the condominium units located immediately north of the Flats site. Views would be unobstructed by vegetation, structures, or topography and the Weaverling Spit is the predominant view for condominium residents with south facing units.

SHADOW, LIGHT AND GLARE

The refinery is visible from the vicinity of the Flats site and lights from the facility are visible at night. No significant shadow or glare exists on or near the Flats site. Other residential and commercial uses on and around the site lend few sources of light or glare during both daytime and nighttime. No buildings of significant size exist that would cast shadows on surrounding properties.

COMMUNITY CHARACTER

The community character of the Flats site, proposed in Alternative D, is similar to that of the March's Point site. The Flats site is located 2.6 miles northwest of the Thompson Road between Tommy Thompson Trail and Fidalgo Bay Road withinin incorporated City limits. The Flats site is also designated as an area of urban development in the County Comprehensive Growth Management Plan (GMP), and is zoned as "Commercial Marine" (CM) in the City Comprehensive Plan, which is intended primarily to provide the public with improved waterfront use, enjoyment and accessibility by providing for a variety of water-related commercial developments, recreational activities, services, facilities, accommodations and amenities (Skagit County, 2007).

The Flats site is located on a partially developed lot and is bordered on the south by State SR-20, and shoreline to the north. Land use surrounding the site includes the Fidalgo Bay Resort Recreation Vehicle Camping, the Nation's existing commercial venture, directly to the east and southeast. The condominium structure is located directly north or northwest of the Flats site.

REGULATORY SETTING

The City Comprehensive Plan is the planning document used for development in the City. Applicable goals and policies for aesthetics and visual resources are the same as those listed for the March's Point site above (City of Anacortes, 2010).

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This section describes the environmental consequences that would result from the development of the alternatives. The analyses presented in this section have been prepared in accordance with the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations §1502.16. The direct environmental effects of each alternative are provided under the resource headings described in **Section 3** and listed below. This section also provides analysis of growth-inducing and indirect effects in **Section 4.14**, as well as cumulative effects (**Section 4.15**).

Section	Resource Area/Issue
4.2	Geology and Soils
4.3	Water Resources
4.4	Air Quality
4.5	Biological Resources
4.6	Cultural and Paleontological Resources
4.7	Socioeconomics Conditions
4.8	Transportation/Circulation
4.9	Land Use
4.10	Public Services
4.11	Noise
4.12	Hazardous Materials
4.13	Aesthetics
4.14	Indirect and Growth-Inducing Effects
4.15	Cumulative Effects

4.1.1 DETERMINATION OF SIGNIFICANCE

Specific significance criteria for each issue area are identified in **Section 3** of this Environmental Impact Statement (EIS). CEQ's regulations (40 CFR §1508.27) define significance of effects in terms of context and intensity, as recited below:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Significance criteria are more precisely defined in standard practices, environmental compliance criteria, or in the statutes or ordinances of the jurisdictional entities. Thus, the Bureau of Indian Affairs (BIA) determination of significance of impacts is accomplished with the assistance of governmental entities that have jurisdiction or special expertise for each resource. Further, BIA uses the standard practices and criteria already established by those entities prior to the preparation of this EIS.

4.1.2 JURISDICTION AND SPECIAL EXPERTISE

Consistent with 40 CFR §1508.15 and §1508.26, the Bureau of Indian Affairs (BIA) identified several parties having jurisdiction and/or special expertise regarding the project alternatives. These entities assist the BIA in the determination of significant impacts for the alternatives for areas within their jurisdiction and/or area of special expertise. These agencies have either agreed to serve as NEPA cooperating agencies, to comment on the Draft EIS or to otherwise provide consultation in the analysis process. These agencies, which have assisted in developing appropriate measures of significance for potential impacts within their areas of jurisdiction or expertise, are identified in **Section 1.3** of this EIS.

4.2 GEOLOGY AND SOILS

This section identifies the potential direct effects associated with geology and soils that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.2**. Cumulative and indirect effects are identified in **Section 4.15** and **Section 4.14**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.1**.

ASSESSMENT CRITERIA

For land resources, each alternative is analyzed to determine if construction or operation would result in direct adverse impacts to the proposed site topography, soils, or mineral resources; or if geological hazards associated with the existing setting would pose limitations to the development of each alternative.

4.2.1 ALTERNATIVE A – PROPOSED PROJECT

TOPOGRAPHY

Alternative A would involve minimal clearing and grading. However, as the March's Point site would be balanced and no cut or fill is required, the development of Alternative A would result in a less than significant effect on topography. No mitigation is required.

SOILS/GEOLOGY

Alternative A could impact soils due to erosion during construction, operation, and maintenance activities. Such activities include clearing, grading, trenching, and backfilling. The majority of the soils on the March's Point site have a low erosion potential based on soil type and slope gradients. **Table 3.2-1** in **Section 3.2**, Geology and Soils describes the soil types, erosion potential, and general gradients for each of the soil units on the site. Soils on the March's Point site are suitable for the development components proposed under Alternative A.

Sediment and erosion discharge into navigable (surface) waters of the U.S. is prohibited by the Federal Clean Water Act (CWA) (1972, with modifications in 1977, 1981, and 1987), which establishes water quality goals for sediment control and erosion prevention. One of the mechanisms for achieving the goals of the CWA is the National Pollutant Discharge Elimination System (NPDES) permit program, administered by the United States Environmental Protection Agency (EPA). As part of the NPDES General Construction permit, a Stormwater Pollution Prevention Plan (SWPPP) must be developed. The SWPPP must make provisions for (1) erosion prevention and sediment control; and (2) control of other potential pollutants. Alternative A would require a NPDES permit from the EPA and a subsequent SWPPP.

The SWPPP will identify the locations of erosion control features recommended to direct and filter stormwater runoff. The features to be used during construction include, but are not limited to, silt fences, fiber rolls, and rock bag dams. The locations of permanent erosion control features such as sediment/grease traps, vegetated drainage swales, and riprap are also identified.

With incorporation of the erosion control and sediment requirement within the NPDES permit, effects from implementation of Alternative A on soils and geology would be minimal and, therefore, less than significant. Mitigation measures are presented in **Section 5.2.1** to further ensure impacts remain less than significant.

SEISMICITY

Construction and operation of the development included within Alternative A would not be significantly affected by seismicity, as the area has low liquefaction and acceleration characteristics, and all structures would be built to applicable seismic codes. Since no known fault traces are mapped as crossing the March's Point site, the potential for surface rupturing along an on-site fault trace is considered low and would not be a constraint for Alternative A. Potential impacts from seismicity under Alternative A are less than significant. No mitigation is required.

MINERAL RESOURCES

The proposed grading associated with Alternative A would not adversely affect known or recorded mineral resources. Alteration in the land use would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. Because there are no known or mapped mineral resources within the March's Point site, development and use of the land would not affect such resources. There are no abandoned mines, shafts, or tailings that would affect development. Project-related impacts to mineral resources under Alternative A are less than significant. No mitigation is required.

4.2.2 ALTERNATIVE B – REDUCED INTENSITY

TOPOGRAPHY

Alternative B would involve similar clearing and grading as that described under Alternative A. Topographic features of the site would be similarly altered by earthwork, although to a lesser degree. Development of Alternative B would result in a less than significant impact on topography. No mitigation is required.

SOILS/GEOLOGY

Alternative B could adversely affect soils due to erosion during construction, operation, and maintenance activities. Such activities include clearing, grading, trenching, and backfilling. The majority of the soils at the March's Point site have a low erosion potential based on soil type and slope gradients. **Table 3.2-1**

in **Section 3.2,** Geology and Soils describes the soil types, erosion potential, and general gradients for each of the soil units on the site. Soils on the March's Point site are suitable for the development components proposed under Alternative B.

As with Alternative A, Alternative B would require a NPDES permit from the EPA for sediment control and erosion prevention. As part of the General Construction NPDES permit, a SWPPP must be developed as described for Alternative A. With incorporation of the requirement within the NPDES permit, effects from implementation of Alternative B on soils and geology would be less than significant. Mitigation measures are presented in **Section 5.2.1** to further ensure impacts remain less than significant.

SEISMICITY

The on-site geological conditions for Alternative B are the same as for Alternative A. Therefore, project-related impacts from seismic activity with implementation of Alternative B would also be less than significant. No mitigation is required.

MINERAL RESOURCES

Mineral resources associated with Alternative B are the same as for Alternative A. Therefore, project-related impacts to mineral resources with implementation of Alternative B will be less than significant.

4.2.3 ALTERNATIVE C – RETAIL CENTER

TOPOGRAPHY

Alternative C would involve clearing and grading as part of the construction of project components. Topographic features of the site would be altered by earthwork similar to those discussed under Alternative A. Development of Alternative C would result in a less than significant effect on topography.

SOILS/GEOLOGY

Alternative C could adversely affect soils due to erosion during construction, operation, and maintenance activities. Such activities include clearing, grading, trenching, and backfilling. The majority of the soils at the March's Point site have a low erosion potential based on soil type and slope gradients. **Table 3.2-1** in **Section 3.2**, Geology and Soils, describes the soil types, erosion potential, and general gradients for each of the soil units on the site. Soils on the March's Point site are suitable for the development components proposed under Alternative C.

As with Alternatives A and B, Alternative C would also require an NPDES permit from the EPA. With incorporation of the requirement within the NPDES permit, effects from implementation of Alternative C on soils and geology would be less than significant. Mitigation measures are presented in **Section 5.2.1** to further ensure impacts remain less than significant.

SEISMICITY

The on-site geological conditions for Alternative C are the same as for Alternatives A and B. Therefore, project-related impacts from seismicity with implementation of Alternative C would also be less than significant. No mitigation is required.

MINERAL RESOURCES

Mineral resources associated with Alternative C are the same as for Alternatives A and B. Therefore, project-related impacts to mineral resources with implementation of Alternative C would be less than significant.

4.2.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

TOPOGRAPHY

Alternative D would entail minimal clearing and grading to accommodate the construction of project components on the western portion of the Flats site. The layout of buildings and surface parking has been designed to take advantage of the topographic features and minimize effects where possible. Therefore, Alternative D impacts to topography would be less than significant. No mitigation is required.

SOILS/GEOLOGY

Alternative D could adversely affect soils due to erosion during construction, operation, and maintenance activities. Such activities include clearing, grading, trenching, and backfilling. The majority of the soils at the Flats site have a moderate erosion potential based on soil type and slope gradients. **Table 3.2-3** in **Section 3.2,** Geology and Soils describes the soil types, erosion potential, and general gradients for each of the soil units on the site. Soils on the Flats site are suitable for the development components proposed under Alternative D.

As with Alternatives A, B, and C, Alternative D would require an NPDES permit from the EPA. With implementation of the requirements within the NPDES, soil impacts from Alternative D would be less than significant. Mitigation measures are presented in **Section 5.2.1** to ensure impacts remain less than significant

SEISMICITY

Construction of the casino would not be significantly affected by seismicity, as the area has low liquefaction and acceleration characteristics, and all structures would be built to applicable seismic codes. Since no known fault traces are mapped as crossing the area, the potential for surface rupturing along an on-site fault trace is low. Impacts from seismicity under Alternative D are less than significant. No mitigation is necessary.

MINERAL RESOURCES

The proposed grading associated with Alternative D would not adversely affect known or recorded mineral resources. Because there are no known or mapped mineral resources within the Flats site, development and use of the land would not affect such resources. There are no abandoned mines, shafts, or tailings that would affect development. Project-related impacts to mineral resources under Alternative D are less than significant. No mitigation is required.

4.2.5 ALTERNATIVE E – NO ACTION

Under the No Action Alternative, development would not occur on either of the alternative project sites. The existing sites would remain in their current developed state. The topography and soils would remain undisturbed. No landform, soil, or seismic effects would occur as a result of Alternative E.

4.3 WATER RESOURCES

This section identifies the potential direct effects to water resources anticipated to result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.3**. Indirect effects associated with off-site construction and growth-inducement are identified in **Section 4.14**. Cumulative effects are identified in **Section 4.15**. Measures to mitigate for potentially adverse effects identified in this section are presented in **Section 5.2.2**.

ASSESSMENT CRITERIA

For surface water resources, each proposed alternative is analyzed to determine if either construction or operation would result in direct adverse impacts to drainage patterns, floodplain management, and/or water quality. For groundwater resources, each proposed alternative is analyzed to determine if either construction of operation would result in direct adverse impacts to groundwater levels, and/or groundwater quality.

4.3.1 ALTERNATIVE A – PROPOSED PROJECT

SURFACE WATER

Flooding

Executive Order (EO) 11988 addresses floodplain management and requires that Federal agencies evaluate the potential effects of any actions it may take in a floodplain. Specifically, EO 11988 states that agencies shall first determine whether the Proposed Action will occur in a floodplain. If an agency proposes to allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains. If the only practicable alternative action requires siting in a floodplain, the agency shall minimize potential adverse impacts to the floodplain.

The March's Point site is located outside the 100-year and 500-year floodplains. As noted in **Section 2.2**, the March's Point site would include the development of stormwater facilities consistent with the City of Anacortes Large Parcel Storm Water Plan. Through development of the stormwater facilities included in the project design, no impacts from flooding would occur through the development of Alternative A.

Construction Impacts

Construction activities under Alternative A would result in ground disturbance, which could lead to erosion. Erosion can increase sediment discharge to surface waters during storm events thereby degrading downstream water quality. Project construction also has the potential to discharge other construction-related materials (concrete washings, oil, and grease) onto the ground and then into nearby surface waters during storm events. Construction would also involve the use of diesel-powered equipment and would likely involve the temporary storage of fuel and oil on site. Discharges of

pollutants, which include grease, oil, fuel and sediments, to surface waters from construction activities and accidents are a potentially significant impact. Implementation of mitigation measures presented in **Section 5.2.2** would reduce the potential for adverse impacts to water quality from construction activities under Alternative A to a less than significant level.

Stormwater Runoff

Development of Alternative A would increase impervious surfaces on the March's Point site and thereby generate increased stormwater runoff during rain events. Water quality could be adversely affected if runoff from project facilities flushes trash, debris, oil, sediments, and grease into area surface waters. Fertilizers used in landscaped areas could also result in impacts to water quality if allowed to enter nearby surface waters.

Stormwater from the March's Point site currently collects via gravity in a manmade ditch that traverses the site and flows to the northeast corner of the site. Once off-site, stormwater is broadcast into an undefined low-spot prior to flowing into a culvert that crosses under State Route 20 (SR-20). On the north side of SR-20, the culvert empties into an open drainage ditch that runs north and then east prior to flowing into Padilla Bay. Under Alternative A, stormwater runoff would be directed into on-site stormwater control facilities sized to accommodate water draining from impervious surfaces as discussed in **Section 2.3**. On-site design features to ensure adequate water quality include the use of storm filter vaults to remove suspended solids such as trash and soil sedimentation, oil, grease and other potential materials that could degrade surface water quality. The development of vegetative swales and an on-site detention basin would provide additional filtering of runoff prior to release into off-site drainage ditch, by capturing sediment and pollutants.

As discussed in the project description (**Section 2.2.3**) the stormwater control facilities would be designed to the standards in the City of Anacortes Large Parcel Storm Water Plan. Stormwater would be diverted to the SR-20 culvert at rates equivalent to existing rates. Accordingly, runoff from Alternative A would not increase flows to the existing off-site drainage facilities, including the SR-20 culvert, over existing conditions. Additionally, as stormwater would be directly treated through stormwater treatment facilities designed in accordance with the City's Large Parcel Storm Water Plan, no adverse impacts to the Padilla Bay would occur from stormwater generated by Alternative A. A less than significant impact to stormwater quantity and quality would occur. Implementation of mitigation measures presented in **Section 5.2.2**, including the use of source control and treatment BMPs to prevent the contamination of surface water and groundwater by polluted stormwater, would further reduce impacts from operation of Alternative A.

GROUNDWATER

Development of Alternative A would not require the use of on-site groundwater supplies as water service would be provided through a service agreement between the Samish Indian Nation (Tribe) and the City as

discussed in **Section 4.10**, Public Services. Therefore, no adverse impacts to on-site groundwater supplies and private wells would occur. During construction of Alternative A, the existing on-site well would be properly abandoned according to City/Skagit County requirements.

If not treated properly prior to discharge, surface water runoff has the potential to negatively affect groundwater quality. However, the stormwater facilities would be designed to remove oil and other contaminants, and filter stormwater through vegetation uptake. Along with the treatment facilities, the soil would act as a filter for percolating stormwater. The depth to groundwater is between 15 and 30 feet and the process of soil adsorption and infiltration would adequately filter groundwater by the time it reaches the groundwater table. Soil absorption involves contaminants adhering to the surface of soil particles as the water passes through. Infiltration involves contaminants becoming entrained in the tiny spaces created by the shapes of soil components. Therefore, by the time stormwater reaches the groundwater table, it will be of similar quality to pre-existing conditions. Stormwater generated by Alternative A would have a less than significant impact on groundwater quality.

Conversion of undeveloped land introduces large areas of impermeable surfaces such as paved parking lots and internal roadways. Introduction of these surfaces can reduce groundwater recharge in areas where surface percolation accounts for a large percentage of natural recharge. Although development of Alternative A would introduce large areas of impermeable surfaces, the development of vegetated swales and a detention basin for treated stormwater would allow collected stormwater to percolate into the groundwater table. Therefore, the introduction of impermeable surfaces would have a less than significant impact on the quantity of groundwater.

4.3.2 ALTERNATIVE B – REDUCED INTENSITY

SURFACE WATER

Impacts to surface water, including flooding, and construction and operational related stormwater quantity and quality impacts as a result of the development of Alternative B would be similar to those of Alternative A as both alternatives are similar in design. Refer to **Section 4.3.1** for a general discussion of impacts to surface water. Therefore, as Alternative B is similar in design, including the development of on-site vegetated swales and detention basins, the surface water impacts from Alternative B would be less than significant within no impacts water quality impacts to Padilla Bay. Implementation of mitigation measures presented in **Section 5.2.2** would further reduce impacts from construction and operation of Alternative B.

GROUNDWATER

Impacts to groundwater supply and quality as a result of the development of Alternative B would be similar to those of Alternative A as both alternatives are similar in design and scope of development.

Refer to **Section 4.3.1** for a discussion of impacts to groundwater. Operation of Alternative B would have a less than significant effect on groundwater. No mitigation is required.

4.3.3 ALTERNATIVE C – RETAIL CENTER

SURFACE WATER

Development of the retail center under Alternative C would encompass the entire March's Point site in a similar manner as Alternative A. Components of this alternative include a single-story large scale commercial building, several single-story commercial buildings, and surface parking lots. Under Alternative C, wastewater would be disposed of off-site at the City municipal WWTP (through a service agreement between the Tribe and the City) and no recycled water would be used. Impacts related to flooding, construction and operation related stormwater quantity and quality would be the same as described under Alternative A.

Under Alternative C the topography of the site would be altered to a similar extent as described under Alternative A. As described for Alternative A, stormwater runoff would be directed through vegetated swales into on-site stormwater control facilities sized to accommodate water draining from impervious surfaces. The stormwater control facilities would be designed to the standards in the City Large Parcel Storm Water Plan. The proposed stormwater control facilities would reduce peak stormwater flows to a drainage ditch adjacent to the northeastern corner of the March's Point site. Impact to stormwater and surface water quality from construction and operation of Alternative C would be less than significant. Implementation of mitigation measures presented in **Section 5.2.2** would further reduce impacts from construction and operation of Alternative C.

GROUNDWATER

Development of Alternative C would not require the use of on-site groundwater supplies as water would be provided pursuant to a services agreement with the City as discussed in **Section 4.10** Public Services. Therefore, adverse impacts to on-site groundwater supplies and private wells would not occur. The existing on-site well in the southwestern corner of the March's Point site would be properly abandoned according to appropriate local requirements during construction of Alternative C.

Surface water runoff has the potential to negatively impact groundwater quality if not treated properly prior to discharge. However, similar to that described under Alternative A, incorporation of storm filter vaults and vegetated swales under Alternative C would provide additional filtering of runoff prior to release into the unnamed on site ditch by capturing sediment and pollutants. Therefore, surface water runoff would not have an adverse impact on groundwater quality. Mitigation measures are presented in **Section 5.2.2** to ensure impacts to groundwater quality from stormwater discharge remain less than significant

4.3.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

SURFACE WATER

Flooding

The Flats site is located outside the 100-year and 500-year floodplains. Therefore, Alternative D would not impede or redirect flood flows, alter floodplain elevations, or affect floodplain management. No significant impacts from flooding would occur as a result of Alternative D.

Construction Impacts

Like with the other development alternatives, construction activities under Alternative D on the Flats site would result in ground disturbance, which could lead to erosion. Erosion can increase sediment discharge to surface waters during storm events thereby degrading downstream water quality. Project construction also has the potential to discharge other construction-related materials (concrete washings, oil, and grease) onto the ground and then into nearby surface waters during storm events. Construction would also involve the use of diesel-powered equipment and would likely involve the temporary storage of fuel and oil on site. Discharges of pollutants to surface waters from construction activities and accidents are a potentially significant impact. Implementation of mitigation measures specified in **Section 5.2.2** would reduce or prevent adverse impacts from construction operations to the local and regional watershed to a less than significant level.

Stormwater Runoff

Development of project components on the Flats site would generate increased runoff during rain events due to increased impervious surfaces. Stormwater runoff under Alternative D would be directed into an on-site vegetated swale prior to discharge into an existing drainage ditch in the southeast corner of the project site. These features include use of storm filters to remove suspended solids such as trash and soil sedimentation, oil, grease, and other potential materials that could degrade surface water quality. Use of vegetative swales would provide additional filtering of runoff prior to release into the wetlands by capturing sediment and pollutants. Stormwater discharge would flow through this ditch approximately 600 feet prior to discharge into Fidalgo Bay. The proposed on-site stormwater control facilities would treat and filter stormwater runoff, reducing the impacts of stormwater runoff and water quality impacts to less than significant levels. Implementation of mitigation measures presented in **Section 5.2.2** would further reduce impacts from construction activities under Alternative D.

GROUNDWATER

Development of Alternative D would not require the use of on-site groundwater supplies as water would be provided pursuant to a services agreement with the City as discussed in **Section 4.10**, Public Services. Therefore, impacts to on-site groundwater supplies under Alternative D would be less than significant.

Conversion of undeveloped land to commercial land uses introduces large areas of impermeable surfaces such as structures and paved parking lots. Introduction of these surfaces can reduce groundwater recharge in areas where surface percolation accounts for a large percentage of natural recharge. Although development of Alternative D would introduce new areas of impermeable surfaces, the use of stormwater vaults for storing treated stormwater would allow collected stormwater to percolate into the groundwater table. Therefore, the introduction of impermeable surfaces would not have an adverse impact on groundwater resources.

4.3.5 ALTERNATIVE E – NO ACTION

SURFACE WATER

No new development is proposed under Alternative E. Under this alternative, there would be no change to surface water in the project area.

GROUNDWATER

Because existing land uses would remain unchanged under this alternative, there would be no change to groundwater.

4.4 AIR QUALITY

This section identifies the potential direct effects to air quality that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.4**. Indirect and cumulative effects are identified in **Section 4.14** and **Section 4.15**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.3**.

4.4.1 ASSESSMENT CRITERIA AND METHODOLOGY

Development and operation of the project alternatives would emit criteria pollutants, hazardous air pollutants (HAPs), and greenhouse gases (GHGs). During construction, criteria pollutants, HAP and GHG emissions from earth-moving activities, diesel-fueled trucks, and construction equipment would occur. During operation criteria pollutants, HAP and GHG emissions from patron, worker, delivery vehicles, and onsite stationary sources (boilers) would occur. This section presents the methodology used to assess the affected environment and to evaluate the potential air quality effects of the proposed alternatives.

CONSTRUCTION ANALYSIS

Construction would entail mass earthwork, fine grading, building construction, and road construction. A mixture of trucks, scrapers, excavators, and graders would be used to complete construction activities. Effects on air quality during construction were evaluated by estimating the amount of pollutants that would be emitted over the duration of the construction period. Particulate matter is the primary pollutant resulting from earth-moving activities.

Volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO_2), and carbon monoxide (CO) emissions from the construction of Alternatives A, B, C, and D would primarily be produced by diesel-fueled equipment use. The majority of these emissions would be from on and off-road truck use at the project sites. Emissions from diesel-fueled trucks and construction equipment were calculated using United States Environmental Protection Agency (EPA) approved emission factors from 2007 Off-Road air quality model (EPA, 2007). A detailed list of the proposed equipment and emissions resulting from the equipment is located in **Appendix E**.

The majority of the respirable particulate matter 10 and 2.5 microns in size (PM_{10} and $PM_{2.5}$) would come from the fugitive dust generated during earth-moving activities, such as site grading. Air quality model Emission Factor (EMFAC) 2007 emission factors were used to estimate PM_{10} and $PM_{2.5}$ project related emissions from equipment exhaust and fugitive dust (EMFAC, 2007). EMFAC's PM_{10} and $PM_{2.5}$ emissions factor is 38.2 pounds per acre-day and the $PM_{2.5}$ emissions factor is based on 28 percent of the PM_{10}'s emission factor. Actual particulate matter emissions from dust generation can vary day to day,

depending on level of activity, specific operations, mitigation measures, and weather conditions. Emissions were estimated assuming that construction would begin in 2013 and continue at an average rate of 22 days per month for all alternatives. Alternatives A, B, C, and D total construction durations were estimated to be 12 months. Emissions results are summarized below and included in **Appendix E**.

OPERATIONAL ANALYSIS

Emission factors in grams per vehicle miles traveled (g/vmt) were estimated for patron vehicles during January and July (winter and summer) and evaluated using EPA's model MOBILE6.2 (EPA, 2003b). MOBILE6.2 calculates emission factors for gasoline-fueled and diesel-fueled light-duty vehicles, trucks, heavy-duty vehicles, and motorcycles. The model accounts for progressively more stringent tailpipe emission standards over the vehicle model years evaluated. MOBILE6.2 model input data is site specific and the output data is provided in **Appendix E**.

Mobile Source Emissions

Criteria Pollutant emissions from vehicles traveling to, from, and within the alternative project sites were calculated for each alternative. Calculations were based on emission factors derived from the EPA MOBILE6.2 air quality model (EPA, 2003b), trip estimations developed using the ITE Trip Generation Manual, and estimated number of patrons for the project alternatives. Emissions factors for SO_2 were derived from the EPA (AP 42) and used to estimate project related SO_2 emissions (EPA, 1995).

Stationary Source Emissions

For each of the project alternatives, natural gas would fuel hot water boilers, space heating, domestic water heaters, steam boilers for food service, and other cooking equipment. Based on other casinos of similar size, annual gas usage for Alternative A and D is estimated to be 140 million standard cubic feet (MMscf) of natural gas use. Alternative B natural gas use is estimated at 90 MMscf and Alternative C natural gas use is estimated to be 80 MMscf. Emissions from natural gas combustion are calculated using emission factors from EPA AP 42 (EPA, 1995).

FEDERAL GENERAL CONFORMITY

Conformity regulations apply to Federal actions that would cause emissions of criteria air pollutants above certain levels to occur in locations designated as non-attainment or maintenance areas for the emitted pollutants. As discussed in **Section 3.4** the project site is located in an area that is classified as attainment or unclassifiable for all National Ambient Air Quality Standards (NAAQS), therefore a federal general conformity determination analysis is not required for the proposed alternatives.

CARBON DIOXIDE HOT SPOT ANALYSIS

Implementation of the project alternatives would result in emissions of CO. Because CO disperses rapidly with increased distance from the source, emissions of CO are considered localized pollutants of

concern rather than regional pollutants, and can be evaluated by Hot Spot Analysis. In accordance with the *Transportation Project-Level Carbon Monoxide Protocol*, Hot Spot Analysis is conducted on intersections that after mitigation would have a level of service (LOS) of E or F (UC Davis, 1997). After the implementation of recommended mitigation for the project alternatives, no intersection would have an LOS or an increase in delay that would warrant a Hot Spot Analysis; therefore, no further analysis is needed.

FEDERAL CLASS I AREAS

Implementation of the project alternatives would result in emissions of criteria air pollutants, HAP, and GHGs. Project-related emissions will be compared to the federal Significant Deterioration (PSD) threshold of 250 tons per year of any criteria air pollutant.

CLIMATE CHANGE

The Council on Environmental Quality (CEQ) recently provided guidance on integrating analysis of GHGs in National Environmental Policy Act (NEPA) documents (see **Section 3.4**). As directed by the CEQ Guidance, this EIS considers whether project emissions have individual or cumulative effects on climate change. Given the global nature of climate change impacts, individual project impacts are most appropriately addressed in terms of the incremental contribution to a global cumulative impact (provided in **Section 4.15**). This approach is consistent with the view articulated by the *Intergovernmental Panel on Climate* (IPCC) *Change Fourth Assessment Report* (IPCC, 2007). Therefore, refer to **Section 4.15** for a discussion and analysis of cumulative impacts related to climate change.

4.4.2 ALTERNATIVE A – PROPOSED PROJECT

CONSTRUCTION EMISSIONS

Construction of Alternative A would emit PM_{10}, $PM_{2.5}$, NO_x, SO_2, CO, VOC, GHGs, and HAPs primarily in the form of diesel particulate matter (DPM) from the use of construction equipment and grading activities. Emissions from construction equipment have the potential to increase the concentration of DPM in the close vicinity (within approximately 500 feet) of the construction site, if control measures are not implemented.

Construction of Alternative A is anticipated to begin in 2013 and last approximately 12 months. Construction for Alternative A is assumed to occur 8-hours a day, 5 days a week. The construction emission totals for the Alternative A are shown in **Table 4.4-1**.

The March's Point site is in a region of attainment for all criteria pollutants; therefore, in accordance with 40 CFR 93, construction of the proposed project would not cause an exceedance of NAAQS. Best management practices (BMPs) provided in **Section 5.2.3** would minimize construction related emissions of criteria pollutants. BMPs provided in **Section 5.2.3** would also reduce DPM emissions from

construction equipment by approximately 85 percent, avoiding potentially adverse effects to nearby sensitive receptors. Therefore, with mitigation, construction of Alternative A would not result in significant adverse effects associated with the regional air quality environment.

TABLE 4.4-1
CONSTRUCTION EMISSIONS – ALTERNATIVE A

Construction Year	**Criteria Pollutants**					
	VOC	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
	tons per year					
Phase I						
Site Grading	1.06	15.38	4.68	2.02	0.98	0.94
Construction	3.65	16.21	13.95	1.67	1.47	1.42
Total Construction Emissions	**4.71**	**31.59**	**18.63**	**3.69**	**2.45**	**2.36**
Conformity de minimus Levels	N/A	N/A	N/A	N/A	N/A	N/A
Exceedance of Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: Mobile 6.2, 2003; AES, 2011d.

OPERATIONAL VEHICLE AND AREA EMISSIONS

Buildout of Alternative A would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary emissions from combustion of natural gas in boilers and other equipment on the project site. Estimated mobile and stationary emissions from operation of Alternative A are provided in **Table 4.4-2**. Detailed calculations of vehicle and area emissions are included as **Appendix E**.

TABLE 4.4-2
OPERATION EMISSIONS - ALTERNATIVE A

Sources	**Criteria Pollutants**					
	VOC	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
	tons per year					
Stationary	0.06	0.01	0.11	0.01	0.06	0.02
Mobile	6.00	8.40	104.90	0.10	0.03	0.02
Total Emissions	**6.06**	**8.41**	**105.01**	**0.11**	**0.09**	**0.04**
Conformity de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Exceedance of Levels	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

Notes: N/A = Not Applicable; de minimus levels are not applicable due to attainment status
(Refer to **Section 3.4**).
Source: EPA 2003b; AES, 2011d.

The project site is in a region of attainment for all criteria pollutants; therefore, in accordance with 40 CFR 93, implementation of Alternative A would not cause an exceedance of NAAQS. Mitigation provided in **Section 5.2.3** would further reduce criteria air pollution emissions from operation of

Alternative A. Therefore, with mitigation, operation of Alternative A would not result in significant adverse effects associated with the regional air quality environment.

GENERAL CONFORMITY DETERMINATION

As discussed in **Section 3.4** the March's Point site is located in an area that is in attainment for all NAAQS; therefore, Alternative A is not subject to a conformity determination.

4.4.3 ALTERNATIVE B – REDUCED INTENSITY

CONSTRUCTION EMISSIONS

Construction emissions for Alternative B would be from the same sources as Alternative A. Alternative B construction is anticipated to begin in 2013 and last approximately 12 months. Construction emission totals for the Alternative B are shown in **Table 4.4-3**.

TABLE 4.4-3
CONSTRUCTION EMISSIONS – ALTERNATIVE B

Construction Year	Criteria Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	tons per year					
Site Grading	0.93	12.97	3.93	1.78	0.87	0.84
Construction	2.34	9.51	9.03	0.85	0.83	0.83
Total Construction Emissions	**3.27**	**22.48**	**12.96**	**2.63**	**1.70**	**1.67**
Conformity de minimus Levels	N/A	N/A	N/A	N/A	N/A	N/A
Exceedance of Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: Mobile 6.2, 2003; AES, 2011d.

The March's Point site is in a region of attainment for all criteria pollutants; therefore, in accordance with 40 CFR 93, construction of Alternative B would not cause an exceedance of NAAQS. BMPs, provided in **Section 5.2.3** would further reduce construction related emissions of criteria pollutants. BMPs provided in **Section 5.2.3** would also reduce approximately 85 percent of DPM emissions from construction equipment. Therefore, with mitigation, Alternative B would not result in significant adverse effects associated with the regional air quality environment.

OPERATIONAL VEHICLE AND AREA EMISSIONS

Buildout of Alternative B would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary emissions from combustion of natural gas in boilers and other equipment on the project site. Estimated mobile and stationary emissions from operation of Alternative B are provided in **Table 4.4-4**. Detailed calculations of vehicle and area emissions are included as **Appendix E**.

TABLE 4.4-4
OPERATION EMISSIONS - ALTERNATIVE B

Sources	Criteria Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	tons per year					
Stationary	0.03	0.00	0.07	0.00	0.03	0.01
Mobile	4.30	6.00	74.50	0.10	0.20	0.10
Total Emissions	**4.33**	**6.00**	**74.57**	**0.10**	**0.23**	**0.11**
Conformity de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Exceedance of Levels	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

Notes: N/A = Not Applicable; de minimus levels are not applicable due to attainment status
(Refer to **Section 3.4**).
Source: Appendix E

The project site is in a region of attainment for all criteria pollutants; therefore, in accordance with 40 CFR 93, implementation of Alternative B would not cause an exceedance of NAAQS. Mitigation provided in **Section 5.2.3** would further reduce criteria air pollution emissions from operation of Alternative B. Therefore, with mitigation, operation of Alternative B would not result in significant adverse effects associated with the regional air quality environment.

GENERAL CONFORMITY DETERMINATION

As discussed in **Section 3.4** the March's Point site is located in an area that is in attainment for all NAAQS; therefore, Alternative B is not subject to a conformity determination.

4.4.4 ALTERNATIVE C – RETAIL CENTER

CONSTRUCTION EMISSIONS

Construction of Alternative C would be similar to construction of Alternative A. Refer to **Section 4.4.2**. Alternative C construction is anticipated to begin in 2013 and last approximately 12 months. Construction for Alternative C is assumed to occur 8-hours a day, 5 days a week. Construction emission totals for the Alternative C are shown in **Table 4.4-5**.

The March's Point site is in a region of attainment for all criteria pollutant; therefore, in accordance with 40 CFR 93, construction of Alternative C would not cause an exceedance of the NAAQS. BMPs, provided in **Section 5.2.3** would further reduce project related criteria pollutants. BMPs provided in **Section 5.2.3** would also reduce approximately 85 percent of DPM emissions from construction equipment. Therefore, with mitigation, construction of Alternative C would not result in significant adverse effects associated with the regional air quality environment.

TABLE 4.4-5
UNMITIGATED CONSTRUCTION EMISSIONS – ALTERNATIVE C

Construction Year	Criteria Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	tons per year					
Site Grading	1.04	15.36	4.37	2.02	0.97	0.94
Construction	5.71	15.62	13.33	1.52	1.43	1.39
Total Construction Emissions	**6.75**	**30.98**	**17.70**	**3.54**	**2.40**	**2.33**
Conformity de minimus Levels	N/A	N/A	N/A	N/A	N/A	N/A
Exceedance of Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: EPA, 2003b; AES, 2011d.

OPERATIONAL VEHICLE AND AREA EMISSIONS

Buildout of Alternative C would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary emissions from combustion of natural gas in boilers and other equipment on the project site. Estimated mobile and stationary emissions from operation of Alternative C are provided in **Table 4.4-6**. Detailed calculations of vehicle and area emissions are included as **Appendix E**.

TABLE 4.4-6
UNMITIGATED OPERATION EMISSIONS - ALTERNATIVE C

Sources	Criteria Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	tons per year					
Stationary	0.04	0.00	0.08	0.00	0.04	0.01
Mobile	11.40	16.00	199.40	0.20	0.60	0.40
Total Emissions	**11.44**	**16.00**	**199.48**	**0.20**	**0.64**	**0.41**
Conformity de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Exceedance of Levels	**N/A**	**N/A**	**N/A**	**N/A**	***N/A***	**N/A**

Notes: N/A = Not Applicable; de minimus levels are not applicable due to attainment status (Refer to **Section 3.4**).
Source: EPA, 2003b; AES, 2011d.

The project site is in a region of attainment for all criteria pollutants; therefore, in accordance with 40 CFR 93, implementation of alternative C would not cause an exceedance of the NAAQS. Mitigation provided in **Section 5.2.3** would further reduce criteria air pollutant emissions from operation of Alternative C. Therefore, with mitigation, operation of Alternative C would not result in significant adverse effects associated with the regional air quality environment.

GENERAL CONFORMITY DETERMINATION

As discussed in **Section 3.4** the project site is located in an area that is in attainment for all NAAQS; therefore, Alternative C is not subject to a conformity determination.

4.4.5 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

The Traffic Impact Analysis (TIA) (**Appendix D**) provides an analysis of a 50,000 square foot casino on the Flats site, which is located in the same region as Alternative A. The TIA provides a trip generation rate, which is used to calculate Alternative A and D project trips. Alternative D is similar in size and generated the same number of trips as Alternative A; therefore, Alternative D criteria pollutant and HAP emissions are the same as Alternative A's (**Section 4.4.2**). Construction and operation of Alternative D, with the implementation of mitigation in **Section 5.2.3**, would not result in significant adverse effects associated with the regional air quality environment.

4.4.6 ALTERNATIVE E – NO ACTION

Under the No Action/No Development Alternative, no development would occur on the project sites. No construction or operational mobile or stationary criteria pollutants or DPM emissions would be generated under Alternative E.

4.5 BIOLOGICAL RESOURCES

This section identifies the effects to biological resources that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.5**. Cumulative and indirect effects are identified in **Section 4.15** and **Section 4.14**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.4**.

ASSESSMENT CRITERIA

This section evaluates the following potential effects to biological resources and considers that a project alternative would have a significant impact on biological resources if it:

- Has a substantial adverse direct or indirect effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA) through direct removal, filling, hydrological interruption, or other means;
- Has a substantial adverse effect on special status species pursuant to the federal Endangered Species Act (FESA);
- Has a substantial adverse effect on habitat necessary for the future survival of such species, including areas designated as critical habitat by the U.S. Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service (NMFS) and areas designated as Essential Fish Habitat (EFH) by the NMFS; or
- Results in take of migratory bird species as defined by the Migratory Bird Treaty Act (MBTA) (16 USC §703-712).

4.5.1 ALTERNATIVE A – PROPOSED PROJECT

POTENTIAL EFFECTS TO TERRESTRIAL HABITATS

Table 4.5-1 identifies the acreages of terrestrial habitat types that would be directly affected by Alternative A. Aquatic habitat types are discussed under the ***Potential Waters of the U.S***. section. Alternative A would result in the removal of the snowberry patch and the ruderal/disturbed areas within the project site; however, these areas are not considered sensitive habitats as they present limited resources for wildlife. Alternative A would permanently remove nonnative annual grassland. Although nonnative annual grassland may provide a wildlife corridor for migration, the March's Point site is not likely used as such because it is surrounded by State Route 20 (SR-20), paved roads, and residential and commercial development, which are barriers to wildlife migration. The 2.66 acres of riparian habitat that would be removed does not provide quality wildlife habitat as it extends along the edge of a paved road and is not considered sensitive because it is comprised primarily of nonnative vegetation. None of these terrestrial habitat types are considered sensitive.

TABLE 4.5-1
TERRESTRIAL HABITAT ACREAGES AFFECTED BY ALTERNATIVE A

Habitat Type	Acreage Affected
Nonnative Annual Grassland	11.12
Riparian	2.66
Snowberry Patch	0.04
Ruderal/Disturbed	0.28
Total	**14.10**

Source: AES, 2011a.

POTENTIAL EFFECTS TO WATERS OF THE U.S.

A preliminary wetland delineation was prepared for a study area that includes the March's Point site (AES, 2011b; **Appendix J**). Waterways identified within the March's Point site were assessed to determine whether these features would potentially be subject to U.S. Army Corps of Engineers (USACE) jurisdiction under Section 404 of the CWA. The results are considered preliminary until the USACE verifies the findings or renders a Jurisdictional Determination. Based on the results of the preliminary wetland delineation (AES, 2011b), the filling of the manmade ditch that traverses the March's Point site under Alternative A could affect approximately 0.05 acres of potentially jurisdictional waters of the U.S. within the northeast and southeast portions of the March's Point site. If these features are determined to be waters of the U.S. by the USACE, the Tribe shall obtain a Section 404 Clean Water Act permit from the USACE prior to construction. Mitigation included in **Section 5.2.4** would reduce potential effects to these water features.

In addition, the Samish Indian Nation (Tribe) will comply with the mitigation measures identified in **Sections 5.2.1** and **5.2.2** to prevent discharge of pollutants to surface waters during construction. This includes complying with the United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (#WAR12000I -General Construction Permit), as well as implementing source control and treatment BMPs to prevent pollution of stormwater runoff during operation. Implementation of the mitigation identified in **Sections 5.2.1**, and **5.2.2**, and **5.2.4** would reduce potential impacts to waters of the U.S. to insignificant levels.

POTENTIAL EFFECTS TO SPECIAL STATUS SPECIES

Federally Listed Endangered, Threatened, or Candidate Species

As discussed in **Section 3.5**, no federally listed endangered, threatened, or candidate species occur within the March's Point site. Therefore, the development of Alternative A would not adversely affect federally listed endangered, threatened, or candidate species.

Federal Species of Concern

Alternative A would result in the removal of ornamental trees that provide roosting habitat for the potentially occurring Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), long-eared

myotis (*Myotis evotis*), and long-legged myotis (*Myotis volans*). Implementation of the mitigation identified in **Section 5.2.4**, would reduce this potential impact to an insignificant level.

Federally Listed Migratory Birds

The development of Alternative A would remove ornamental trees that provide potential nesting habitat for migratory bird species and other birds of prey protected under the MBTA. In addition, potential disruption of nesting migratory birds and other birds of prey during construction could result in nest abandonment or mortality should construction occur between March 1 and September 15. Likewise, increased human activity and traffic, elevated noise levels, and operation of machinery could also impact birds if their nests are located within the vicinity of development areas. Implementation of mitigation identified in **Section 5.2.4**, would reduce this impact to a less than significant level.

POTENTIAL EFFECTS TO CRITICAL HABITAT

The development of Alternative A would not directly affect critical habitat for marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), or bull trout (*Salvelinus confluentus*) Coastal-Puget Sound Distinct Population Segment (DPS) because no critical habitat has been designated within the March's Point site. The nearest known bull trout population to the March's Point site is in Puget Sound (Chan, 2011). Even though no bull trout populations are known to forage, migrate, or overwinter within Fidalgo Bay or Padilla Bay (USFWS, 2004), these areas are designated as critical habitat (refer to **Figure 3.5-3**). The manmade drainage ditch (DCH 1) within the March's Point site has a hydrologic connection to Padilla Bay.

If untreated, stormwater runoff from Alternative A could impact water quality in Padilla Bay and indirectly affect designated critical habitat for bull trout. The stormwater treatment facilities proposed throughout the March's Point site, including vegetated stormwater treatment swales and an on-site detention basin, would minimize indirect effects to designated critical habitat by ensuring stormwater runoff generated from impervious surfaces is contained and treated prior to surface discharge. Operational activities associated with Alternative A are designed to maintain high water quality standards that will eliminate indirect adverse effects to designated critical habitat by ensuring discharge of high quality water offsite.

The USFWS (2004) *Draft Recovery Plan for the Coastal-Puget Sound Distinct Population Segment of Bull Trout* (*Salvelinus confluentus*) states that PCB levels do not meet standards in Padilla Bay and Fidalgo Bay for the Puget Sound bull trout marine foraging, migration, overwintering habitat. The Phase I Environmental Site Assessment Report (PBS&J, 2008) revealed no evidence of recognized environmental conditions in connection with the March's Point site. Refueling, operation, and storage of construction equipment and materials could result in accidental spills of pollutants, such as fuel, concrete, sealants, oil, and paint, into the manmade drainage ditch (DCH 1), which drains to Padilla Bay. Implementation of the best management practices identified in **Sections 5.2.1**, **5.2.2**, and **5.2.10** including the protection of downstream waterways from increased flow rates, the control of erosion, minimization

of sediment load, and refueling away from waterways, would ensure that construction and operation activities associated with the development of Alternative A would not indirectly affect designated critical habitat for bull trout.

POTENTIAL EFFECTS TO ESSENTIAL FISH HABITAT

The development of Alternative A would not directly affect Chinook salmon (*Oncorhynchus* (=*Salmo*) *tshawytscha*) Upper Columbia Spring-Run EFH, Snake River Fall-Run EFH, Snake River EFH, and Puget Sound EFH and bull trout EFH because none occurs within the March's Point site. As discussed above, if untreated, stormwater runoff from Alternative A could impact water quality in Padilla Bay and indirectly affect EFH. Proposed stormwater treatment facilities described in **Section 2.2**, including vegetated stormwater treatment swales and an on-site detention basin, as well as source control and treatment BMPs required as mitigation in **Sections 5.2.1**, **5.2.2**, and **5.2.10,** would ensure that construction and operational activities associated with the development of Alternative A would not indirectly affect Chinook salmon EFH and bull trout EFH.

4.5.2 ALTERNATIVE B – REDUCED INTENSITY

POTENTIAL EFFECTS TO HABITATS

Table 4.5-2 identifies the acreages of habitat types that would be directly affected by Alternative B. Aquatic habitat types are discussed under the ***Potential Waters of the U.S***. section. Alternative B would avoid impacts to the snowberry patch, and would affect less acreages of riparian and nonnative annual grassland than Alternative A. However, as stated under Alternative A, none of these terrestrial habitat types are considered sensitive.

TABLE 4.5-2
TERRESTRIAL HABITAT ACREAGES AFFECTED BY ALTERNATIVE B

Habitat Type	Acreage Affected
Nonnative Annual Grassland	7.95
Riparian	0.12
Ruderal/Disturbed	0.28
Total	**8.35**

Source: AES, 2011a.

POTENTIAL EFFECTS TO WATERS OF THE U.S.

Based on the results of the preliminary Wetland Delineation (AES, 2011b), Alternative B could affect approximately 0.05 acres of potentially jurisdictional waters of the U.S. If these features are determined to the waters of the U.S. by the USACE, the Tribe shall obtain a Section 404 Clean Water Act permit from the USACE prior to construction. Mitigation included in **Section 5.2.4** would reduce potential effects to these water features.

In addition, the Tribe would comply with the mitigation measures identified in **Sections 5.2.1** and **5-2.2** to prevent discharge of pollutants to surface waters during construction. This includes complying with the

USEPA NPDES General Construction Permit, as well as implementing source control and treatment BMPs to prevent pollution of stormwater runoff during operation. Implementation of the mitigation identified in **Sections 5.2.1**, and **5-2.2**, and **5.2.4** would reduce potential impacts to waters of the U.S. to less than significant levels.

POTENTIAL EFFECTS TO SPECIAL STATUS SPECIES

Federally Listed Endangered, Threatened, or Candidate Species

Because no federally listed endangered, threatened, or candidate species occur within the March's Point site, none would be adversely affected as a result from the development of Alternative B.

Federal Species of Concern

Adverse effects to federally listed species of concern from the development proposed under Alternative B would be similar to those described for Alternative A.

Federally Listed Migratory Birds

Adverse effects to migratory bird species and other birds of prey from the development proposed under Alternative B would be similar to those described for Alternative A.

POTENTIAL EFFECTS TO CRITICAL HABITAT

Adverse effects to critical habitat from the development proposed under Alternative B would be similar to those described for Alternative A.

POTENTIAL EFFECTS TO ESSENTIAL FISH HABITAT

Adverse effects to Chinook salmon EFH and bull trout EFH from the development of Alternative B are similar to those discussed under Alternative A.

4.5.3 ALTERNATIVE C – RETAIL CENTER

POTENTIAL EFFECTS TO HABITATS

Table 4.5-3 identifies the acreages of terrestrial habitat types that would be directly affected by Alternative C. Effects to habitat types from the development proposed under Alternative C would be similar to those described above for Alternative A.

TABLE 4.5-3
TERRESTRIAL HABITAT ACREAGES AFFECTED BY ALTERNATIVE C

Habitat Type	Acreage Affected
Nonnative Annual Grassland	11.12
Riparian	2.66
Snowberry Patch	0.04
Ruderal/Disturbed	0.28
Total	**14.10**

Source: AES, 2011a.

POTENTIAL EFFECTS TO WATERS OF THE U.S.

Potential effects to the approximately 0.05 acres of potential waters of the U.S. from the development proposed under Alternative C would be similar to those described for Alternative A.

POTENTIAL EFFECTS TO SPECIAL STATUS SPECIES

Federally Listed Endangered, Threatened, or Candidate Species

Because no federally listed endangered, threatened, or candidate species occur within the March's Point site, none would be adversely affected as a result from the development of Alternative C.

Federal Species of Concern

Potential effects to federally listed species of concern from the development proposed under Alternative C would be similar to those described for Alternative A.

Federally Listed Migratory Birds

Potential effects to migratory bird species and other birds of prey from the development proposed under Alternative C would be similar to those described for Alternative A.

POTENTIAL EFFECTS TO CRITICAL HABITAT

Potential effects to critical habitat from the development proposed under Alternative C would be similar to those described for Alternative A.

POTENTIAL EFFECTS TO ESSENTIAL FISH HABITAT

Potential effects to Chinook salmon EFH and bull trout EFH from the development of Alternative C are similar to those discussed under Alternative A.

4.5.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

POTENTIAL EFFECTS TO HABITATS

Table 4.5-4 identifies the acreages of habitat types that would be directly affected by Alternative D. The ruderal/distrubed habitat type is not considered sensitive.

TABLE 4.5-4
TERRESTRIAL HABITAT ACREAGES AFFECTED BY ALTERNATIVE D

Habitat Type	Acreage Affected
Ruderal/Disturbed	1.52
Source: AES, 2011a	

POTENTIAL EFFECTS TO WATERS OF THE U.S.

Selection of Alternative D would affect approximately 0.006 acres of potentially jurisdictional waters of the U.S. within the southeastern portion of the Flats site. The Tribe would obtain a Section 404 Clean Water Act permit from the USACE for impacts to waters of the U.S. Mitigation is identified in **Section 5.2.4** to address this impact.

In addition, the Tribe will comply with the mitigation measures identified in **Sections 5.2.1** and **5.2.2** to prevent discharge of pollutants to surface waters during construction. This includes complying with the USEPA NPDES General Construction Permit, as well as implementing source control and treatment BMPs to prevent pollution of stormwater runoff during operation. Implementation of the mitigation identified in **Sections 5.2.1** and **5.2.2** would reduce this impact to a less than significant level.

POTENTIAL EFFECTS TO SPECIAL STATUS SPECIES

Federally Listed Endangered, Threatened, or Candidate Species

Based on a review of the USFWS list of federally listed species for Skagit County and a field survey by qualified biologists, no suitable habitat for special status species has been indentified on the Flats site. Because no federally listed endangered, threatened, or candidate species occur within the Flats site, none would be adversely affected as a result from the development of Alternative D.

Federal Species of Concern

Development of Alternative D would occur within close proximity to trees within the coniferous forest on the northwest corner of the Flats site that could provide marginal nesting habitat for the bald eagle (*Haliaeetus leucocephalus*). Potential disruption of nesting bald eagles during construction could result in nest abandonment should construction occur between January 1 and August 15 in the Pacific Northwest (USFWS, 2007b). Likewise, increased human activity and traffic, elevated noise levels, and operation of machinery could also impact bald eagles since active nests have been documented within one mile of the Flats site. Implementation of mitigation identified in **Section 5.2.4**, would reduce this impact to a less than significant level.

Federally Listed Migratory Birds

The development of Alternative D would occur within close proximity of ornamental trees that could provide potential nesting habitat for migratory bird species and other birds of prey protected under the MBTA (although bald eagle is protected under the MBTA, impacts to this species are discussed separately). In addition, potential disruption of nesting migratory birds and other birds of prey during construction could result in nest abandonment should construction occur between March 1 and September 15. Likewise, increased human activity and traffic, elevated noise levels, and operation of machinery could also impact birds if their nests are located within the immediate vicinity of development areas. Implementation of mitigation identified in **Section 5.2.4**, would reduce this impact to a less than significant level.

POTENTIAL EFFECTS TO CRITICAL HABITAT

The development of Alternative D would not directly affect critical habitat for marbled murrelet, northern spotted owl, and bull trout Coastal-Puget Sound Distinct Population Segment (DPS) because no critical habitat has been designated within the Flats site. The nearest known bull trout population to the Flats site is in Puget Sound (Chan, 2011). Even though no bull trout populations are known to forage, migrate, or overwinter within Fidalgo Bay, these areas are designated as critical habitat (refer to **Figure 3.5-3**). The Flats site is adjacent to Fidalgo Bay.

If untreated, stormwater from Alternative D to the manmade drainage ditch that drains offsite could indirectly affect designated critical habitat for bull trout in Fidalgo Bay. Stormwater treatment features proposed within the southeastern corner of the Flats site would minimize indirect effects to designated critical habitat by ensuring stormwater runoff generated from impervious surfaces is contained and treated prior to discharge into Fidalgo Bay. Operational activities associated with Alternative D were designed to avoid or minimize indirect adverse affects to designated critical habitat by ensuring that any water transported offsite would not adversely affect water quality.

Potential construction impacts could result from discharge of hazardous materials associated with increased PCBs (USFWS, 2004), increased turbidity, and decreased DO in Fidalgo Bay. Refueling, operation, and storage of construction equipment and materials could result in accidental spills of pollutants, such as fuel, concrete, sealants, oil, and paint, into the manmade drainage ditch, which drains to Fidalgo Bay. Implementation of the best management practices identified in **Sections 5.2.1**, **5.2.2**, and **5.2.10** including the protection of downstream waterways from increased flow rates, the control of erosion, minimization of sediment load, and refueling away from waterways, would ensure that construction and operation activities associated with the development of Alternative D would not indirectly affect designated critical habitat for bull trout.

POTENTIAL EFFECTS TO ESSENTIAL FISH HABITAT

The development of Alternative D would not directly affect Chinook salmon Upper Columbia Spring-Run EFH, Snake River Fall-Run EFH, Snake River EFH, and Puget Sound EFH and bull trout EFH because none occurs within the Flats site.

Proposed stormwater treatment features, including vegetated stormwater treatment swales, as well as source control and treatment BMPs required as mitigation in **Sections 5.2.1**, **5.2.2**, and **5.2.10,** would ensure that construction and operational activities associated with the development of Alternative D would not indirectly affect Chinook salmon EFH and bull trout EFH.

4.5.5 ALTERNATIVE E – NO ACTION

Under the No Action Alternative, development would not occur on either of the alternative project sites; therefore, no effects to biological resources would occur as a result of Alternative E.

4.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section identifies the potential direct effects to cultural resources that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.6**. Cumulative and indirect effects are identified in **Section 4.15** and **Section 4.14**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.5**.

ASSESSMENT CRITERIA

In accordance with Section 106 of the National Historic Preservation Act (NHPA), a significant adverse impact would result if implementation of one of the alternatives resulted in one of the following effects to existing cultural resources discussed in **Section 3.6**:

- Physical destruction of or damage to all or part of the resource; alteration of a resource;
- Removal of the resource from its historic location; change of the character of the resource's use or of physical features within the resource's setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the resource's significant historic features; or
- Neglect of a resource that causes its deterioration.

4.6.1 ALTERNATIVE A – PROPOSED PROJECT

CULTURAL RESOURCES

The cultural resources study of the March's Point site found no cultural resources recorded on the site and made a professional recommendation that developing the site would have no effect on historic properties. The Bureau of Indian Affairs (BIA) requested that the Washington Department of Archaeology and Historic Preservation (DAHP) (also known as the State Historic Preservation Office [SHPO]) review the March's Point Cultural Resources Study. DAHP provided concurrence with the finding of *No Historic Properties Affected* in August 2012 (**Appendix C;** AES, 2011).

Nine prehistoric cultural resources have been previously documented within a one mile radius of the March's Point site. There will be no impacts to these documented archaeological resources.

There is always the slight possibility that previously unknown archaeological resources will be encountered during construction activities. This would be a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated archaeological discoveries to reduce potential project impacts to a less than significant level.

PALEONTOLOGICAL RESOURCES

Given the geological history of the March's Point site, including severe and recent glacial activities, and because field surveys and sub-surface testing did not identify any paleontological resources at the site, it is very unlikely that paleontological resources are present on-site. Therefore, no known paleontological resources would be affected under Alternative A.

However, there is a potential for the discovery of unrecorded, subsurface paleontological resources during ground-disturbing activity. This would be a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated paleontological discoveries to reduce potential project impacts to a less than significant level.

4.6.2 ALTERNATIVE B – REDUCED INTENSITY

CULTURAL RESOURCES

Potential impacts under Alternative B would be similar to those described above for Alternative A. Development proposed under Alternative B would not affect known historic properties. There is always the possibility that previously unknown archaeological resources will be encountered during construction activities. This would be a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated archaeological discoveries to reduce potential project impacts to a less than significant level.

PALEONTOLOGICAL RESOURCES

As with Alternative A, no paleontological resources have been reported or observed on or in the vicinity of the March's Point site. Therefore, no known paleontological resources would be affected under Alternative B. Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated paleontological discoveries to reduce potential project impacts to a less than significant level.

4.6.3 ALTERNATIVE C – RETAIL CENTER

CULTURAL RESOURCES

Because Alternative C would affect the same site to a similar degree as Alternative A, the potential impacts to cultural resources under Alternative C would be the same as described above for Alternative A. Development proposed under Alternative C would not affect known historic properties. There is always the possibility that previously unknown archaeological resources will be encountered during construction activities. This would be a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated archaeological discoveries to reduce potential project impacts to a less than significant level.

PALEONTOLOGICAL RESOURCES

As with Alternative A, it is unlikely that paleontological resources are present on or in the vicinity of the site. Therefore, no known paleontological resources would be affected under Alternative C. If paleontological resources are discovered, the mitigation measures presented in **Section 5.2.5** for the treatment of unanticipated paleontological discoveries would be followed to reduce potential project impacts to a less than significant level.

4.6.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

CULTURAL RESOURCES

One previously recorded archaeological resource was identified on the Flats site during the course of research and field work conducted in support of the *Fidalgo Bay Resort Flats Cultural Study*. The location of the site is not within the footprint of the proposed casino building; therefore it would not be impacted by subsurface foundation work. However, development of parking and ancillary facilities has the potential to disturb the site. Additionally, the project area is considered archaeologically sensitive, and thus unknown resources may be discovered during construction. The DAHP provided concurrence with the finding of *No Adverse Effect* in August 2012 (**Appendix C**; AES, 2011f) subject to avoidance and/or protection mitigation measures outlined in **Section 5.2.5**. Implementation of these mitigation measures would reduce potential project impacts to known and unknown archaeological resources to less than significant levels.

PALEONTOLOGICAL RESOURCES

As with Alternative A, given the geological history of the site and because field surveys did not identify any paleontological resources at the site, it is very unlikely that paleontological resources are present at the Flats site. Therefore, no known paleontological resources would be affected under Alternative D. There is a potential for unrecorded, subsurface paleontological resources to be discovered during ground-disturbing activity. This would be a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated paleontological discoveries to reduce potential project impacts to a less than significant level.

4.6.5 ALTERNATIVE E – NO ACTION

No new development is proposed under Alternative E. Under this alternative, there would be no impacts to cultural or paleontological resources on the alternative project sites.

4.7 SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE

This section identifies potential socioeconomic effects anticipated to result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.7**. Cumulative and specific indirect effects are identified in **Section 4.14** and **Section 4.15**, respectively. Measures to avoid, minimize, and mitigate for adverse effects identified in this section are presented in **Section 5.2.6**.

ASSESSMENT CRITERIA

SOCIOECONOMIC IMPACTS

To determine the potential effects of the alternatives associated with socioeconomic conditions, the economic effects of temporary construction and ongoing operational activities of were measured. Because socioeconomic effects would be most pronounced in the vicinity of the proposed sites, the scope of analysis focuses on impacts to the alternative sites and the surrounding Skagit County (County). Impacts from construction would be a one-time occurrence, while those from operation would be generated continuously after opening. An adverse economic, fiscal, or social impact would occur if the effect of the project were to negatively alter the ability of governments to perform at existing levels, or alter the ability of people to obtain public health and safety services. Economic effects in this analysis are quantified for the County using the Impact Analysis for Planning (IMPLAN) model. Estimated building costs, and projected revenues used to calculate employment, output, tax revenue impacts, and wages are based on projections provided by the Samish Indian Nation (Tribe) (**Appendix H**).

ENVIRONMENTAL JUSTICE IMPACTS

To determine the impacts of the alternatives on environmental justice, the location and status of minority and low-income communities of concern, as identified in **Section 3.7**, are compared with the effects and nature of an alternative's impacts. An adverse environmental justice impact would result if any impact within the scope of this document disproportionately affected an identified minority or low-income community or any benefit arising from the implementation of an alternative was inequitably shared with the above groups. *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* (EPA, 1998) provides the following direction on how to analyze the impacts of actions on low-income and minority populations:

> Under NEPA, the identification of a disproportionately high and adverse human health or environmental effect on a low-income population, minority population, or Indian tribe does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory. Rather, the identification of such an effect should heighten agency attention to alternatives (including

alternative sites), mitigation strategies, monitoring needs, and preferences expressed by the affected community or population (EPA, 1998).

4.7.1 ALTERNATIVE A – PROPOSED PROJECT

ECONOMIC EFFECTS

Expenditures on goods and services for construction and operational activities would generate substantial direct economic output, as well as indirect and induced economic output. Output is defined as the total value of all goods and services produced at the establishment or construction site. Direct output would result from money spent on construction and operational activities of the project. Indirect output would result from expenditures on goods and services by businesses that receive funds directly from the construction and operation of Alternative A. Induced output would result from expenditures on goods and services by employees directly generated from construction and operation of Alternative A.

Construction

Expenditures on goods and services from the construction of Alternative A were calculated from estimated costs for construction, investment in furniture, fixture and equipment (FF&E), gaming machines, various business and consulting fees, and pre-opening expenses. Alternative A is expected to be constructed through 2013 and is anticipated to open for a full year of operation beginning in 2014. Under Alternative A, construction activities are estimated to cost approximately $22.5 million, which is expected to generate a one-time total output of approximately $8.6 million within the County (**Table 4.7-1**).

TABLE 4.7-1
ONE-TIME CONSTRUCTION ECONOMIC IMPACT

Construction	Alternative			
	A	B	C	D
Development Cost	*$22,527,462*	*$15,047,971*	*$40,378,736*	*$22,527,462*
Direct Output (Industry)				
Construction	$5,478,626	$3,659,631	$15,604,402	$5,478,626
Wholesale Trade	$106,578	$72,339	$303,558	$106,578
Manufacturing	$518,532	$346,371	--	$518,532
Direct Total	$6,103,736	$4,078,341	$15,907,960	$6,103,736
Other Output				
Indirect	$881,469	$589,006	$2,370,413	$881,469
Induced	$1,626,926	$1,127,630	$4,391,321	$1,626,926
Total Output	*$8,612,131*	*$5,794,977*	*$22,669,695*	*$8,612,131*

Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers may not add up to equal the number given in the Total.
Source: AES, 2011e; Projections are presented in 2011 dollars

Direct output is estimated to total approximately $6.1 million, of which approximately $5.5 million (90 percent) is attributed to the construction industry. Indirect and induced outputs would total approximately $881,469 and $1,626,926, respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County.

Construction of Alternative A would generate substantial output to a variety of businesses in the County. Output received by County businesses would in turn increase their spending, and demand for labor, further stimulating the local economy. This would be considered a beneficial impact.

Operation

Expenditures on goods and services from the operation of Alternative A were calculated from revenue projections for the first complete year of operation, currently estimated to be 2014. After construction is complete, the projected revenue for the gaming, restaurant, and bar components of Alternative A is estimated to be approximately $41.8 million (Samish Indian Nation, 2011). Furthermore, revenues are expected to grow by approximately 3.4 percent compounded annually (Samish Indian Nation, 2011). New spending from the Proposed Project is expected to generate a net annual total output of approximately $33.0 million within the County (**Table 4.7-2**). Direct output is estimated to total $24.2 million, of which approximately $24.1 (99.7 percent) would be attributed to the gaming and entertainment industry. Indirect and induced outputs would total approximately $4.0 million and $4.8 million respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County.

TABLE 4.7-2
ANNUAL OPERATIONAL ECONOMIC IMPACT

Operation	Alternative			
	A	B	C	D
Direct Output (Industry)				
Entertainment & Recreation	$24,133,654	$16,120,880	--	$24,133,654
Retail Trade	--	--	$16,564,775	--
Accommodation & Food Services	$62,117	$41,493	--	$62,117
Direct Total	$24,195,771	$16,162,373	$16,564,775	$24,195,771
Other Output				
Indirect	$4,001,453	$2,672,903	$1,532,321	$4,001,453
Induced	$4,748,621	$3,172,000	$5,423,563	$4,748,621
Total Output	*$32,945,845*	*$22,007,275*	*$23,520,659*	$32,945,845

Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers may not add up to equal the number given in the Total.
Source: AES, 2011e; Projections are presented in 2011 dollars

Operation of Alternative A would generate increased revenues for a variety of businesses in the County as a result of increased economic activities. Output received by County businesses would in turn increase

their spending and demand for labor, thereby further stimulating the local economy. This would be considered a beneficial impact. No mitigation is required.

SUBSTITUTION EFFECTS

Potential substitution effects (the loss of customers at existing commercial businesses to the new business) of Tribal casinos on existing restaurant, recreation, and retail establishments must be considered when attempting to determine the true impact of a casino on the economy. The magnitude of the substitution effect can generally be expected to vary greatly by specific location and according to a number of variables. That is, how much of the casino's revenue comes at the expense of other business establishments in the area depends on how many and what type of other establishments are within the same market area as the casino, disposable income levels of local residents and their spending habits, as well as other economic and psychological factors affecting the consumption decisions of local residents.

Existing Tribal Casino Gaming Market Substitution Effects

Existing regional gaming facilities with the greatest potential to be affected by the project include: Swinomish Northern Lights Casino located approximately 2 miles from the March's Point site, Skagit Valley Casino located approximately 17 miles from the site, Tulalip Casino located approximately 37 miles from the site, Angel of the Wind Casino located approximately 30 miles from the site, Nooksack River Casino located approximately 30 miles from the site, and Silver Leaf Casino located approximately 38 miles from the site. Whenever a new casino opens in a market area, a certain amount of market competition is to be expected. As estimated, the proposed project could potentially capture approximately 11 percent of the tribal gaming market, or $31.2 million in annual revenues originating from within 90 minutes of the subject site (Samish Indian Nation, 2011). Anticipated substitution effects are likely to diminish after the first year of the project's operation once local residents experience the casino and return to more typical spending patterns. Despite existing competition in the vicinity of the proposed project, the gaming market is sufficient to warrant an additional gaming venue in the region as conservative forecasts project 2.8 percent to 5.7 percent market growth in the coming years (Samish Indian Nation, 2011). As such, it is anticipated that all competing casinos would continue to generate significantly positive cash flows. Therefore, substitution effects resulting from Alternative A to competing gaming facility revenues would not impact the ability of other tribal government to provide essential services and facilities to their membership.

Non-Gaming Substitution Effects

In 2010, the City of Anacortes (City) had a population of approximately 15,778 people, which is higher than the USDA's definition of a rural community (2,500 residents) (U.S. Census Bureau, 2010). Worst-case non-gaming substitution effects occurring in rural environments as a result of Native American casinos have shown on average a nine percent decrease in earnings at local restaurants and bars and an increase in earnings in other commercial sectors (Taylor et. al, 2000). Thus, worst case effects as described in the Taylor study would not apply to the March's Point site. Therefore, it may be inferred

that if substitution occurs it would be at some percentage lower than nine percent. Additionally, potential non-gaming substitution effects would be counteracted by the local economic activity generated by casino patrons other than local residents. Specifically, as the casino would draw non-residents to the area, the associated increase in new visitor demand for off-site entertainment venues, restaurants, and bars would make up for some area residents choosing to visit Alternative A rather than other local establishments. Thus, it is not anticipated that significant quantifiable non-gaming substitution effects would occur.

TAX REVENUES

Alternative A would result in a variety of fiscal impacts. Indian tribes do not pay corporate income taxes on revenue or property taxes on tribal land. Alternative A would increase demand for public services, resulting in increased costs for local governments to provide these services. Tax revenues would be generated for federal, state and local governments from secondary economic activities (i.e., the indirect and induced effects of tribal gaming). The taxes on secondary economic activity include: corporate profits tax, income tax, sales tax, excise tax, property tax, and personal non-taxes, such as motor vehicle licensing fees, fishing/hunting license fees, other fees, and fines.

Alternative A would be located on County tax parcels P19917, P19919, and P19920. According to the Skagit County Assessor's Office, the total 2011 annual property tax for the parcels was $20,192.02. Alternative A would result in the entire area of the parcels at the March's Point site to be transferred into trust status for the Tribe. Therefore, the taxable value of the parcels, or approximately $20,192.02 in annual property tax, would not be collected by the County. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative A. As shown in **Table 4.7-3**, construction of Alternative A would generate $171,934 in one-time federal tax revenues, and $140,705 in one-time State/County/local tax revenues. Operation of Alternative A would generate $309,468 in annual federal tax revenues, and $458,138 in annual State/County/local tax revenues from indirect and induced taxes. Actual annual tax revenues generated by the project may be greater than those indicated above as direct tax revenue is not accounted for in the estimate. With the anticipated increase in taxes resulting from the construction and operation of Alternative A, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

SUMMARY OF ECONOMIC EFFECTS

Construction and operation of Alternative A would generate substantial economic output for a variety of businesses in the County. Additionally, Alternative A would generate tax revenues for State, County, and local governments. Potential effects due to the loss of state and federal tax revenues resulting from the project would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative A. Overall, Alternative A would result in a beneficial impact to the local economy in the County.

TABLE 4.7-3
TAX REVENUES

Jurisdiction	Alternative			
	A	B	C	D
Construction (One-Time)				
Federal	$171,934	$117,804	$462,790	$171,934
State/County/Local	$140,705	$96,753	$378,673	$140,705
Operation (Annually)				
Federal	$611,830	$408,692	$490,356	$611,830
State/County/Local	$458,138	$306,028	$444,824	$458,138

Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers may not add up to equal the number given in the Total. The tax revenues indicated in the table include indirect and induced taxes only. Due to the project's unique circumstances, including the proposed location on trust land, direct tax revenues were not quantifiable. As such, actual tax revenues generated by the project may be greater than those indicated above as direct tax revenues have not been included in the totals.

Source: AES, 2011e; Projections are presented in 2011 dollars.

EMPLOYMENT

Investment in construction and operational activities would generate substantial direct employment opportunities and wages, as well as indirect and induced employment opportunities and wages. The source of direct, indirect, and induced employment opportunities and wages would be similar to those for economic output, as discussed above. The IMPLAN model was used to estimate employment opportunities generated by Alternative A. See **Appendix H** for the Economic Impact and Growth Inducing Study.

Construction

Construction of Alternative A would generate a one-time total of approximately 65 positions within the region (**Table 4.7-4**). The number of employment positions is equivalent to the number of person-years available from wages. A person-year is defined as the amount of labor one full-time employee can complete in a calendar year. For example, two half-time employees working for a year would constitute one person-year.

Employment opportunities generated from construction and operation of Alternative A would result in wage generation. Wages include hourly and salary payments as well as benefits including health and life insurance and retirement payments. Under Alternative A, investment in construction activities would generate one-time total wages of approximately $2.9 million within the County (**Table 4.7-4**). Direct wages would total approximately $2.3 million, of which approximately $2.1 million (91 percent) would be attributed to the construction industry. The generation of employment and wages during the construction phase is considered a beneficial effect of Alternative A.

TABLE 4.7-4
ONE-TIME CONSTRUCTION EMPLOYMENT AND WAGE IMPACTS

Construction Impact	Alternative			
	A	B	C	D
Employment (Person-Years)				
Direct (Industry)				
Construction	40	29	114	40
Manufacturing	3	2	--	3
Wholesale Trade	1	0	2	1
Direct Total	44	32	117	44
Other				
Indirect	6	4	17	6
Induced	15	10	41	15
Total Jobs	*65*	*46*	*174*	*65*
Wages				
Direct (Industry)				
Construction	$2,090,343	$1,458,927	$5,953,783	$2,090,343
Manufacturing	$132,451	$86,773	--	$132,451
Wholesale Trade	$40,239	$27,867	$114,609	$40,239
Direct Total	$2,263,032	$1,573,567	$6,068,392	$2,263,032
Other				
Indirect	$204,908	$136,927	$547,790	$204,908
Induced	$420,580	$291,506	$1,135,193	$420,580
Total Wages	*$2,888,520*	*$2,002,000*	*$7,751,375*	*$2,888,520*

Note: Though numbers appear to be estimated to the nearest dollar and/or whole number, accuracy is not indicated to that level due to rounding. Due to rounding, numbers may not add up to equal the number given in the Total.
Source: AES, 2011e; Projections are presented in 2011 dollars

Operation

Employment opportunities generated from the operation of Alternative A would include entry-level, mid-level, and management positions. Examples of employment opportunities typically offered by tribal casino and resort facilities are listed in **Table 4.7-5**. Average salaries offered are expected to be consistent with those of other tribal gaming facilities and competitive in the local labor market.

TABLE 4.7-5
TYPICAL TRIBAL CASINO EMPLOYMENT OPPORTUNITIES

Casino slot operations	Food & beverage operations	Financial services
Table games	Restaurant services	Support services
Entertainment operations	Culinary services	Security services
Casino credit	Human resources	Surveillance
Casino administration	Housekeeping Services	Casino Services

Source: AES, 2011e.

As calculated through IMPLAN, operation activities associated with Alternative A would generate an annual total of approximately 347 employment opportunities and approximately $10.19 million in employee wages to be captured within the County (**Table 4.7-6**).

TABLE 4.7-6
ANNUAL OPERATIONAL EMPLOYMENT AND WAGE IMPACTS

Operational Impact	Alternative			
	A	**B**	**C**	**D**
Employment (Person-Years)				
Direct (Industry)				
Entertainment and Recreation	267	178	--	267
Retail	--	--	553	--
Accommodation and Food Services	1	1	--	1
Direct Total	268	179	553	268
Other				
Indirect	35	23	21	35
Induced	44	29	27	44
Total Jobs	*347*	*232*	*225*	*347*
Wages				
Direct (Industry)				
Entertainment and Recreation	$6,153,803	$4,110,638	--	$6,153,803
Retail	--	--	$4,576,989	--
Accommodation and Food Services	$20,475	$13,677	--	$20,475
Direct Total	$6,174,277	$4,124,315	$4,576,989	$6,174,277
Other				
Indirect	$1,040,714	$695,179	$347,754	$1,040,714
Induced	$1,227,579	$820,002	$1,400,904	$1,227,579
Total Wages	*$8,442,570*	*$5,639,496*	*$6,325,647*	*$8,442,570*

Note: Though numbers appear to be estimated to the nearest dollar and/or whole number, accuracy is not indicated to that level due to rounding. Due to rounding, numbers may not add up to equal the number given in the Total.
Source: AES, 2011e; Projections are presented in 2011 dollars.

Direct employment impacts would total approximately 268 job opportunities (**Appendix H**). Indirect and induced employment opportunities would total approximately 35 and 44 respectively, and would be dispersed and distributed among a variety of different industries and businesses throughout the County. The generation of employment and wages during the operation phase is considered a beneficial effect of Alternative A.

For the purposes of this analysis, it is assumed that the unemployment rate for the County will follow a similar trend to what has been projected for the U.S., and that the County will experience an unemployment rate of 6.2 percent in 2014 (**Appendix H**; **Table 4.7-7**). As detailed in **Appendix H**, there are projected to be approximately 61,210 people in the County labor force in 2014. Using the projected 2014 unemployment rate of 6.2 percent for the County, the number of unemployed people in the County is estimated at 3,795 people in 2014, of which approximately 545 people would be available and qualified for work at the project site. There are anticipated to be more than enough people available to fill all employment opportunities generated at the project site; no additional people would be required or anticipated to move to the County to meet the labor demand generated by the project. For reasons

described above under *Economic Effects*, Alternative A would not result in significant permanent job loss elsewhere due to substitution effects.

TABLE 4.7-7
SKAGIT COUNTY PROJECTED LABOR DATA

Year	Labor Force	Unemployed	Unemployment Rate
2014	61,210	3,795	6.2%

Source: U.S. Department of Labor, 2011; AES, 2011e.

Summary of Employment Effects

Construction and operation of Alternative A would generate substantial temporary and ongoing employment opportunities and wages in the County. Given the projected unemployment rate and the dynamics of the local labor market, the County is anticipated to be able to easily accommodate the increased demand for labor during the operation of Alternative A. This would result in employment and wages for persons previously unemployed and would contribute to the alleviation of poverty among lower income households. This is a beneficial effect.

HOUSING

Based on the information presented in **Section 3.7.1**, in the project's first full year of operation in 2014, the County housing market is projected to have 55,915 total units and 9,679 vacant units (**Table 4.7-8**).

TABLE 4.7-8
PROJECTED 2014 HOUSING MARKET

	Housing Units
Total Units	55,915
Occupied Units	46,236
Vacant Units	9,679
% Vacant	17.4%

Source: U.S. Census Bureau, 2005-2009; AES, 2011e.

As discussed above, there are anticipated to be more than enough people currently residing within the County available to fill all employment opportunities generated at the project site; no additional people would be required or anticipated to move to the County to meet the labor demand generated by the Alternative A. Therefore, Alternative A would not be anticipated to result in substantial population growth within the area. There would be no need for the new employees already located within the County to relocate within the area.

However, as illustrated in **Table 4.7-8**, even if some employees elect to relocate within the County, there would be enough vacant homes available to these employees. As such, Alternative A would have a

negligible impact on the regional housing stock, and would not be expected to stimulate regional housing development.

SOCIAL EFFECTS

Problem and Pathological Gambling

Gambling, in one form or another, is now legal in every state except Hawaii and Utah. According to a National Gambling Impact Study Commission (NGISC) study, approximately 86 percent of Americans report having gambled at least once during their lifetimes and 63 percent of Americans report having gambled at least once during the previous year (NGISC, 1999). This estimate is based on participation in all forms of gambling including lotteries, poker, internet gambling, sports betting, and casino gambling.

The American Psychiatric Association (APA) describes pathological gambling as an impulse control disorder characterized by "persistent and recurrent maladaptive gambling behavior that disrupts personal, family, or vocational pursuits. The gambling pattern may be regular or episodic, and the course of the disorder is typically chronic" (NGISC, 1999). The APA has established ten criteria for the diagnosis of a pathological and problem gambler, which include preoccupation, tolerance, withdrawal, escape, chasing, lying, loss of control, illegal acts, risking significant relationships, and financial bailout. At-risk gaming behaviors typically meet one or two of these criteria; problem gamblers typically meet three to four of these criteria; and pathological gamblers typically meet at least five of these criteria. Collectively, both pathological and problem gambling are referred to as "problem gambling."

An NGISC (1999) study reported on three studies, two completed in 1997 and one completed in 1998, noted that pathological gambling often occurs in conjunction with other behavioral problems, including substance abuse, mood disorders, and personality disorders. Even if it were possible to isolate the effects of problem gambling on people who suffer from co-morbidity, it is difficult to then isolate the effects of casino gambling from other forms of gambling. As discussed, casino gambling is only one form of gaming. In fact, the most prevalent forms of gambling are those found in most neighborhoods: scratch lottery cards, lotto, and video lottery terminals. Thus, problem gamblers are likely to already exist in most communities. However, there are several recent studies that suggest that the presence of a casino results in a higher rate of resident problem and pathological gamblers than in counties without a casino. At the national level, approximately 4 percent of the adult population is considered problem or pathological gamblers. According to Grinols et al. (2000), the Las Vegas community has a problem and pathological gambler population that is nearly six percent higher than in a non-casino community. Ricardo Gazel finds in his *Economic Impacts of Casino Gambling at the State and Local Level* (1998) article, that the incidence of problem and pathological gamblers can be between 1 to 4 percent higher in a casino community than for the general population, depending on the type of gambling that is prevalent. He finds that communities with a higher percentage of slot machines have a higher problem and pathological gambler differential than in areas with other types of gambling. Several studies suggest that

these population differentials take effect for residents within a 50 mile radius of a casino, and increase to the above mentioned rates as the casino moves closer to the population. According to Welte et al. (2004), the probability of being a problem or pathological gambler roughly doubles for those living within ten miles of a casino compared with those who do not (7.2 percent and 3.1 percent, respectively).

Because six existing casinos are located within 50 miles of the project site, including the existing Northern Lights Casino located approximately two miles from the project site, there would be no anticipated significant increase to problem gambling rates in the local area given that gambling venues are already readily accessible to the local population. Thus, potential impacts to problem gambling as a result of the Proposed Project would be less than significant.

Crime

There is a general belief that the introduction of legalized gambling into a community increases crime. However, this argument is based more on anecdotal evidence rather than empirical evidence. Casinos, by their nature, increase the volume of people entering a given area. Whenever large volumes of people are introduced into an area, the volume of crime is also expected to increase. This is true of any large-scale development. Taken as a whole, literature on the relationship between casino gambling and crime rates suggests that communities with casinos are as safe as communities without casinos. The National Opinion Research Center (NORC, 1999) found that insufficient data exists to quantify or determine the relationship between casino gambling within a community and crime rates.

Alternative A would introduce a large number of patrons and employees into the vicinity on a daily basis. As a result, under Alternative A, criminal incidents would be expected to increase proportionally in the project area, particularly at the project site, as with any other development of this size. However, increased tax revenues resulting from Alternative A and local agreements between the Tribe and City would fund expansion of law enforcement services required to accommodate planned growth. Thus, Alternative A would not result in significant adverse effects associated with crime. Potential impacts to law enforcement services are addressed in **Section 4.10**, Public Services.

COMMUNITY IMPACTS

Schools

Due to the limited number of employees expected to relocate to the project area as a result of Alternative A, as noted in the *Housing* section above, it is expected that effects to the Anacortes School District (ASD) due to new students would be negligible. Additionally, given that any anticipated new students would be distributed across all grade levels between kindergarten and high school, any new students that may enroll in ASD as a result of the project would be a nominal impact on the district. Furthermore, if Alternative A were to result in the relocation of any families to the area, ASD would likely collect additional taxes from the families of new students and would use this revenue to hire additional teachers

to meet additional demand, if necessary. Therefore, any potential increased enrollment would have a negligible effect on the ability of ASD to provide education services at existing levels. Alternative A would not result in adverse impacts to local schools. No mitigation is required.

Libraries and Parks

Effects to area libraries and parks could occur if the employees or patrons of Alternative A significantly increase the demand on these resources. Due to the limited number of employees expected to relocate to the project area, as noted in the *Housing* section above, it is expected that these effects would be negligible. Additionally, due to the casino/entertainment character of Alternative A, it is not anticipated that patrons would frequent local libraries or parks. Therefore, there would be a less than significant effect to libraries and parks. No mitigation is required.

ENVIRONMENTAL JUSTICE: MINORITY AND LOW-INCOME COMMUNITIES

Subsection 3.7.3 describes local populations near the project site that could be affected by development of Alternative A. No low-income or minority communities were identified in the vicinity of the project site.

Alternative A would benefit the Samish Indian Nation, a minority community, in at least two ways. First, it would generate new income to fund the operation of the Tribal Government. This income is anticipated to have a beneficial effect on Tribal attitudes, expectations, quality of life, and culture by funding Tribal programs that serve Tribal members, including education, health care, housing, social services, and Tribally-sponsored cultural events; and by supporting Tribal self-sufficiency and self-determination. Second, Tribal members would have access to new jobs created on the project site. Employment generated by this Alternative would not only allow Tribal members to enjoy a better standard of living, but would also provide an opportunity for Tribal members to end their dependence on government funding. As discussed in **Section 3.7**, approximately 15 percent of the tribal labor force is unemployed and 6 percent are employed but living below the poverty line (BIA, 2005). Therefore, the creation of employment opportunities is expected to benefit Tribal members as well as local taxpayers in general. As discussed above in the Substitution section, operation of the Samish Northern Lights Casino would reduce the revenue at the other casinos in the local market area, particularly the nearby Swinomish Northern Lights Casino. Operation of the Samish Casino is not, however, expected to preclude competing casinos from generating significant positive cash flows that fund essential tribal services and facilities. Alternative A would not result in significant adverse effects to minority or low-income communities.

4.7.2 ALTERNATIVE B – REDUCED INTENSITY

ECONOMIC EFFECTS

The direct economic effects for both construction and operation of Alternative B are comparable to those described for Alternative A, but to a lesser scale since Alternative B is reduced in size and scope.

Construction

Under Alternative B, construction activities are estimated to cost approximately $15.0 million, which is expected to generate a one-time total output of approximately $5.8 million within the County (**Table 4.7-1**). Direct output is estimated to total approximately $4.1 million, of which approximately $3.7 million (90 percent) would be attributed to the construction industry. Indirect and induced outputs would total approximately $589,006 and $1,127,630, respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County.

Construction of Alternative B would generate substantial output to a variety of businesses in the County in the industries discussed above. Output received by the County businesses would in turn increase their spending, and demand for labor, thereby further stimulating the local economy. This would be considered a beneficial impact.

Operation

Following completion of construction in 2014, the projected revenue for Alternative B is estimated to be approximately $27.9 million. Alternative B is expected to generate an annual total output of approximately $22.0 million within the County (**Table 4.7-2**). Direct output was estimated to total approximately $16.2 million, of which approximately $16.1 million (99.3 percent) would be attributed to the gaming and entertainment industry. Indirect and induced outputs would total approximately $2.7 million and $3.2 million, respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County.

Operation of Alternative B would generate increased revenues for a variety of businesses in the County as a result of increased economic activities. Output received by the County businesses would in turn increase their spending and demand for labor, thereby further stimulating the local economy. This would be considered a beneficial impact.

SUBSTITUTION EFFECTS

Under Alternative B, a portion of revenue may be transferred from other local businesses through substitution. As noted under Alternative A, whenever a new casino opens in a market area, a certain amount of market competition is to be expected. Yet the budget, size, and scope of Alternative B is more limited than Alternative A; therefore its potential substitution effects are also smaller. Furthermore, any anticipated substitution effects are likely to diminish after the first year of the project's operation once

local residents experience the casino and return to more typical spending patterns. Similar to Alternative A, gaming substitution, should it occur, represents a negligible portion of total economic activity that would be generated by Alternative B. Because a smaller casino would have less economic impact on the community, potential non-gaming substitution effects would also be similar, but less than those described above for Alternative A. These impacts would be comparable to Alternative A, but smaller, and therefore less than significant.

TAX REVENUES

Alternative B would result in a variety of fiscal impacts. Similar to Alternative A, under Alternative B the Tribe would not pay corporate income taxes on revenue or property taxes on tribal land. In addition, Alternative B would increase demand for public services, resulting in increased costs for local governments to provide these services. As with Alternative A, the entire taxable value of the parcels, or approximately $20,192.02 in annual property tax, would be lost under Alternative B. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative B; however, this impact would be to a lesser extent than Alternative A since Alternative B is reduced in size and scope. With the anticipated increase in taxes resulting from the operation of Alternative B, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

For Alternative B, construction activities would generate one-time tax revenues, while operational activities would generate annual revenues to the federal, State, County, and local governments. Construction would result in an estimated $117,804 in federal tax revenues, and $96,753 in state/County/local government tax revenues. Operation of Alternative B would result in an estimated $408,692 in federal tax revenues and $306,028 in State/County/local government tax revenues (**Table 4.7-3**) from indirect and induced taxes. Actual annual tax revenues generated by the operation of Alternative B may be greater than those indicated above as direct tax revenues are not accounted for in the estimate. The generation of net revenues to governments is estimated to be comparable to Alternative A, though smaller, and is considered a beneficial effect.

SUMMARY OF ECONOMIC EFFECTS

Construction and operation of the Alternative B would generate significant economic output for a variety of businesses in the County. Additionally, Alternative B would generate substantial tax revenues for State, County, and local governments. Overall, Alternative B would result in a beneficial impact to the County economy, but to a lesser extent than Alternative A since Alternative B is reduced in size and scope.

EMPLOYMENT

Investment in construction and operational activities would generate substantial direct employment opportunities and wages, as well as indirect and induced employment opportunities and wages. The IMPLAN model was used to estimate employment opportunities generated by Alternative B; resulting estimates are shown in **Tables 4.7-4** and **4.7-6**.

Construction

Under Alternative B, investment in construction activities would generate a one-time total of approximately 46 employment positions within the County during the construction phase, including approximately 32 direct employment opportunities (**Table 4.7-4**). Indirect and induced employment opportunities are estimated to be approximately 4 and 10 positions, respectively.

Under Alternative B, investment in construction activities would generate one-time total wages of approximately $2.0 million within the County (**Table 4.7-4**). Direct wages would total approximately $1.6 million. Indirect and induced wages would total approximately $136,927 and $291,506, respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County. The generation of employment and wages during the construction phase is considered a beneficial effect of Alternative B.

Operation

As calculated through IMPLAN, operation activities associated with Alternative B would generate an estimated 232 annual employment opportunities within the County (**Table 4.7-6**). Direct employment impacts would total approximately 179 opportunities. Indirect and induced employment opportunities would total approximately 23 and 29 positions, respectively. Indirect and induced employment opportunities would be distributed among a variety of different industries and businesses throughout the County.

Investment in operational activities associated with Alternative B would generate annual total wages of approximately $5.6 million within the County (**Table 4.7-6**). Direct wages would total approximately $4.1 million. Indirect and induced wages would total approximately $695,179 and $820,002, respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County. The generation of employment and wages during the operation phase is considered a beneficial effect of Alternative B.

Summary of Employment Effects

Construction and operation of Alternative B would generate substantial temporary and ongoing employment opportunities and wages in the County. This would result in employment and wages for persons previously unemployed; increasing the ability of the population to obtain health and safety

services, and help to alleviate poverty among lower income households. This is considered a beneficial effect.

HOUSING

The 2014 County housing market as discussed under Alternative A would fulfill the demands for housing under Alternative B. This impact would be comparable to, but smaller than Alternative A. Alternative B would not result in significant adverse effects to the housing market.

SOCIAL EFFECTS

Social impacts including pathological and problem gambling, and crime from Alternative B would be comparable though smaller than Alternative A, since Alternative B is reduced in size and scope. Alternative B would not result in significant adverse impacts to problem gambling or crime.

COMMUNITY IMPACTS

Schools

Effects to schools would be similar to, but smaller than those described under Alternative A because Alternative B is reduced in size and scope. This would be considered a less than significant impact. No mitigation is required.

Libraries and Parks

Effects to parks and libraries would be similar to those described under Alternative A and, therefore, less than significant. No mitigation is required.

ENVIRONMENTAL JUSTICE: MINORITY AND LOW-INCOME COMMUNITIES

No minority or low-income communities were identified in the vicinity of the Project Site. The effects to the Samish Indian Nation and the Swinomish Tribe would be similar, but less than, those described above for Alternative A. Alternative B would, therefore, not result in significant adverse effects to minority or low-income communities.

4.7.3 ALTERNATIVE C – RETAIL CENTER

ECONOMIC EFFECTS

Construction

Under Alternative C, construction activities are estimated to cost approximately $40.4 million, which is expected to generate a one-time total output of approximately $22.7 million within the County (**Table 4.7-1**). Direct output is estimated to total approximately $15.9 million. Indirect and induced outputs would total approximately $2,370,413 and $4,391,321, respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County.

Construction of Alternative C would generate substantial output to a variety of businesses in the County. Output received by the County businesses would in turn increase their spending, and labor demand, thereby further stimulating the local economy. This would be considered a beneficial impact.

Operation

Upon completion of construction in 2014, the projected revenue for Alternative C is estimated to be approximately $38.8 million. Alternative C is expected to generate an annual total output of approximately $23.5 million within the County (**Table 4.7-2**). Direct output is estimated to total approximately $16.6 million. Indirect and induced outputs would total approximately $1.5 million and $5.4 million respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County.

Operation of Alternative C would generate increased revenues for a variety of businesses in the County as a result of increased economic activities. Output received by County businesses would in turn increase their spending and demand for labor, thereby further stimulating the local economy. This would be considered a beneficial impact.

SUBSTITUTION EFFECTS

For reasons as described under Alternative A, Alternative C would have limited potential for substitution effects to occur. Additionally, if substitution were to occur, some of the effects would be counteracted by the local economic activity generated by patrons of the development within the local environment. Specifically, as the development would draw non-residents to the area, the associated increase in new visitor demand for off-site entertainment venues, restaurants, and bars would make up for some area residents choosing to visit Alternative C rather than other local establishments. Given the current population of the City, it is not anticipated that significant quantifiable substitution effects would occur under Alternative C.

TAX REVENUES

Alternative C would result in a variety of fiscal impacts. Similar to Alternative A, under Alternative C the Tribe would not pay corporate income taxes on revenue or property taxes on tribal land. In addition, Alternative C would increase demand for public services, resulting in increased costs for local governments to provide these services. As described under Alternative A, the entire taxable value of the parcels, or approximately $20,192.02 in annual property tax, would be lost to the County's property tax rolls. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative C. With the anticipated increase in taxes resulting from the operation of

Alternative C, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

For Alternative C, construction activities would generate one-time tax revenues, while operational activities would generate annual revenues to the federal, state, Skagit County, and local governments. Construction would result in an estimated $462,790 in federal tax revenues, and $378,673 in state/County/local government tax revenues. Operation of Alternative C would result in an estimated $490,356 in federal tax revenues and $444,824 in state/County/local government tax revenues (**Table 4.7-3**) from indirect and induced taxes. Actual annual tax revenues generated by the operation of Alternative C may be greater than those indicated above as direct tax revenue is not accounted for in the estimates. The generation of net revenues to governments is considered a beneficial effect.

SUMMARY OF ECONOMIC EFFECTS

Construction and operation of the Alternative C would generate significant economic output for a variety of businesses in Skagit County. Additionally, Alternative C would generate substantial tax revenues for state, County, and local governments. Overall, Alternative C would result in a beneficial impact to the Skagit County economy.

EMPLOYMENT

Investment in construction and operational activities would generate substantial direct employment opportunities and wages, as well as indirect and induced employment opportunities and wages. The IMPLAN model was used to estimate employment opportunities generated by Alternative C; resulting estimates are shown in **Tables 4.7-4** and **4.7-6**.

Construction

Under Alternative C, investment in construction activities would generate a one-time total of approximately 174 employment positions within the County during the construction phase (**Table 4.7-4**). Indirect and induced employment opportunities would result in approximately 17 and 41 employment opportunities, respectively.

Under Alternative C, investment in construction activities would generate one-time total wages of approximately $7.8 million within the County (**Table 4.7-4**). Direct wages would total approximately $6.1 million. Indirect and induced wages would total approximately $547,790 and $1.1 million, respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County. The generation of employment and wages during the construction phase is a beneficial effect of Alternative C.

Operation

As calculated through IMPLAN, operation activities associated with Alternative C would generate an estimated 617 employment opportunities captured within Skagit County (**Table 4.7-6**). Direct employment impacts would total approximately 553 job opportunities. Indirect and induced employment opportunities would total approximately 13 and 50 positions, respectively. Indirect and induced employment opportunities would be distributed among a variety of different industries and businesses throughout the County.

Investment in operational activities associated with Alternative C would generate annual total wages of approximately $6.3 million within the County (**Table 4.7-6**). Direct wages would total approximately $4.6 million. Indirect and induced wages would total approximately $347,754 and $1.4 million, respectively. Indirect and induced output would be distributed among a variety of different industries and businesses throughout the County. The generation of employment and wages during the operation phase is a beneficial effect of Alternative C.

Summary of Employment Effects

Construction and operation of Alternative C would generate substantial temporary and ongoing employment opportunities and wages in the County. This would result in employment and wages for persons previously unemployed, increasing the ability of the population to provide themselves with health and safety services and contributing to the alleviation of poverty among lower income households. This is a beneficial effect.

HOUSING

The 2014 County housing market as discussed under Alternative A would fulfill the demands for housing under Alternative C. This impact would be comparable to Alternative A. Alternative C would not result in significant adverse effects to the housing market.

SOCIAL EFFECTS

Alternative C would not result in impacts to pathological or problem gambling since a casino would not be developed under this alternative. Social impacts to crime from Alternative C would be comparable to Alternative A. Alternative C would not result in significant adverse impacts to social effects.

COMMUNITY IMPACTS

Schools

Effects to schools would be similar to those described under Alternative A. This would be considered a less than significant impact. No mitigation is required.

Libraries and Parks

Effects to parks and libraries would be similar to those described under Alternative A, and therefore less than significant. No mitigation is required.

ENVIRONMENTAL JUSTICE: MINORITY AND LOW-INCOME COMMUNITIES

No minority or low-income communities were identified in the vicinity of the March's Point site. The beneficial effects to the Samish Indian Nation under Alternative C would be less than those described for Alternative A because the revenues accruing to the Tribe would be less. Operating a retail facility on the March's Point site would not compete with the nearby Swinomish Northern Lights Casino and Alternative C would not adversely affect the Swinomish Tribe. As such, Alternative C would not result in significant adverse effects to minority or low-income communities.

4.7.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

ECONOMIC EFFECTS

The size and scope of the project under Alternative D would be identical to that described under Alternative A. As such, the construction and operation impacts under Alternative D would be identical to those identified for Alternative A, with the exception of anticipated property tax impacts since Alternative D would be located on a different site.

Property Tax Impact

Alternative D would be located on portions of County tax parcels P33269, P33271, and P33272; portions of parcels P33269 and P33272 located east of the Tommy Thompson Trial would be not used for the project and would remain in fee ownership. Additionally, portions of tax parcel P33271 not needed for the project would continue to be used for RV parking and remain in fee ownership. According to the Skagit County Assessor's Office, the total 2011 annual property tax for the entirety of these parcels was $27,496. Alternative D would not result in the entire area of the parcels at the Flats site to be transferred into trust status for the Tribe. Therefore, less than the entire taxable value of the parcels would be lost and the fiscal impacts would be less than $27,496. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative D, as described under Alternative A. With the anticipated increase in taxes resulting from the operation of Alternative D, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

4.7.5 ALTERNATIVE E – NO ACTION

Under the No Action/No Development Alternative, none of the four development alternatives (Alternatives A, B, C, or D) considered within the EIS would be implemented. The No Action/No Development Alternative assumes that existing uses on the project sites would not change in the near

term. Under this alternative, the BIA would not take any actions in furtherance of their obligation to promote tribal self-determination and economic development. None of the potentially beneficial or adverse effects identified for Alternatives A through D would occur.

4.8 TRANSPORTATION/CIRCULATION

This section identifies the potential direct effects to transportation and circulation that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental existing baseline presented in **Section 3.8**. Cumulative effects are identified in **Section 4.15**. Indirect effects are identified in **Section 4.14**. Measures to avoid and, if necessary, mitigate for adverse effects are presented in **Section 5.2.7**.

ASSESSMENT CRITERIA

The potential for adverse effects as a result of project-related traffic was determined based on acceptable Level of Service (LOS) standards determined by the appropriate jurisdictional agency. LOS standards within the City of Anacortes (City) are LOS D on State Route 20 (SR-20), and all principal arterials and Central Business District streets; and LOS C on minor arterials, collector streets and local roadways.

4.8.1 ANALYSIS METHODOLOGY

The project would result in the addition of vehicle traffic to local intersections. A traffic impact study (TIS) was prepared for Alternatives A, B, C, and D (TENW, 2011). The TIS is provided in **Appendix D**. This section incorporates the results of the TIS and describes the number of trips that would be generated by each alternative and any potential adverse effects that would occur to area intersections within the designated study area. Traffic effects resulting from Alternatives A, B, C, and D were analyzed using trip generation rates derived from other Indian casino traffic studies and the International Traffic Engineer's *Trip Generation Manual* 8th Edition, 2008.

STUDY AREA

To assess changes in traffic conditions, intersections were evaluated for each project alternative. Detailed descriptions of study intersections for the project alternatives are included in **Section 3.8** and **Appendix D**.

PEAK HOUR

Traffic conditions were assessed for the afternoon (PM) peak hour conditions based on a methodology consistent with the Washington State Department of Transportation (WSDOT) standards. The PM peak hour was selected for modeling since it is generally the worst case condition both in terms of existing traffic volumes on the network and the highest trip generation from the proposed project alternatives. Intersection PM peak hour turning movements were counted at each existing study intersection in August 2011(**Appendix D**). Traffic counts were collected from 3:00 PM to 6:00 PM. The highest traffic volume hour was utilized to determine the peak hour, which varied from intersection to intersection.

2013 BASELINE CONDITIONS

To assess project related impacts, future baseline traffic conditions were estimated for the year 2013, which corresponds to the timing of buildout of the project alternatives. Baseline traffic conditions were estimated based on a two percent growth rate and by adding projected traffic from approved and/or reasonably foreseeable projects to existing traffic volumes.

Table 4.8-1 summarizes 2013 baseline traffic conditions at the March's Point site during PM peak hour at each of the study intersections. As shown in **Table 4.8-1**, all study intersections would operate acceptable under 2013 without project conditions.

TABLE 4.8-1
2013 BASELINE CONDITIONS- MARCH'S POINT SITE

Intersections	Traffic Control	2013 PM Peak Traffic	
		Delay	LOS
SR-20/Thompson Road	S	14	B
SR-20/Reservation Road	S	15	B
Summit Park Road/Thompson Road/Project Site Driveway	U	EB – 9	A
		NB Left – 7	A
Stevenson Road/Thompson Road	U	WB – 9	A
		NB Left – 7	A
Stevenson Road/Reservation Road	U	EB – 10	B
		SB Left – 8	A

Note: U = unsignalized; S = signalized.
Source: TENW, 2011, (**Appendix D**).

Table 4.8-2 summarizes 2013 baseline traffic conditions at the Flats site during PM peak hour at each of the study intersections.

4.8.2 ALTERNATIVE A – PROPOSED PROJECT

SITE ACCESS

Access to the March's Point site will be provided by 4 driveways, three along Stevenson Road and one along Thompson Road across from Summit Park Drive (Figure 3 in the TIS, **Appendix D**). Improvements to these access intersections to manage safe ingress and egress of traffic at the project site have been recommended as a result of the TIS (**Appendix D**) and are included as mitigation in **Section 5.2.7**.

CONSTRUCTION TRAFFIC

Construction of Alternative A would require truck trips for delivery of equipment and material and daily construction workers trips. Traffic impacts resulting from the construction of Alternative A would be

temporary and intermittent in nature and would generally occur during off-peak traffic hours (5 AM to 6 AM and 10 AM to 4 PM). Construction activity impacts would be concentrated on Thompson Road and SR-20 in the immediate vicinity of the March's Point site, and would include temporary traffic delays due to slower moving construction trucks and the increase in worker vehicles on area roadways.

TABLE 4.8-2
2013 BASELINE CONDITIONS – FLATS SITE

Intersections	Traffic Control	2013 PM Peak Traffic	
		Delay	**LOS**
SR-20 Spur/R Avenue	S	37	D
SR-20/SR-20 Spur	S	43	D
SR-20 Spur/Fidalgo Bay Road	U	**EB – 91**	**F**
		WB – 84	**F**
		NB Left – 11	B
		SB Left – 11	B
SR-20 Spur WB Exist/Fidalgo Bay Road	U	WB -9	A
Weaverling Road/Fidalgo Bay Road	U	WB – 9	A
		SB Left – 7	A
34th Street/R Avenue	U	EB – 25	C
		WB – 23	C
		NB Left – 9	A
		SB Left – 9	A
30th Street/R Avenue	U	EB – 19	C
		WB – 22	C
		NB Left -9	A
		SB Left – 9	A

Note: U = unsignalized; S = signalized; **Bold** = unacceptable LOS.
Source: TENW, 2011, (**Appendix D**).

Daily construction trips are estimated to be approximately 131 peak hour trips (refer to **Section 4.11** for estimated peak hour construction trips). Peak hour construction trips include construction worker trips and material delivery and equipment delivery. Traffic generated by construction of Alternative A would be 55 percent of operational traffic. Traffic due to construction would be temporary, intermittent, and would generally occur outside the peak hour. Because construction traffic would be temporary, significantly less than operational traffic, and would occur outside of the peak hour, significant adverse effects would not occur.

TRIP GENERATION RATES

The PM peak hour trip generation was calculated for Alternative A. Vehicle trip generation rates for the proposed casino were estimated using surveys from similar facilities in Washington, Arizona, and

California. Average trip generation rates were determined based on total size of five facilities (TENW, 2011). As shown in **Appendix D**, trip generation rates were found to be 52.5 during the weekday daily, 62.6 during the weekend daily, 4.1 during the weekday p.m. peak hour, and 4.7 during the weekend peak hour. The projected vehicle trip generation resulting from Alternative A is shown in **Table 4.8-3**.

TABLE 4.8-3
ALTERNATIVE A PEAK HOUR TRIP GENERATION

Land Use	Size	Weekday				Weekend	
		P.M Peak Hour			Daily	Peak	Daily
		Enter	Exit	Total	Trips	Hour	
Casino	50 ksf	122	84	206	2,600	237	3,100

Note: ksf = thousand square feet.
Source: TENW, 2011, (**Appendix D**).

TRIP DISTRIBUTION

The trip distribution assumed for Alternative A is based on location of the project, type of the project, density of development surrounding the March's Point site, existing transportation facilities, existing traffic volumes and patterns on adjacent and nearby roadways, and professional traffic engineering judgment. Traffic to and from the March's Point site is expected to be distributed in the following manner (refer to Figure 10 of the TIS, **Appendix D**):

March's Point Site

- 52 percent West via SR-20 and Summit Park Road,
- 35 percent East via SR-20,
- 5 percent North via Bartholomew Road, and
- 8 percent South via Reservation Road and Thompson Road.

TRAFFIC CONDITIONS WITH ALTERNATIVE A

To assess the impacts of the project on transportation facilities in the study area, the projected number of trips generated by Alternative A was added to 2013 baseline traffic volumes (refer to **Section 4.8.1**).

Table 4.8-4 shows the PM peak hour intersection delay and LOS at each of the study intersections under baseline with Alternative A traffic conditions. PM peak hour turning volumes at each of the study intersections under baseline with Alternative A traffic conditions are provided within the TIS (**Appendix D**).

All intersection would operate at an acceptable LOS D or better during the PM peak hour in 2013 with the addition of Alternative A traffic. Therefore, Alternative A would have a less than significant effect on traffic and circulation.

TABLE 4.8-4
2013 BASELINE WITH ALTERNATIVE A INTERSECTION LOS

INTERSECTION	2013 with Alternative A	
	Delay	LOS
SR-20 / Thompson Road[1]	17	B
SR-20 / Reservation Road[1]	16	B
Summit Park Road / Thompson Road/Project Site Driveway[2]	EB – 10	A
	WB – 9	A
	NB Left – 8	A
	SB Left – 8	A
Stevenson Road / Thompson Road[2]	WB – 9	A
	NB Left – 7	A
Stevenson Road / Reservation Road[2]	EB – 11	B
	SB Left – 8	A
West Proposed Site Access / Stevenson Road[2]	EB Left – 7	A
	SB – 9	A
Center Proposed Site Access / Stevenson Road[2]	EB Left – 7	A
	SB – 9	A
East Proposed Site Access / Stevenson Road[2]	EB Left – 7	A
	SB – 9	A

Note; **Bold** = unacceptable LOS
[1] Signalized.
[2] Unsignalized.
Source: TENW, 2011; (**Appendix D**).

QUEUING CONDITIONS

The increase in traffic generated by Alternative A would not contribute to unacceptable queue lengths at study intersections, including the SR-20/Thompson Road intersection. A less than significant queuing impact would occur. However to improve queuing lengths and improve traffic flow along Thompson Road, mitigation has been included in **Section 5.2.7** to provide an immediate benefit to the transportation network and add storage capacity to further reduce traffic effects.

TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

Bicycle and pedestrian facilities in the vicinity of the March's Point site are limited. Sidewalk facilities in the vicinity of the March's Point site are limited to facilities north of SR-20 along the Tommy Thompson trail. Because sufficient parking is available onsite and sidewalk and bicycle facilities do not provide direct access to the project site, no significant adverse effects would occur to pedestrian facilities as a result of Alternative A. To further reduce potential impacts to bicycle and pedestrian facilities and to improve connectivity and circulation, mitigation is provided in **Section 5.2.7** regarding increased transit routes in the vicinity of the site.

4.8.3 ALTERNATIVE B – REDUCED INTENSITY

SITE ACCESS

Access to the March's Point site under Alternative B would be similar to Alternative A, although there would only be two access points from Stevenson Road. Refer to **Section 4.8.2**.

CONSTRUCTION TRAFFIC

The temporary traffic generated during construction of Alternative B would be less than Alternative A due to the decreased size of development; therefore, Alternative B would not result in an adverse significant effect to traffic and circulation during construction.

TRIP GENERATION RATES

The projected vehicle trip generation resulting from Alternative B is shown in **Table 4.8-5**. The methodology used to determine trip generation and trip distribution is described above under **Section 4.8.2**.

TABLE 4.8-5
ALTERNATIVE B PEAK HOUR TRIP GENERATION

Land Use	Size	Weekday				Weekend	
		P.M Peak Hour			Daily	Peak	Daily
		Enter	Exit	Total	Trips	Hour	
Casino	35 ksf	85	59	144	1,800	166	2,200

Note: ksf = thousand square feet.
Source: TENW, 2011, (**Appendix D**).

TRIP DISTRIBUTION

The trip distribution for Alternative B is the same as Alternative A. Refer to **Section 4.8.2**.

TRAFFIC CONDITIONS WITH ALTERNATIVE B

To assess the impacts of the project on transportation facilities in the study area, the projected number of trips generated by Alternative B was added to baseline traffic volumes (refer to **Section 4.8.1**). **Table 4.8-6** shows the PM peak hour intersection delay and LOS at each of the study intersections under baseline with Alternative B traffic conditions. PM peak hour turning volumes at each of the study intersections under baseline with Alternative B traffic conditions are provided within the TIS (**Appendix D**).

The increase in traffic generated by Alternative B would not contribute to unacceptable traffic operations at the study intersections. Therefore, Alternative B would not result in an adverse significant effect on traffic and circulation.

TABLE 4.8-6
2013 BASELINE WITH ALTERNATIVE B INTERSECTION LOS

INTERSECTION	2013 with Alternative A	
	Delay	LOS
SR-20 / Thompson Road	15	B
SR-20 / Reservation Road	15	B
Summit Park Road / Thompson Road/Project Site Driveway	EB – 9	A
	WB – 9	A
	NB Left – 8	A
	SB Left – 7	A
Stevenson Road / Thompson Road	WB – 9	A
	NB Left – 7	A
Stevenson Road / Reservation Road	EB – 10	B
	SB Left – 8	A
West Proposed Site Access / Stevenson Road	EB Left – 7	A
	SB – 9	A
Center Proposed Site Access / Stevenson Road	EB Left – 7	A
	SB – 9	A
East Proposed Site Access / Stevenson Road	EB Left – 7	A
	SB – 9	A

Note; **Bold** = unacceptable LOS
Source: TENW, 2011; (**Appendix D**).

QUEUING CONDITIONS

The increase in traffic generated by Alternative B would not contribute to unacceptable queue lengths at study intersections, including the SR-20/Thompson Road intersection. A less than significant queuing impact would occur. However to improve queuing lengths and improve traffic flow along Thompson Road, mitigation has been included in **Section 5.2.7** to provide an immediate benefit to the transportation network and add storage capacity to further reduce traffic effects.

TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

Transit, bicycle, and pedestrian facilities under Alternative B would be the same as Alternative A. Refer to **Section 4.8.2**.

4.8.4 ALTERNATIVE C – RETAIL CENTER

SITE ACCESS

Alternative C site access will be provided by four driveways, three along Stevenson Road and one along Thompson Road across from Summit Park Drive (**Figure 2-4**). Improvements to these access intersections to manage safe ingress and egress of traffic at the March's Point site have been recommended as a result of the TIS (**Appendix D**) and are included as mitigation in **Section 5.2.7**.

CONSTRUCTION TRAFFIC

Construction of Alternative C would require truck trips for delivery of equipment and material and daily construction workers trips. Traffic impacts resulting from the construction of Alternative C construction activities would be temporary and intermittent in nature and would generally occur during off-peak traffic hours (5 AM to 6 AM and 10 AM to 4 PM). Construction activity impacts would be concentrated on Thompson Road and Stevenson Road in the immediate vicinity of the March's Point site, and would include temporary traffic delays due to slower moving construction trucks and the increase in worker vehicles on area roadways.

Construction activities would generate approximately 101 trips during the peak hour. Peak hour construction trips include construction worker trips and material and equipment delivery. Traffic generated by construction of Alternative C would be 21 percent of operational traffic. Traffic due to construction would be temporary, intermittent, and would generally occur outside the peak hour. Because construction traffic would be temporary, significantly less than operational traffic, and would occur outside of the peak hour, significant adverse effects would not occur.

PROJECT TRAFFIC

Trip Generation and Trip Distribution

The projected vehicle trip generation resulting from Alternative C is shown in **Table 4.8-7**. The ITE Manual was used to determine each project component's trip generation rate. The trip distribution under Alternative C would be the same as the trip distribution used in Alternative A, refer to **Section 4.8.2**. The following is the trip distribution for Alternative C:

TABLE 4.8-7
ALTERNATIVE C PEAK HOUR AND DAILY TRIP GENERATION

Proposed Land Use	Size (ksf)	ITE Code	PM Peak Hour			Daily Trips
			Enter	Exit	Total	
Specialty Retail	17	814	20	26	46	750
Free-Standing Discount Store	120	815	300	300	600	6,900
Less Discount Store Pass-by Trips (28%)	--	--	-84	-84	-168	-1,900
Total Trips Generated	**--**	**--**	**236**	**242**	**479**	**5,700**

Source: **Appendix D**

March's Point Site

- 45 percent West via SR-20 and Summit Park Road,
- 40 percent East via SR-20,
- 7 percent North via Bartholomew Road, and

- 8 percent South via Reservation Road and Thompson Road.

TRIP REDUCTION

In accordance with the ITE Trip Generation Manual the following pass-by trip reduction was used for Alternative C:

- Discount Store – 28 percent

TRAFFIC CONDITIONS WITH ALTERNATIVE C

To assess the impacts of the project on transportation facilities in the study area, the projected number of trips generated by Alternative C was added to 2013 baseline traffic volumes (refer to **Section 4.8.1**). **Table 4.8-8** shows the PM peak hour intersection delay and LOS at each of the study intersections under baseline with Alternative C traffic conditions. PM peak hour turning volumes at each of the study intersections under baseline with Alternative C traffic conditions are provided within the TIS (**Appendix D**).

TABLE 4.8-8
2013 BASELINE WITH ALTERNATIVE C INTERSECTION LOS

INTERSECTION	2013 with Alternative A	
	Delay	LOS
SR-20 / Thompson Road	36	D
SR-20 / Reservation Road	16	B
Summit Park Road / Thompson Road/Project Site Driveway	18	C
	15	C
	8	A
	8	A
Stevenson Road / Thompson Road	10	A
	8	A
Stevenson Road / Reservation Road	11	B
	8	A
West Proposed Site Access / Stevenson Road	8	A
	10	A
Center Proposed Site Access / Stevenson Road	8	A
	9	A
East Proposed Site Access / Stevenson Road	8	A
	10	A

Note; **Bold** = unacceptable LOS
Source: TENW, 2011; (**Appendix D**).

All intersection would operate at an acceptable LOS D or better during the PM peak hour in 2013 with the addition of Alternative C traffic. Therefore, Alternative C would have a less than significant effect on traffic and circulation.

QUEUING CONDITIONS

The increase in traffic generated by Alternative C would contribute to unacceptable queue lengths along Thompson Road due to traffic at the SR-20/Thompson Road intersection. A potentially significant

queuing impact would occur. To improve queuing lengths and improve traffic flow along Thompson Road, a mitigation measure has been included in **Section 5.2.7**. This mitigation would reduce queuing impacts to a less than significant level.

TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

Impacts to bicycle and pedestrian facilities in the vicinity of the March's Point site under Alternative C would be the same as Alternative A. Refer to **Section 4.8.2**.

4.8.5 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

SITE ACCESS

Access to the Flats site would be provided via two driveways located along Fidalgo Bay Road. Two internal roadways would provide connection and access to the adjacent Fidalgo Bay RV property. Improvements to these access intersections to manage safe ingress and egress of traffic to Fidalgo Bay Road have been recommended as a result of the TIS (**Appendix D**) and are included as mitigation in **Section 5.2.7**.

CONSTRUCTION TRAFFIC

Construction of Alternative D would require truck trips for delivery of equipment and material and daily construction workers trips. Traffic impacts resulting from the construction of Alternative D would be temporary and intermittent in nature and would generally occur during off-peak traffic hours (5 AM to 6 AM and 10 AM to 4 PM). Construction activity impacts would be concentrated on Fidalgo Bay Road and the immediate vicinity of the Flats site, and would include temporary traffic delays due to slower moving construction trucks and the increase in worker vehicles on area roadways.

Daily construction trips are estimated to be approximately 131 peak hour trips (refer to **Section 4.11** for estimated peak hour construction trips). Peak hour construction trips include construction worker trips and material delivery and equipment delivery. Traffic generated by construction of Alternative D would be 55 percent of operational traffic. Traffic due to construction would be temporary, intermittent, and would generally occur outside the peak hour. Because construction traffic would be temporary, significantly less than operational traffic, and would occur outside of the peak hour, significant adverse effects would not occur.

TRIP GENERATION RATES

The PM peak hour trip generation and trip distribution for Alternative D is the same as Alternative A, refer to **Section 4.8.2**.

TRAFFIC CONDITIONS WITH ALTERNATIVE D

To assess the impacts of the project on transportation facilities in the study area, the projected number of trips generated by Alternative D was added to 2013 baseline traffic volumes (refer to **Section 4.8.1**).

Table 4.8-9 shows the PM peak hour intersection delay and LOS at each of the study intersections under baseline with Alternative D traffic conditions. PM peak hour turning volumes at each of the study intersections under baseline with Alternative D traffic conditions are provided within the TIS (**Appendix D**).

TABLE 4.8-9
2013 BASELINE CONDITIONS – FLATS SITE

Intersections	Traffic Control	2013 PM Peak Traffic	
		Delay	LOS
SR-20 Spur/R Avenue	S	37	D
SR-20/SR-20 Spur	S	43	D
SR-20 Spur/Fidalgo Bay Road	U	**EB – 91**	**F**
		WB – 84	**F**
		NB Left – 11	B
		SB Left – 11	B
SR-20 Spur WB Exist/Fidalgo Bay Road	U	WB -9	A
Weaverling Road/Fidalgo Bay Road	U	WB – 9	A
		SB Left – 7	A
34th Street/R Avenue	U	**EB – 45**	**E**
		WB – 40	**E**
		NB Left – 9	A
		SB Left – 9	A
30th Street/R Avenue	U	EB – 19	C
		WB – 22	C
		NB Left -9	A
		SB Left – 9	A

Note: U = unsignalized; S = signalized; **Bold** = unacceptable LOS.
Source: TENW, 2011, (**Appendix D**).

All intersections, with the exception of the SR-20 Spur/Fidalgo Bay Road and the 34th Street/R Avenue intersections would operate at an acceptable LOS D or better during the PM peak hour in 2013 with the addition of Alternative D traffic. A potentially significant impact would occur. Mitigation has been provided in **Section 5.2.7** to reduce the impacts to less than significant levels.

QUEUING CONDITIONS

The increase in traffic generated by Alternative D would not contribute to unacceptable queue lengths at study intersections. A less than significant queuing impact would occur.

TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

Impacts to bicycle and pedestrian facilities in the vicinity of the Flats site under Alternative D would not occur, because sufficient parking is available onsite and sidewalk and bicycle facilities currently provide

direct access to the Flats site via the Tommy Thompson Trail. No significant adverse effects would occur to pedestrian facilities as a result of Alternative D.

No public transit systems operate in the immediate vicinity of the Flats site. Therefore, increased ridership and lack of direct transit access could create an adverse impact. Mitigation has been provided in **Section 5.8** to reduce this impact.

4.8.6 ALTERNATIVE E – NO ACTION

The traffic conditions under the No Action Alternative would continue as described in **Section 4.8.1** for the baseline without Project conditions. No project related traffic would be added to the local intersections; therefore, no effects would occur under this alternative.

4.9 LAND USE

This section identifies the direct effects to land use that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.9**. Cumulative effects are identified in **Section 4.15**. Indirect effects associated with off-site construction and growth-inducement are identified in **Section 4.14**.

ASSESSMENT CRITERIA

Adverse impacts would occur if development of a proposed alternative would be incompatible with adjacent designated land uses, including agriculture, thereby impeding effective local and regional planning efforts.

4.9.1 ALTERNATIVE A – PROPOSED PROJECT

LAND USE

Land Use Jurisdiction

The National Environmental Policy Act (NEPA) requires an assessment of the potential effects of a proposed federal action on adopted land use plans, as well as plans that have been formally proposed and are being actively pursued by officials of the jurisdiction. Accordingly, the consistency of the Proposed Action with adopted and proposed land use regulations is assessed below.

At this time, the March's Point site is currently under jurisdiction of the City; once the Federal government acquires the property in trust for the Tribe, the parcels would not be subject to local land use regulations. Only tribal land use regulations, promulgated by the Tribal Council, are applicable on trust lands. However, the Tribal Government desires to work cooperatively with local and State authorities on matters related to land use.

Consistency with the City of Anacortes Comprehensive Plan

A gaming facility is not listed as a permitted use for the Light Manufacturing 1 (LM1) land use designation in the goals and policies described in the City's Comprehensive Plan; however, the proposed development on the March's Point site is compatible with the City's goals and policies relating to the urban growth area (City of Anacortes, 2010). **Table 4.9-1** discusses the consistency of Alternative A with respect to the relevant land use goals and policies outlined in the City Comprehensive Plan.

TABLE 4.9-1
PROPOSED PROJECT AND ALTERNATIVES
CITY OF ANACORTES COMPREHENSIVE PLAN CONSISTENCY

Comprehensive Plan Policies		Discussion
Goal	**Summary**	
City Goals and Policies for Manufacturing Areas		
1	Heavy manufacturing development should be contained in those general areas presently designated for Heavy Manufacturing in the existing zone ordinance. Manufacturing is defined as those industrial or manufacturing activities which are engages in the production of articles or a product from raw or prepared materials by giving them new forms and qualities. Heavy manufacturing is manufacturing which in the production process creates a potential hazard or a nuisance to other uses. **Policies:** • Encourage coordination and cooperate with other entities within the County which are involved in manufacturing development. Where appropriate, follow a policy of utilizing Planned Manufacturing District classifications in the Zoning Ordinance which would allow for development of Light Manufacturing uses in a manner compatible with surrounding uses.	Once property is taken into federal trust, only federal and Tribal land use regulations are applicable on trust lands. The development of the gaming facility would be inconsistent with the heavy manufacturing zoning designation. However, as discussed in **Section 1.5,** the Tribe intends to adopt and enforce all ordinances, standards and requirements of the City until such time that the Tribe adopts its own standards of environmental protection, building code standards, fire code standards, and safety standards that meet or exceed City standards (**Appendix K**),
3	Encourage multiple business manufacturing development, providing a more stable economic base through diversity, as opposed to a single large manufacturing industry. Policies: • Through land use designations and performance standards, provide opportunity for mutual benefits for various businesses which co-locate. • Allow mixed use residential/light manufacturing development in some zones where workers (and their families) can live and work in the same facility as long as provision is made for compatibility among uses.	See discussion under City Goal 1 above.

4	Develop policies for manufacturing areas which will provide the City and the developers with consistent expectations with regard to performance standards and contract obligations. Policies: • Provide manufacturing development performance standards in the zoning ordinance for impacts such as noise, glare, emissions, and periodically review such standards and their application to assure clarity and consistency in City expectations and enforcement. • Manufacturing activities and developments should be designed and operated to minimize adverse impacts to surrounding areas and the community as a whole. The shipment or movement of hazardous and nuisance materials within or through the City should be managed by the City.	Although inconsistent with the heavy manufacturing zoning designation, the project alternatives located on the March's Point site would include design elements to reduce impacts from on-site noise, glare, and air emissions, to surrounding land uses. See discussion under City Goal 1 regarding adoption of City ordinances, standards and requirement.
Goals and Policies for Commercial Marine Areas		
1	Preserve the CM areas for commercial enterprise where orientation to the waterfront and waterway areas is of prime importance to marine, commercial and tourist activities. CM areas include all CM zones as set out in the Zoning Ordinance whether designated CM, CM1, or CM2. **Policies:** • Encourage commercial activities that are environmentally clean and labor intensive. • Encourage City and Port cooperation in the development of CM areas. • Encourage retail and commercial enterprise that will enhance the marine-oriented and aesthetic qualities of the waterfront. Allow residential uses in certain CM zones through the conditional use process only if a specific project is determined not to displace or diminish the underlying purpose of the zone.	Although inconsistent with the commercial marine zoning designation, the project alternative located on the Flats site would include a tourism based facility. See discussion under City Goal 1 regarding adoption of City ordinances, standards and requirement.
2	Require a public access element in all development plans abutting shoreline where appropriate. **Policies:** • Public access and pedestrian access to the shoreline shall be required. • CM areas that are unplatted should be encouraged to provide public access areas such as fishing piers, waterfront roads, street-end parks, view parks, public areas for beach walking, transient moorage. Conditional Use permits should require the same public access conditions as those required of retail and commercial development.	Shoreline access along Tommy Thompson Trial to the east of the Flats site will not be impacted during construction or operation.

3	The zoning ordinance for Commercial Marine should strongly encourage marine, commercial and tourist developments that are water and waterview-dependent, destination oriented, and enhance the marine values inherent in the district such as physical and visual access to waterways and shoreline. **Policies:** • Public access should be included in all development plans where economically feasible and safe. Unregulated public access is access for all persons at all times, regulated public access is access for all persons at all times; regulated public access is access for all persons paying fee for use of facilities such as restaurants, shops, motels, or access which is limited by time, location and activities. • Encourage marinas with boat and marine equipment as well as services. • Encourage boat repair facilities. • Encourage boatel, motel and hotel accommodations to enhance the marine-oriented activities. • Encourage recreational equipment rentals and sales. Encourage specialty shops and eating establishments. Encourage City and Port cooperation in the development of transient moorage for moderately sized cruise ships; moorage buoys should be included in appropriate locations.	See discussion under City Goal 1 regarding adoption of City ordinances, standards and requirement.
4	The zoning ordinance for Commercial Marine 1 may allow limited residential development, provided the residential development is integrated with and contributes to marine, commercial and tourist developments that are water and waterview-dependent, destination oriented, and that enhance the marine values inherent in the district. **Policies:** • Any residential development must be consistent with the marine character of the waterfront. • Residential development should be limited to areas above the first floor and be coordinated in design and scale with the overall mixed use development in order to preserve the underlying CM purpose. • Encourage any residential development to provide public amenities such as view corridors, public plazas, and walkways in coordination with the overall marine, commercial and tourist development. • Encourage provision of landscape features for any residential development and coordination between the landscaping for the residential development and the overall marine, commercial and tourist development. • Support the development of public access to Fidalgo Bay and linkages between the Railroad Corridor/Linear Park and Cap Sante Marine/Harbor by offering incentives which would attract private investment. • Any project shall be economically advantageous in the long run to the City.	No residential units are proposed.

5	Performance standards and regulatory incentives should be developed for the CM areas to promote desirable development and public amenities. **Policies:** • Assure economic benefit to the City, • Encourage preservation of unique and/or historical features and marine views. • Provide adequate on-site parking that is, to the maximum extent feasible, landward of the principle structure(s) away from the shoreline or in a parking garage, including underground if possible. • Assure adequate vehicle and pedestrian circulation and access to and from the areas. • CM area should provide adequate buffer areas and/or sight screening where appropriate. • In the CM1 zone, the City may allow limited residential development which may consist of multi-family dwellings, provided the residential development is integrated with a mixed-use marine, commercial and tourist development through conditional use and planned unit development through conditional use and planned unit development processes, perhaps with a development agreement. • Residential development in the CM Zone shall be by conditional use, not exceed R4A densities (18 units per acre), and be an integral part of a mixed use neighborhood; vacation rental type of arrangements are encouraged. Tidelands may not be included for purpose of density calculations. Affordable housing provision(s) shall be part of any such residential development, either on-site or off-site. • Development in Commercial Marine areas should be designed to minimize adverse impacts to the marine habitats, shorelines and surrounding areas. • Development approved through the conditional use process may not cover more than 50% of the upland area with buildings. • To preserve the underlying commercial marine purpose of CM, CM1 and CM2 zones, all residential units shall be located above the ground floor, with the ground floor reserved for non-residential commercial marine uses.	See discussion under City Goal 1 regarding adoption of City ordinances, standards and requirement.
6	Review other areas in the City that may be appropriate for the CM designation, giving consideration to existing land uses.	NA

General City Goals		
2	Improve the image of Anacortes as a marine oriented City by encouraging, protecting and enhancing marine views from public places, public access (particularly along the waterfront), and marine habitats and resources by encouraging marine water-dependent and water-related businesses and activities.	Although inconsistent with the zoning designations, the project alternatives would include a tourism based facility. See discussion above regarding adoption of City ordinances, standards and requirement.
3	Promote compatible land uses and improve visual appearance in each and every zoning district.	See discussion under City Goal 1 regarding adoption of City ordinances
4	Keep a reasonable balance between housing, manufacturing, commercial/retail, open space and other land uses within the community.	See discussion under City Goal 1 regarding adoption of City ordinances
5	Encourage the development of a balanced and adequate employment and revenue base necessary for provision of needed services.	See discussion under City Goal 1 regarding adoption of City ordinances
7	There shall be periodic and regular review of the City Comprehensive Plan and Zoning Ordinance; see Appendix E of the City Comprehensive Land Use Plan. Additionally, the City Council and/or the Planning Commission may from time to time initiate Comprehensive Plan and Zoning Ordinance Amendments.	See discussion under City Goal 1 regarding adoption of City ordinances, standards and requirement.
Source: City of Anacortes, 2010 and Discussion by AES, 2013		

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Consistency with the City of Anacortes Land Use Designations

Alternative A would involve the development of a gaming facility and ancillary parking facilities on 11.41 acres at the March's Point site. The site is currently undeveloped and zoned (LM1). The City Comprehensive Plan 2010 states that there are 300 acres of commercial/industrial land available in the area south of March's Point, most of which is within the city limits with full urban services available. While gaming and ancillary parking facilities are not listed as permitted uses for the LM1 land use designation, they are compatible with surrounding land uses along the State Route 20 (SR-20) corridor (see **Land Use Compatibility** section below). The March's Point site is within the urban growth area of the City designated for urban development.

Coastal Zone Management Act

The March's Point site is not located within lands designated under the Coastal Zone Management Act (CZMA). Therefore, no regulatory requirements or associated impacts to the coastal zone would occur under Alternative A. Project best management practices (BMPs) and mitigation measures provided in **Sections 5.2.1**, **5.2.2**, **5.2.4**, and **5.2.10** would be implemented to avoid or minimize the potential for impacts to the shoreline environment under Alternative A.

Land Use Compatibility

Proposed land uses under Alternative A include the development of a gaming facility and restaurant. The facilities would occupy the eastern portion of the March's Point site with surface parking surrounding the casino structure along Stevenson Road to the south. Although not consistent with the existing City zoning designation (LM1), the Proposed Project would be compatible with surrounding land uses, as surrounding areas along SR-20 are already developed with industrial and commercial facilities. An existing tribal casino is additionally located along SR-20 within the Swinomish Reservation, approximately 2 miles east in an area directly adjacent to Heavy and Light Manufacturing zoning designations.

Impacts resulting from construction/development of Alternative A may include, but are not limited to, air quality and noise effects from construction and operational activities (**Sections 4.4** and **4.11** respectively); traffic congestion (**Section 4.8**); and alteration of the visual resources and aesthetics of the surrounding neighborhood (**Section 4.13**). Implementation of mitigation measures identified in **Sections 5.2.3**, **5.2.7**, **5.2.9**, and **5.2.11** would reduce impacts to less than significant levels. Because the area has been planned for increased urbanization, long-term incompatibility effects with adjacent land uses are not expected. A less than significant impact to land use would occur under Alternative A.

AGRICULTURE

The Proposed Project would convert undeveloped land that has been designated for urban development by the City. There are no existing farming operations or infrastructure that would support cultivation on or

in the immediate vicinity of the March's Point site. Form AD-1006, the Farmland Conversion Impact Rating Form, was also used to determine whether the site is farmland subject to the Federal Farmland Policy Protection Act (FPPA). Sites receiving a total score of less than 160 need not be given further consideration; the March's Point site received a total score of 83 out of a total possible score of 260 based upon these criteria (**Appendix F**). According to United States Department of Agriculture (USDA) recommended thresholds, the site should not be considered for farmland protection. Conversion of this potential agricultural land would not result in a significant impact to agricultural resources.

4.9.2 ALTERNATIVE B – REDUCED INTENSITY

LAND USE

Land Use Jurisdiction

Alternative B would bring the same site (March's Point site) into trust as Alternative A discussed above and the jurisdictional effects would be the same as Alternative A. Accordingly, City land use regulations and project effects are the same as those discussed above.

Consistency with City Comprehensive Growth Management Plan

Consistency with the City Comprehensive Plan would be the same as discussed for Alternative A above. **Table 4.9-1** above discusses the land use consistency of the Proposed Project and Alternatives with respect to the relevant goals and policies outlined within the Comprehensive Plan.

Consistency with the City of Anacortes Land Use Designations

Development of Alternative B would be similar to Alternative A, but on a reduced scale. Alternative B would entail placing the property into trust and developing a gaming facility on the site. Alternative B is within the urban growth area of the City and is designated for urban development. Consistency with the City of Anacortes land use designations would be the same as discussed for Alternative A.

Land Use Compatibility

Developing the smaller casino would have similar effects on land use compatibility as discussed above for Alternative A, but to a lesser degree. Alternative B would be developed in the same location as Alternative A and therefore, would be compatible with surrounding land uses and existing developments. Any potential impacts to land use resulting from Alternative B would be less than significant.

Coastal Zone Management Act

The March's Point site is not located within lands designated under the CZMA. Therefore, no regulatory requirements or impacts to the coastal zone would occur under Alternative B. Project BMPs and mitigation measures provided in **Sections 5.2.1**, **5.2.2**, **5.2.4**, and **5.2.10** would be implemented to reduce or remove the potential for impacts to the shoreline environment under Alternative B.

AGRICULTURE

Developing the smaller casino would have the same effects on agriculture as described above for Alternative A. Conversion of this potential agricultural land would not result in a significant impact.

4.9.3 ALTERNATIVE C – RETAIL CENTER

LAND USE

Land Use Jurisdiction

Alternative C would bring the same site (March's Point site) into trust as Alternative A discussed above and the jurisdictional effects would be the same as Alternative A. Accordingly, City land use regulations and project effects are the same as those discussed above.

Consistency with the City of Anacortes Comprehensive Plan

Table 4.9-1 above discusses the land use consistency of Alternative C with respect to the relevant goals and policies outlined within the Comprehensive Plan.

Consistency with the City of Anacortes Land Use Designations

Alternative C would involve developing three separate retail/commercial buildings at the same site proposed for development under Alternatives A and B. These buildings would house various retail-based enterprises. Under the LM1 designation, permitted uses include "retail sales of golf clothing and equipment (when) directly associated with golf courses and driving ranges", "retail floor space existing as of May 1, 1995", "boat sales and services", and "commercial" and "public parking." The specific retail /commercial uses of the proposed buildings have not been determined, and therefore may not be consistent with the permitted uses of the LM1 land use designation. However, if the retail/commercial buildings included enterprises such as boat sales and services, they may be consistent with the LM1designation. The proposed retail/commercial buildings would be compatible with existing land uses given the March's Point site is located within the urban growth area of the City and designated for urban development.

Land Use Compatibility

Developing retail/commercial buildings would not be consistent with the zoning designation; however, it would be compatible with surrounding land uses. Multiple retail and commercial businesses are located adjacent to SR-20 in LM1 designated areas including; Money Saver Mini Storage, Fidalgo Mini Storage Inc., Island RV, Frontier Ford Inc., Circus Drive-In Theater, Bayside Fitness, Blue Cow Carwash, La Barca Mexican Restaurant and others. Impacts resulting from construction/development may include, but are not limited to, air quality and noise effects from construction and operational activities (**Sections 4.4** and **4.11** respectively); congestion on rural roads not sized to accommodate increased traffic (**Section 4.8**); and alterations of the viewsheds and aesthetics of the surrounding neighborhood (**Section 4.13**).

Implementation of mitigation measures identified in **Section 5.2.3**, **5.2.7**, **5.2.9**, and **5.2.11** would reduce potential impacts to less than significant levels. In the long term, the site and adjacent areas to the south and east have been planned for urban development. As the area has been designated for increased urbanization with light manufacturing development, any potential impacts to land use resulting from Alternative C would be less than significant.

Coastal Zone Management Act

The March's Point site is not located within lands designated under the CZMA. Therefore, no regulatory requirements or impacts to the coastal zone would occur under Alternative C. Project BMPs and mitigation measures provided in **Sections 5.2.1**, **5.2.2**, **5.2.4**, and **5.2.10** would be implemented to reduce or remove the potential for impacts to the shoreline environment under Alternative C.

AGRICULTURE

The impacts to agriculture from developing Alternative C would be the same as those described above for Alternative A. According to USDA recommended thresholds, the site should not be considered for farmland protection. Conversion of this potential agricultural land would not result in a significant impact.

4.9.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

LAND USE

Land Use Jurisdiction

Alternative D would bring the Flats site into federal trust. Existing land use jurisdiction would be the same as Alternative A.

Consistency with the City of Anacortes Comprehensive Plan

Table 4.9-1 above discusses the land use consistency of Alternative D with respect to the relevant goals and policies outlined within the Comprehensive Plan.

Consistency with the City of Anacortes Land Use Designations

The Flats site is currently zoned as a "Commercial Marine" (CM) area in the City's Comprehensive Plan and is within the urban growth area of the City designated for urban development. While casino and ancillary parking facilities are not included as permitted uses under the CM land use designation, they would be satisfying the purpose of the designation by contributing a commercial enterprise that would attract tourist activity while also maintaining a marine oriented theme throughout the facilities. Alternative D would be inconsistent with this land use designation; however, it would be compatible with surrounding land uses as described in further detail below.

Land Use Compatibility

Although Alternative D would be constructed adjacent to a residential condominium, developing the casino facility would be compatible with surrounding land uses along the shoreline in the City. Alternative D would provide the public with a marine-oriented commercial attraction, maintain access to the nearby Tommy Thompson Trail, and would provide informal pedestrian access to the waterfront. This would enable the public to enjoy the waterfront on a site that would be developed for recreational purposes, as the CM zoning designation intended.

Impacts resulting from construction/development may include, but are not limited to, noise and air quality effects from construction and operational activities (**Sections 4.4** and **4.11** respectively); congestion on rural roads not sized to accommodate increased traffic (**Section 4.8**); and alterations of the visual resources and aesthetics of the nearby waterfront condominium complex (**Section 4.13**). Implementation of mitigation measures identified in **Section 5.0** would reduce air quality impacts to less than significant levels, but would not be sufficient to reduce operational traffic noise to a less than significant level. As the area has been planned for increased urbanization with commercial development, potential impacts to land use resulting from Alternative D would be less than significant.

Coastal Zone Management Act

The eastern portion of the Flats site is located within CZMA designated shoreline. The casino structure and a majority of the surface parking lot proposed under Alternative D would be outside of the coastal zone on the west side of the Flats site.

As described in **Section 3.9.4**, under the CZMA, the Proposed Action must be carried out in a manner that is consistent to the maximum extent practicable with the enforceable policies of the State of Washington Shoreline Management Act (SMA) and the City's Shoreline Master Program (SMP). The Flats site is located along a stretch of Fidalgo Bay that is assigned the Urban land use designation under the City's SMP. This designation conditionally allows for non-water-oriented development consistent with the proposed commercial and entertainment/recreational land uses included under Alternative D. The enforceable policies of the SMP are reflected in the applicable coastal general plan and zoning designations, which specify the planned land uses and the types of land uses allowed in each zoning district. As described above, Alternative D is generally consistent with the purpose of the existing zoning designation for the site and, with mitigation, is compatible with the surrounding land uses. Mitigation included in **Section 5.2.12** would ensure that Alternative D would be undertaken in a manner that is consistent to the maximum extent practicable with the policies of the SMP in accordance with the CZMA.

AGRICULTURE

Alternative D would convert partially undeveloped land that has been designated for development by the City. The NRCS identifies the Flats site as having loamy sand and xerorthent soils that would not support

prime farmland (NRCS, 2011). There are no existing farming operations on the site or infrastructure that would support cultivation. The Flats site received a total score of 20 out of a total possible score of 260 based upon these criteria (**Appendix F**). According to USDA recommended thresholds, the site should not be considered for farmland protection. Conversion of this land would not result in a significant impact to agricultural resources.

4.9.5 ALTERNATIVE E – NO ACTION

LAND USE

Under this alternative, all current land uses would continue to exist on the alternative project sites. No impact would occur under the No Action Alternative.

AGRICULTURE

The No Action Alternative would not preclude agricultural uses on the project sites.

4.10 PUBLIC SERVICES

This section identifies the potential direct effects to public services that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.10**. Cumulative effects are identified in **Section 4.15**. Indirect effects associated with off-site construction and growth-inducement are identified in **Section 4.14**. Measures to avoid and, if necessary, mitigate for adverse effects are presented in **Section 5.2.9**.

ASSESSMENT CRITERIA

To determine the impact on public services the water supply, wastewater, solid waste, energy, telecommunications, law enforcement, fire protection and emergency medical services, demand for each alternative are considered. An adverse impact would occur if project-related demands on public services would cause an exceedance of system capacities that result in effects to the physical environment.

4.10.1 ALTERNATIVE A – PROPOSED PROJECT

WATER SUPPLY

The Tribe has expressed its intent to contract with the City for water supply and pay the expenses associated with the delivery of expanded service to the March's Point site.

Table 4.10-1 shows the water demand for Alternative A. Based on similar existing casino facilities, wastewater flows typically represent 80 to 85 percent of potable demand. Reductions are due to consumption for irrigation, cooking activities, evaporation, and cooling tower losses. For planning purposes, a 10 percent safety factor is added to these typical water losses to account for worst-case cooling tower operating scenarios and other unknown additional losses. This results in a planning level demand loss of 25 percent, i.e. wastewater is 75 percent of potable water demand.

TABLE 4.10-1
ESTIMATED WATER DEMAND – ALTERNATIVE A

	Alternative A
Wastewater Generated - Average	26,000
Total Average Potable Water Demand	35,000

Note: Conservatively assuming a 25% loss/consumption of potable water; Therefore, average wastewater flow is 75% of potable water demand (26,000/0.75=34,666; Rounded to 35,000
Source: AES, 2011

The estimated average daily water demand for consumption, food preparation, sanitation, and other general water requirements for the casino and related facilities, including water used in the cooling system, is approximately 35,000 gallons per day (gpd). It is estimated that landscaping would require an

additional 5,000 gpd during peak irrigation months. There is an additional requirement of 4,000 gpm for 2 hours of emergency fire flow (City of Anacortes, 2012).

City water facilities presently have a treatment capacity of 42 million gallons per day (mgd). Existing average daily treatment and distribution from the City WTP is approximately 21 mgd (LaBlanc, 2013). At peak demand, the Proposed Project would account for 0.38% of the remaining capacity of the City's water supply system.

Existing City water distribution pipelines in the vicinity of the March's Point site have been sized to facilitate distribution of approximately 55 mgd. Therefore, the distribution pipelines would not require upsizing to meet the Proposed Project demands.

No significant effects to the water supply distribution facilities would occur as a result of Alternative A. However, in the event of a water shortage or increase in demand on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to meet water consumption needs and insufficient fire flows in the case of an emergency. Mitigation measures are provided in **Section 5.2.8** to ensure that an adequate water supply is available for the operation of Alternative A, and for the necessary fire flows. With mitigation measures the impact would be less than significant. Cumulative impacts to the City's water supply sources are discussed in detail in **Section 4.15**. Indirect effects associated with the expansion of the City's water supply infrastructure are discussed in **Section 4.14.2**.

WASTEWATER SERVICE

Connection to the existing City wastewater collection system would occur under Alternative A. Treatment of Alternative A wastewater would occur at the at the existing City wastewater treatment plant (WWTP). The City WWTP facilities meet Washington Department of Ecology (Ecology) and Department of Health (DOH) water quality standards including the Water Reclamation and Reuse Standards and National Pollutant Discharge Elimination System (NPDES) permitting program (NPDES Permit #WA-002025-7). As shown in **Table 4.10-2**, Alternative A would have an estimated average daily flow of 26,000 gallons per day (gpd). Based on this estimate, the peak day design flow is 41,000 gpd. The peak day design flow assumes that the facilities are operating at maximum capacity.

Under Alternative A, collection of wastewater would consist of gravity lines that would transfer wastewater from buildings to the existing City sewer line located under Thompson Road. From there, wastewater would be pumped via existing pipelines beneath the roads to the City WWTP located at 500 T Avenue. Estimated peak capacity for the WWTP is 4.5 mgd, with average daily flows of around 1.92 mgd. From the WWTP, treated wastewater effluent is discharged via existing NPDES permit. Treated effluent would meet water quality guidelines as discussed further in **Section 4.3**, Water Resources.

Under peak day flows, Proposed Project wastewater would account for approximately 2% of the remaining treatment capacity at the City's WWTP.

TABLE 4.10-2
ESTIMATED WASTEWATER FLOWS – ALTERNATIVE A

Area Description	Square Footage	Number of Seats	Flow/Unit	Average Day Flows (gallons per day)	Peak Day Flows (gallons per day)
Gaming Floor	13,200	570	22	12,540	20,190
Restaurant/Lounge	8,720	220	55	12,100	19,481
Casino Support / Administration	7,590	20	10	200	322
Back of House/Employee Area	9,445	40	10	400	644
Misc.	9,045	-	-	-	-
Total	48,000	850	-	26,000	41,000

Notes: [1] Based on similar facilities; [2] Estimated quantity; [3] Rounded to 2 significant digits, [4]Assumes peaking factor of 1.61 times average day flow
Source: AES, 2011

No significant effects to the City wastewater facilities would occur as a result of Alternative A. However, in the event of an increase in demand on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to treat project wastewater flows. Mitigation measures are provided in **Section 5.2.8** to ensure that wastewater collection and treatment services are available for the operation of Alternative A. With mitigation measures the impact would be less than significant. Cumulative impacts to the City's wastewater system are discussed in detail in **Section 4.15**. Indirect effects of project connection are discussed in **Section 4.14.2**.

SOLID WASTE SERVICE

Construction

Construction of the casino under Alternative A would result in a temporary increase in generation of solid waste. Potential solid waste streams from construction would include paper, wood, glass, aluminum and plastics from packing materials; waste lumber; insulation; empty non-hazardous chemical containers; concrete; metal, including steel from welding/cutting operations; and electrical wiring.

Construction waste that cannot be recycled would be collected by the City of Anacortes Solid Waste Division or a private company, and disposed of at the Roosevelt Landfill in Klickitat County, which accepts construction and demolition materials. This impact would be temporary and not significant given that the landfill has an adequate capacity to accommodate the increase in the amount of waste generated by the construction of Alternative A (Klickitat County, 2000). Mitigation measures are presented in

Section 5.2.8 to further reduce the amount of construction and demolition materials disposed of at the landfill and ensure impacts remain less than significant.

Operation

It is anticipated that the Tribe will contract with the City or a private company for solid waste collection service. All waste would be brought to the Skagit County Recycling and Transfer Station (RTS), where it will be sorted, compacted, and then non recyclables would be transported by rail to the Roosevelt Landfill. Based on the generation rates of similar gaming facilities, it is estimated that Alternative A would generate approximately 0.8 tons per day of trash (**Table 4.10-3**). Landscaping and maintenance staff would pick up any trash that is left on the property. Decorative receptacles for trash and recycling would be placed strategically throughout the casino facility to discourage littering. The solid waste from Alternative A would represent approximately 310 tons per year, which is roughly equal to 0.01 percent of the Roosevelt Landfill's annual capacity.

TABLE 4.10-3
ESTIMATED SOLID WASTE DISPOSAL – ALTERNATIVE A

Waste Generation Source	Waste Generation Rate[1]	Units	Value	Total Waste (lb/day)
Casino (other services)	3.12	lb/100 sf/day	38,000	1,200
Restaurant	0.05	lb/sf/day	10,000	500
Total lb/day				**1,700**
Total ton/year				**310**
Source: AES, 2011				

Operation of Alternative A would not result in significant effects on solid waste services. Mitigation measures are presented in **Section 5.2.8** to further reduce the amount of solid waste disposed of at the landfill and ensure impacts remain less than significant.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Construction

Construction on the March's Point site could damage underground utilities, leading to outages and/or serious injury. This impact is potentially significant. Mitigation measures are presented in **Section 5.2.8** to reduce impacts to less than significant.

Operation

Electricity would be obtained from Puget Sound Energy (PSE), which currently provides electricity to the surrounding properties. PSE has the capacity to serve Alternative A through either existing aboveground and/or underground power lines adjacent to the site or a new semi-dedicated line from its substation located on Thompson Road approximately 150 yards west of the southwest corner of the project site. Once an alternative is chosen, PSE, a private service provider, would work with the Tribe to identify the

power facilities needed for each component of the development. Alternative A would not result in significant effects on energy services. Mitigation measures are provided in **Section 5.2.8**, which would further reduce effects with the incorporation of energy efficient design standards and on-site equipment.

Natural gas service would be provided by Cascade Natural Gas (CNG) through a connection to a pipeline approximately 0.5 miles north of the Project Site.

Many private companies provide telephone, internet, and cable services to properties within the vicinity of the March's Point site. Prominent companies which offer these telecommunication services include Comcast, Clear, Wave Broadband, and AT&T. The Tribe would utilize these or similar services. Many of these companies have the technical capacity to supply Alternative A with adequate telecommunication services. Therefore, development of telephone and cable services on the site is not expected to be a significant impact as the Tribe intends to provide their portion of the necessary funding for the installation and operation of services.

Implementation of Alternative A would result in a less than significant impact to electricity, natural gas, and telecommunications services and demand. Nonetheless, mitigation measures have been identified in **Section 5.2.3** and **5.2.8** to further reduce the energy demand of the Proposed Project and ensure adequate services for Alternative A.

PUBLIC HEALTH AND SAFETY

As discussed in **Section 2.2.1**, the Tribe has entered into a Tribal-State Compact, as required by the Indian Gaming Regulatory Act (IGRA), that governs the conduct of Class III gaming activities. The Tribal-State Compact includes requirements pertaining to building codes, fire codes, and food safety. Specifically, the Tribe would comply with or create Tribal ordinances equivalent to the International Building Code (IBC) (updated version of the Uniform Building Code as stated in the Tribal-State Compact) and federal public health standards for food and beverage handling.

Given that the Tribal-State Compact would require compliance with building codes, fire inspections, and food safety, potential impacts to public health and safety from the development of Alternative A would be less than significant.

Law Enforcement

As discussed in **Section 2.2.1**, law enforcement services would be provided by the City of Anacortes Police Department (APD), while prosecution and court and jail services would be provided by the Skagit County Sheriff's Office. A Tribal security force would provide security patrol and monitoring needs of the casino as needed. The Tribe would install security cameras and employ security personnel to provide surveillance of the casino, parking areas, and surrounding grounds. Security guards would patrol the facilities to reduce and prevent criminal and civil incidents. Security guards would carry two-way radios

to request and respond to back up or emergency calls. Tribal security personnel would work cooperatively with the APD and Sheriff's Office. The need for APD or Sheriff's Office assistance would likely be required only in situations where there were a serious threat to life and property and where arrests would be made.

The APD and Sheriff's Office would not need any additional facilities or equipment to meet the increased need for services under Alternative A (Small, Pers. Communication, 2011). However, due to the potential for an increase in APD calls for service during operation of Alternative A and extended hours of operation at the March's Point site, a potentially significant impact could occur. With implementation of the conditions of the service agreement between the Tribe and the City, as discussed in **Section 5.2.8**, payments by the Tribe would compensate the City for costs of impacts associated with increased police services at the March's Point site. Therefore, with mitigation, Alternative A would result in a less than significant effect on public law enforcement services.

Criminal Jurisdiction

In 1963, Washington State assumed partial jurisdiction over certain offenses occurring in Indian country pursuant to Public Law 83-280 (PL 280) (See Wash. Rev. Code Sections 37.12.010-.070 [1964]). As a consequence, the trust acquisition would result in changes in criminal jurisdiction on the March's Point site dependent on whether victims or the accused are Native American. For future criminal matters at the casino consisting of crimes by non-Indians against other non-Indians, the State of Washington would continue to exercise criminal jurisdiction. Accordingly, changes in criminal jurisdiction would not be significant.

Fire Protection and Emergency Medical Services

Construction Effects

Construction may introduce potential sources of fire to the March's Point site. During construction, equipment and vehicles may accidentally spark and ignite vegetation. Equipment used during grading and construction activities may also create sparks which could ignite dry grass on the site. This risk would be similar to that found at other construction sites and is considered potentially significant. Mitigation measures are presented in **Section 5.2.8** to address this potential impact and reduce impacts to less than significant levels.

Operation Effects

After development of Alternative A, the Anacortes Fire Department (AFD) would continue to provide fire suppression services to the March's Point site. Development of the casino structure on the March's Point site would create additional risks from fires and add to firefighting responsibilities in the area. Vegetation in and around the developed areas would be minimal and irrigated during dry months, thereby minimizing the risk of fire. Additionally, the timely detection of fires by individuals working in the casino, early intervention, and firebreaks created by driveways and roads would reduce the risk of fires. Per building

code requirements within the Tribal-State Compact, the casino structure would be constructed using International Building Code (IBC) design requirement. The facilities would be constructed to meet adequate fire flow requirements as discussed under Water Supply above.

Due to the potential for an increase in AFD calls for fire protection services during operation of Alternative A, the part time staffing of AFD Station Three, and the extended hours of operation at the March's Point site, a potentially significant impact to the AFD could occur. With implementation of the conditions of the service agreement between the Tribe and the City, as discussed in **Section 5.2.8**, payments by the Tribe would compensate the City for costs of impacts associated with increased fire protection services at the March's Point site. Therefore, with implementation of mitigation, Alternative A would result in a less than significant effect on public fire protection services.

The AFD also provides first responder emergency medical service through paramedic staffing on AFD engines. The AFD currently has a public/private contract for ambulance service through Skagit County Medic One. If the Tribe made an agreement with AFD for emergency and fire protection services, first responder and ambulance service would be provided through this contract. It is not anticipated that the development would significantly increase the number of dispatched calls to a level that would require additional resources or staff.

The nearest emergency room is located at Island Hospital. On average, the Island Hospital has extra bed capacity. Because emergency medical services are adequate to serve Alternative A, the effects to emergency services would be less than significant.

Alternative A would increase the number of visitors in the area and operate 24-hours a day, which would result in the need for increased fire protection and emergency medical services. The Tribe shall be committed in the service agreement to reimburse the AFD for costs relating to the provision of fire and emergency medical services.

Due to the potential for an increase in AFD calls for emergency medical service during operation of Alternative A, the part time staffing of AFD Station Three, and the extended hours of operation at the March's Point site, a potentially significant impact could occur. With implementation of the conditions of the service agreement between the Tribe and the City, as discussed in **Section 5.2.8**, payments by the Tribe would compensate the City for costs of impacts associated with increased emergency medical services at the March's Point site. Therefore, with implementation of mitigation, Alternative A would result in a less than significant effect on publically provided emergency medical services.

4.10.2 ALTERNATIVE B – REDUCED INTENSITY

WATER SUPPLY

The components of Alternative B are similar to those of Alternative A, but the casino facility is reduced in size. Alternative B, as with Alternative A, would have domestic water supplied by the City. The Tribe has expressed its intent to contract with the City for water supply and pay the expenses associated with delivery of service to the project site.

The estimated average daily water demand for consumption, food preparation, sanitation, and other general water requirements for the casino and related facilities, including water used in the cooling system, is approximately 24,000 gallons per day (gpd) (**Table 4.10-4**). It is estimated that landscaping would require an additional 5,000 gpd during peak irrigation months. There is an additional requirement of 3,250 gpm for emergency fire flow (Skagit County, 2012).

TABLE 4.10-4
ESTIMATED WATER DEMAND – ALTERNATIVE B

	Alternative B
Wastewater Generated - Average	18,000
Total Average Potable Water Demand	24,000

Note: Conservatively assuming a 25% loss/consumption of potable water; Therefore, average wastewater flow is 75% of potable water demand (26,000/0.75=24,000 gallons per day
Source: AES, 2011

City water facilities presently have a treatment capacity of 30 million gallons per day (mgd) and a storage capacity of 7 million gallons. The City WTP is currently undergoing an expansion project which would increase the treatment capacity to 42 mgd. Existing average daily treatment and distribution from the City WTP is approximately 21 mgd (LeBlanc, 2013). At peak demand, Alternative B would account for 0.26% of the remaining capacity of the City's water supply system.

Existing City water distribution pipelines in the vicinity of the March's Point site have been sized to facilitate the distribution of approximately 55 mgd. Therefore, the distribution pipelines would not require upsizing to meet the Alternative B demands.

No significant effects to the water supply distribution facilities would occur as a result of Alternative B. However, in the event of a water shortage or increase in demand on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to meet water consumption needs and insufficient fire flows in the case of an emergency. Mitigation measures are provided in **Section 5.2.8** to ensure that an adequate water supply is available for the operation of Alternative B, and for the necessary fire flows. With mitigation measures the impact would be less than significant. Cumulative impacts to the City's water supply sources are discussed in detail in

Section 4.15. Indirect effects associated with the expansion of the City's water supply infrastructure are discussed in **Section 4.14.2**.

WASTEWATER SERVICE

Similar to Alternative A, collection of wastewater would consist of gravity lines that would transfer wastewater from buildings to the existing City wastewater collection system located under Thompson Road. From there, wastewater would be pumped via pipelines beneath the roads to the City treatment plant located at 500 T Avenue. From the treatment plant, treated wastewater effluent would be released under the existing NPDES permit.

No significant effects to the City wastewater collection and treatment facilities would occur as a result of Alternative B. However, in the event of an increase in demand on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to treat project wastewater flows. The payments by the Tribe pursuant to a service agreement would compensate the City for costs of impacts associated with wastewater services. With implementation of the conditions of the service agreement, as discussed in **Section 5.2.8**, development of Alternative B would not result in significant effects on wastewater conveyance or treatment. Cumulative impacts to the City's wastewater system are discussed in detail in **Section 4.15**. Indirect effects of project connection are discussed in **Section 4.14.2**.

SOLID WASTE SERVICE

Construction

The construction of Alternative B would result in a temporary increase in solid waste generation similar in composition but slightly reduced in volume to Alternative A. Waste that cannot be recycled would be disposed of at the Roosevelt Landfill, which accepts construction and demolition materials. This impact would be temporary and not significant given that the landfill has an adequate capacity to accommodate the increase in the amount of waste generated by the construction of Alternative B. Mitigation measures are presented in **Section 5.2.8** to further reduce the amount of construction and demolition materials disposed of at the landfill and ensure impacts remain less than significant.

Operation

As with Alternative A, it is anticipated that the Tribe will contract with the City or a private company for solid waste collection service. All waste would be brought to the RTS, where it will be sorted, compacted, and then non recyclables would be transported by rail to the Roosevelt Landfill. Based on generation rates at similar facilities, Alternative B would generate approximately 1 ton per day of trash (**Table 4.10-5**). Methods of trash and littering reduction are similar to those described under Alternative A. Waste generated under Alternative B would be handled appropriately through disposal at the facilities described in **Section 3.10.3**. The solid waste from Alternative B would represent approximately 200 tons per year, which is less than 0.001 percent of Roosevelt Landfill's remaining capacity. Methods of trash

reduction are similar to those described under Alternative A and mitigation measures are provided in **Section 5.2.8** to ensure impacts from solid waste remain less than significant.

TABLE 4.10-5
ESTIMATED SOLID WASTE DISPOSAL – ALTERNATIVE B

Waste Generation Source	Waste Generation Rate[1]	Units	Value	Total Waste (lb/day)
Casino (other services)	3.12	lb/100 sf/day	26,500	827
Restaurant	0.05	lb/sf/day	5,500	275
Total lb/day				**1,102**
Total ton/year				**200**
Source: AES, 2011				

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Construction

Construction on site could damage underground utilities, leading to outages and/or serious injury. This impact is potentially significant. Mitigation measures are presented in **Section 5.2.8** to reduce impacts to less than significant.

Operation

As with Alternative A, electricity would be obtained from PSE, with electrical supply provided through either existing aboveground and/or underground power lines adjacent to the site or a new semi-dedicated line from its substation located on Thompson Road approximately 150 yards west of the southwest corner of the project site. Once an alternative is chosen, PSE would work with the Tribe to identify the power facilities needed for each component of the development. Alternative B would not result in significant effects on energy services. Mitigation measures are provided in **Section 5.2.8**, which would reduce effects to less than significant.

Natural gas service would be provided by CNG through a connection to a pipeline approximately 0.5 miles north of the March's Point site.

The Tribe would utilize telecommunications services from the companies described above in **Section 4.10-1**. Many of these companies have the technical capacity to supply Alternative B with adequate telecommunication services. Therefore, development of telephone and cable services on the site is not expected to be a significant impact as the Tribe intends to provide their portion of the necessary funding for the installation and operation of services.

Implementation of Alternative B would result in a less than significant impact to electricity, natural gas, and telecommunications services and demand. Nonetheless, mitigation measures have been identified in

Section 5.2.3 and **5.2.8** to further reduce the energy demand and ensure adequate services for Alternative B.

PUBLIC HEALTH AND SAFETY

As discussed above under Alternative A, the Tribe must comply with Tribal-State Compact requirements pertaining to building codes and public health and safety standards.

Given that the Tribal-State Compact would require compliance with building codes, fire inspections, and food safety, potential health and safety impacts from the development of Alternative B would be less than significant.

Law Enforcement

Construction and operation of Alternative B would increase demands on police services, potentially leading to a decrease in acceptable service ratios, longer response times and problems meeting other service objectives.

Similar to Alternative A, Tribal security officers would work cooperatively with the APD/Sheriff's Office to provide law enforcement services to the March's Point Site. Service calls to APD would occur in situations where criminal activities and arrests would be warranted.

Increased calls for City service under Alternative B would occur due to an increased number of employees and patrons anticipated on the March's Point site during operation. Therefore, the operation of Alternative B would result in a potentially significant impact to law enforcement services. The incorporation of mitigation measures within **Section 5.2.8** would reduce potential impacts to law enforcement, including acceptable service ratios, response times and other police protection objectives, to less-than-significant levels.

Fire Protection and Emergency Medical Services

Increased calls for AFD service under Alternative B would occur due to an increased number of employees and patrons anticipated on the March's Point site during operation. Therefore, the operation of Alternative B would result in a potentially significant impact to fire protection and emergency medical services as discussed above under Alternative A. The incorporation of mitigation measures within **Section 5.2.8,** including a service agreement between the Tribe and City**,** would reduce potential impacts to fire protection and emergency medical services, including acceptable service ratios, response times and other fire protection and medical service objectives, to less-than-significant levels

4.10.3 ALTERNATIVE C – RETAIL CENTER

WATER SUPPLY

The Tribe has expressed its intent to contract with the City and pay the expenses associated with delivery of water service to the March's Point site. As stated under Alternative A above, City water facilities have a pumping capacity of 30 mgd and a storage capacity of 7 million gallons. As stated above under Alternative A, the City has available capacity at the WTP and within adjacent distribution lines to handle expanded service similar to Alternative C.

No significant effects to the water supply distribution facilities would occur as a result of Alternative C. In the event of a water shortage or increase in demand on the City water supply system that would prevent water service from being obtained, potentially significant impacts could occur including the inability to meet water consumption needs and insufficient fire flows in the case of an emergency. With implementation of the conditions of the service agreement, as discussed in **Section 5.2.8**, development of Alternative C would not result in significant effects on water supply services.

WASTEWATER SERVICE

As with Alternatives A and B, the City would provide for off-site disposal of wastewater. Connection to the existing City wastewater conveyance system would occur, with wastewater treatment occurring at the City WWTP.

Table 4.10-6 shows the estimated average and peak day flows for Alternative C. The components of Alternative C would have an estimated average daily flow of 13,700 gpd. Based on this estimate the peak day design flow is 22,000 gpd. The peak day design flow assumes that the facilities are operating at maximum capacity. With implementation of the expected conditions of an intergovernmental agreement, as discussed in **Section 5.2.8**, no significant effects to the City's public sewer and wastewater treatment system and level of service would occur under Alternative C.

TABLE 4.10-6
DESIGN WASTEWATER FLOWS – ALTERNATIVE C

Area Description	Square Footage	Flow/Square Foot	Average Day Flows (gallons per day)	Peak Day Flows (gallons per day)
Retail	137,000	0.1	13,700	22,000

Notes: [1] Based on similar facilities; [2] Estimated quantity; [3] Rounded to 2 significant digits, [4]Assumes peaking factor of 1.61 times average day flow
Source: AES, 2011

SOLID WASTE SERVICE

Construction

The construction of Alternative C would result in a temporary increase in construction waste. Waste that cannot be recycled would be disposed of at the Roosevelt Landfill, which accepts construction and demolition materials. This impact would be temporary and not significant given that the landfill has an adequate capacity to accommodate the increase in the amount of waste generated by the construction of Alternative C. Mitigation measures are presented in **Section 5.2.8** to further reduce the amount of construction and demolition materials disposed of at the landfill and ensure impacts remain less than significant.

Operation

It is anticipated that the Tribe will contract with the City Solid Waste Division, or a private company, for solid waste collection service. All waste would be brought to the RTS where it would be sorted, compacted, and then non-recyclables transported to the Roosevelt Landfill.

Waste generation can be estimated using a generation rate based on employees, similar to, be to a lesser degree than Alternative A. Similar to Alternative A, the increase in solid waste produced by Alternative C would represent roughly 0.01 percent of the annual intake at the Roosevelt Landfill, which is considered less than significant. To reduce the volume of trash even further, a compactor would be used. Methods of trash reduction are similar to those described under Alternative A and mitigation measures to further reduce impacts from solid waste generation, and ensure they remain less than significant, are described in **Section 5.2.8**.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Construction

Construction on the March's Point site could damage underground utilities, leading to outages and/or serious injury. This impact is potentially significant but with mitigation measures identified in **Section 5.2.8,** it would be less than significant.

Operation

Alternative C, a retail center, would use less electrical equipment and have shorter hours of operation when compared to the components of Alternative A. The estimated electrical usage for retail and business park developments is based on the planning standard of 30 to 35 kW per developed acre. As Alternative C would entail the development of approximately 3.15 acres the estimated usage is 94.5 to 104 kW. When considered on a regional level, Alternative C would not constitute a significant increase in electricity or create an impact to the regional electrical grid due to service-based nature of PSE

Natural gas service would be provided by CNG through a connection to a pipeline approximately 0.5 miles north of the March's Point site. When considered on a regional level, Alternative C would not constitute a significant increase in natural gas usage or create an impact to the regional electrical grid due to service-based nature of CNG

The Tribe would utilize telecommunications services from the companies described above in **Section 4.10-1**. Many of these companies have the technical capacity to supply Alternative C with adequate telecommunication services.

Implementation of Alternative C would result in a less than significant impact to electricity, natural gas, and telecommunications services and demand. Nonetheless, mitigation measures have been identified in **Section 5.2.3** and **5.2.8** to further reduce the energy demand of the Proposed Project and ensure adequate services for Alternative C.

PUBLIC HEALTH AND SAFETY

The addition of a retail center, proposed within Alternative C, would create new public health and safety impact through the development of retail facilities on federal trust property. With the implementation of mitigation in **Section 5.2.8**, potential impacts to public health and safety under Alternative C would be reduced to less than significant levels.

Law Enforcement

Construction and operation of Alternative C would increase demands on police services, potentially leading to a decrease in acceptable service ratios, longer response times and problems meeting other service objectives.

Similar to Alternatives A and B, Tribal security officers would work cooperatively with the APD/Sheriff's Office to provide law enforcement services to the March's Point site. Service calls to APD would occur in situations where criminal activities and arrests would be warranted.

Increased calls for City service under Alternative C would occur due to an increased number of employees and patrons anticipated on the March's Point Site during operation. Therefore, the operation of Alternative C would result in a potentially significant impact to law enforcement services. The incorporation of mitigation measures within **Section 5.2.8** would reduce potential impacts to law enforcement, including acceptable service ratios, response times and other police protection objectives, to less than significant levels.

Fire Protection and Emergency Medical Services

The design of Alternative C would include IBC fire code standards. Landscaping and vegetation in and around the Alternative C would be irrigated, further minimizing the risk of fire. The facilities would additionally be constructed to meet adequate fire flow requirements**.**

Alternative C design and compliance with IBC building codes and fire suppression standards would ensure the impacts to fire protection services at the March's Point site are minimal. On-site water infrastructure, including the development of fire hydrants would result in a beneficial impact by enhance on-site firefighting operations.

The retail center would not be in operation 24-hours a day, however, a minimal increase in calls for City service under Alternative C would occur due to an increased number of employees and patrons anticipated on the March's Point site during operation of the retail center. Therefore, the operation of Alternative C would result in a potentially significant impact to fire protection and emergency medical services. The incorporation of mitigation measures within **Section 5.2.8,** including a service agreement between the City and the Tribe, would reduce potential impacts to fire protection and emergency medical services, including acceptable service ratios, response times and other fire protection objectives, to less-than-significant levels

4.10.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

WATER SUPPLY

Under Alternative D, water would be supplied by the City via existing pipelines. The Tribe intends to contract for water services with City through a services agreement, similar in intent and scope to the agreement for services for the Proposed Project site.

An 8-inch diameter pipeline operating at approximately 140 pounds per square inch (psi) runs along Fidalgo Bay Road which has the capacity and pressure to serve Alternative D, including fire suppression needs (Nemeth, Pers. Communication, 2011). On-site distribution lines would be constructed to connect buildings and fire hydrants to the existing system. It is estimated that landscaping would require an additional 2,000 gpd during peak irrigation months. There is an additional requirement of 4,000 gpm for emergency fire flow (Skagit County, 2012).

No significant effects to the water supply distribution facilities would occur as a result of Alternative D. However, in the event of a water shortage or increase in demand on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to meet water consumption needs and insufficient fire flows in the case of an emergency. Mitigation measures are provided in **Section 5.2.8** to ensure that an adequate water supply is available for the operation of Alternative D, and for the necessary fire flows. With mitigation measures the impact would be less than significant.

WASTEWATER SERVICE

For wastewater service, Alternative D would utilize existing City wastewater collection infrastructure and treatment/disposal facilities. Under Alternative D, wastewater would connect to the existing sewer main through located adjacent to the property within an easement under the Tommy Thompson Trail. Similar to Alternative A, wastewater collected via this existing sewer system would be routed to the City WWTP.

Table 4.10-7 shows the estimated average and peak day wastewater flows for Alternative D. The components of Alternative A would have an estimated average daily flow of 26,000 gallons per day (gpd). Based on this estimate, the peak day design flow is 41,000 gpd. The peak day design flow assumes that the facilities are operating at maximum capacity.

TABLE 4.10-7
ESTIMATED WASTEWATER FLOWS – ALTERNATIVE D

Area Description	Square Footage	Number of Seats	Flow/Unit	Average Day Flows (gallons per day)	Peak Day Flows (gallons per day)
Gaming Floor	13,200	570	22	12,540	20,190
Restaurant/Lounge	8,720	220	55	12,100	19,481
Casino Support / Administration	7,590	20	10	200	322
Back of House/Employee Area	9,445	40	10	400	644
Misc.	9,045	-	-	-	-
Total	48,000	850	-	26,000	41,000

Notes: [1] Based on similar facilities; [2] Estimated quantity; [3] Rounded to 2 significant digits, [4]Assumes peaking factor of 1.61 times average day flow
Source: AES, 2011

No significant effects to the City wastewater collection or treatment facilities would occur as a result of Alternative D. However, in the event of an increase in wastewater flows on the City system that would prevent City service from being obtained, potentially significant impacts could occur including the inability to dispose of Alternative D wastewater flows. Mitigation measures are provided in **Section 5.2.8** to ensure that an adequate wastewater treatment is available for the operation of Alternative D. With mitigation measures the impact would be less than significant.

SOLID WASTE SERVICE

Construction

The construction of Alternative D would result in a temporary increase in waste generation similar in composition and volume to Alternative A. Waste that cannot be recycled would be disposed of at the

Roosevelt Landfill, which accepts construction and demolition materials. This impact would be temporary and not significant given that the landfill has an adequate capacity to accommodate the increase in the amount of waste generated by the construction of Alternative D. Mitigation measures are presented in **Section 5.2.8** to further reduce the amount of construction and demolition materials disposed of at the landfill and ensure that impacts remain less than significant.

Operation

It is anticipated that the Tribe will contract with the City or a private company for solid waste collection service. All waste would be brought to the RTS, where it will be sorted, compacted, and then non recyclables would be transported by rail to the Roosevelt Landfill. Alternative D includes a development similar to the casino described under Alternative A, including 13,200 square feet of gaming floor and 8,720 square feet of restaurant and beverage facilities. Therefore, it is reasonable to assume that waste generation would be similar to that of Alternative A at an estimated generation of 0.8 tons per day. This represents approximately 0.001% of the Roosevelt Landfill's daily intake, which is considered less than significant. To reduce the volume of trash, a compactor would be used. Methods of trash reduction are similar to those described under Alternative A and mitigation measures to further reduce impacts from solid waste generation are described in **Section 5.2.8**.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Construction

Construction on site could damage underground utilities, leading to outages and/or serious injury. This impact is potentially significant. Mitigation measures are presented in **Section 5.2.8** to reduce impacts to less than significant.

Operation

As with Alternative A, electricity service under Alternative D would be obtained through a contractual agreement with PSE. The components of Alternative D have identical uses and are substantially similar in size to Alternative A; therefore, the Tribe intends to contract for electrical services with PSE through a services agreement, similar in intent and scope to the agreement being negotiated for the March's Point site. Because the regional electrical provider has the capacity and infrastructure to serve the Flats site, the effects to electricity are considered less than significant. Mitigation measures are provided in **Section 5.2.8**, which would reduce effects to less than significant.

Alternative D would utilize natural gas from CNG. There is a line located immediately south of the Flats site.

The Tribe would utilize telecommunications services from the companies described above in **Section 4.10-1**. Many of these companies have the technical capacity to supply Alternative D with adequate telecommunication services. Therefore, development of telephone and cable services on the site is not

expected to be a significant impact as the Tribe intends to provide their portion of the necessary funding for the installation and operation of services. No significant effects to local service would occur.

PUBLIC HEALTH AND SAFETY

Refer to the discussion under Alternative A for public health and safety issues, which also applies to Alternative D.

Law Enforcement

Construction and operation of Alternative D would increase demands on police services, potentially leading to a decrease in acceptable service ratios, longer response times and problems meeting other service objectives.

Similar to Alternatives A and B, Tribal security officers would work cooperatively with the APD/Sheriff's Office to provide law enforcement services to the March's Point site. Service calls to APD would occur in situations where criminal activities and arrests would be warranted.

Increased calls for City service under Alternative D would occur due to an increased number of employees and patrons anticipated on the Flats site during operation. Therefore, the operation of Alternative D would result in a potentially significant impact to law enforcement services. The incorporation of mitigation measures within **Section 5.2.8** would reduce potential impacts to law enforcement, including acceptable service ratios, response times and other police protection objectives, to less-than-significant levels.

Fire Protection and Emergency Medical Services

Construction and operation on the site create additional risks from fires; these risks and precautions to reduce the risk of fire are similar to those described for Alternative A. Fire suppression components on site would include fire sprinkler systems and fire hydrants. To address the potential of an increased need for fire protection and emergency medical services resulting from the development of Alternative D, the Tribe would obtain a service agreement from the AFD to provide fire protection and emergency medical services similar in scope and intent to that described in the Alternative A. Mitigation measures are identified in **Section 5.2.8** to ensure impacts remain less than significant.

4.10.5 ALTERNATIVE E – NO ACTION

WATER SUPPLY

Under the No Action Alternative, no land would be taken into trust and no Tribal project would be constructed. No additional water supply would be necessary until such time as the alternative project sites are developed consistent with local plans and zoning. Because future urban development is planned

in the City and County Comprehensive Plans, effects to water supply have already been addressed and mitigation provided. A less-than-significant impact would result from the No Action Alternative.

WASTEWATER AND SOLID WASTE SERVICE

Under the No Action Alternative, no land would be taken into trust and no Tribal project would be constructed. No additional wastewater treatment or discharge would be required, and solid waste generation would remain the same until such time as the land is developed consistent with local plans and zoning. Because future urban development is planned in the City and County Comprehensive Plans, impacts from increased wastewater treatment and solid waste generation have already been addressed and mitigation provided. A less-than-significant impact would result from the No Action Alternative.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Under the No Action Alternative, no land would be taken into trust and no Tribal project would be constructed. The No Action Alternative would not result in impacts to electricity, natural gas, or telecommunications.

PUBLIC HEALTH AND SAFETY

Under the No Action Alternative, no land would be taken into trust and no Tribal project would be constructed. In the future, if one of the alternative project sites is developed consistent with local plans and zoning, the development(s) would be subject to State and County public health regulations, inspections, building codes, and fire codes. The No Action Alternative would not result in impacts to public health and safety.

Law Enforcement, Fire Protection, and Emergency Medical Services

Under the No Action Alternative, no land would be taken into trust and no Tribal project would be constructed. The No Action Alternative would not result in increased demands on law enforcement, fire protection, or emergency medical services.

4.11 NOISE

This section identifies the potential direct effects to noise that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.11**. Cumulative effects are identified in **Section 4.15**. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.9**.

ASSESSMENT CRITERIA AND METHODOLOGY

The assessment of project effects is based on the Federal Highway Administration (FHWA) construction noise level thresholds in its 2006 Construction Noise Handbook, as well as the Federal Noise Abatement Criteria (NAC) standards used by FHWA and the Washington State Department of Transportation (WSDOT) (**Table 3.11-3**). The assessment of vibration noise is based on the Federal Transportation Administration (FTA) standards of 0.5 Peak Particle Velocity (PPV) for structures and 0.1 PPV for annoyance of people (FTA, 2006). Adverse noise-related effects would occur during construction and operation if the following occurred:

- Project construction result in an increase in the ambient noise environment of greater than 78 decibels, equivalent noise level (dBA, Leq) or 5 dBA, Leq over baseline conditions during daytime (7am – 6pm), whichever is greater.
- Project operation would result in an increase in the ambient noise environment of greater than 66 dBA, Leq, or would result in an audible increase in ambient noise level at sensitive receptor locations including residential housing adjacent to the project site. See **Section 3.11** for a definition of sensitive receptors.
- Construction or operation of the Proposed Project exceeds the FTA vibration standards of 0.5 Peak Particle Velocity (PPV) for structures and 0.1 PPV for annoyance of people (FTA, 2006).

4.11.1 ALTERNATIVE A – PROPOSED PROJECT

CONSTRUCTION NOISE

Grading and construction associated with Alternative A would be intermittent and temporary in nature. The closest receptors that would be exposed to noise during project construction are private residences located along Stevenson Road approximately 100 feet south of the March's Point site. Construction noise levels at and near the project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips and worker trips have the potential to raise ambient noise levels along local routes, depending on the number of worker/haul trips made and types of vehicles used. All construction traffic and deliveries would access the project site via Thompson Road and State Route 20 (SR-20).

During construction of the Proposed Project a maximum of 260 one-way worker trips would occur per day, approximately half (130) during the am peak hour and half (130) during the pm peak hour. Although construction trips would generally occur outside of the peak hour, it is assumed for this noise analysis that all construction trips occur during the peak traffic hour to provide a worst case scenario analysis. It is estimated that an average of eight daily trip or one peak hour material haul trip would occur during construction. Because trucks are louder than passenger cars, a passenger car equivalence (PCE) multiplier of 8 cars per truck was used (TRB, 2000). Therefore, the total equivalent passenger car trips per peak hour would be 138. The traffic volume on Thompson Road would be 158 trips per peak hour during construction (Traffic Impact Study; **Appendix D**). The existing ambient noise level in the vicinity of the Proposed Project was measured at 47.7 dBA, Leq (refer to **Section 3.11**, **Table 3.11-6**). Construction trips would not double the existing traffic volume and would therefore result in a less than 2.7 dBA, Leq increase in the existing ambient noise level. With increased ambient noise level in the vicinity of the project site, Alternative A construction traffic would be less than 50.4 dBA, Leq, which is less than the FHWA 78 dBA, Leq threshold. Alternative A would not result in a significant adverse effect to ambient noise levels in the project vicinity from worker and delivery traffic during any phase of construction.

Construction of Alternative A would include ground clearing, excavation, erection of foundations and buildings, and finishing work. **Table 4.11-1** shows typical stationary point source noise levels at 25 feet during different construction stages.

TABLE 4.11-1
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level at 25 feet (dBA Leq)
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89
Source FHWA, 2006	

Stationary point sources of noise attenuate (lessen) at a rate of 6-9 dBA, Leq per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions, topography and type of ground surfaces, noise barriers, etc.) (WSDOT, 2004). An attenuation factor of 6.0 dBA, Leq per doubling of distance is appropriate given the flat topography and lack of ground cover on and in the vicinity of the project site. The maximum construction noise at the project site would be 89 dBA, Leq at 25 feet. Using an attenuation factor of 6.0 dBA, Leq per doubling of distance, the maximum noise level at the nearest sensitive noise receptor, a private residence, during daily construction activities would be 77.0 dBA, Leq. The maximum noise level at the nearest sensitive noise receptor would be less than the FHWA threshold of 78 dBA Leq (**Table 3.11-3**). There would not be an adverse significant effect due to

stationary construction noise. Mitigation measures have been included in **Section 5.2.9** to further reduce noise potential construction noise.

CONSTRUCTION VIBRATION

Construction activities for Alternative A would consist of using earthmoving equipment shown in **Table 4.11-2**, which can produce detectable or damaging levels of vibration at nearby sensitive land uses, primarily depending on the distance between the source and the nearby sensitive land use. Generally, physical damage is only an issue when construction requires the use of equipment with high vibration levels (i.e., compactors, large dozers, etc) and occurs within 25 feet of an existing structure. **Table 4.11-2** provides estimated vibration levels at 25 feet and 100 feet from construction activities. The predicted PPV levels are below the significance threshold of 0.5 PPV for structures at 25 feet and 0.1 PPV for annoyance of people at 100 feet (FTA, 2006). Therefore, vibration from construction of Alternative A would not result in significant adverse effects to nearby structures and sensitive receptors.

TABLE 4.11-2
ALTERNAIVE A - REFERENCE AND PREDICTED PPV FROM CONSTRUCTION

Equipment	Reference PPV at 25 feet	Predicted PPV at 100 feet
	Inches per Second	
Large bulldozer	0.089	0.011
Excavator	0.089	0.011
Compactor	0.170	0.021
Scaper	0.089	0.011
Loaded trucks	0.076	0.0095
Small bulldozer	0.003	0.0004

Note: PPV was predicted using the equation $PPV_{predicted} = PPV_{ref} *(D_{ref}/D_{source})^{1.4}$.
Source: FTA, 2006.

OPERATION NOISE

The following identifies potential impacts from project-related noise sources, such as traffic, heating ventilation and air conditioning (HVAC) systems, parking structure and parking lots, and deliveries.

Traffic

The level of traffic noise depends on: l) the volume of the traffic, 2) the speed of the traffic, and 3) the number of trucks in the flow of the traffic. It is not anticipated that speed in the vicinity of the project site or the mix of trucks in the traffic would change during the operational phase; however, with the operation of the casino traffic volumes would increase.

State Route 20

The primary source of noise in the vicinity of the March's Point site is generated by traffic on SR-20 approximately 500 feet from nearby sensitive noise receptors. As discussed in the TIS (**Appendix D**),

there are approximately 2,726 vehicles per peak hour on State Route 20 (SR-20) adjacent to the project site. Alternative A would add an estimated 237 vehicles per peak hour to area roadways, of which 85 percent or approximately 202 vehicles per peak hour would occur on SR-20. The existing ambient noise level in the vicinity of SR-20 was measured at 54.1 dBA, Leq (refer to **Section 3.11**, **Table 3.11-6**). Alternative A traffic at buildout would less than double the existing volume of traffic resulting in an increase of the ambient noise level of less than 0.3 dBA Leq; therefore, the ambient noise level would be less than 54.4 dBA, Leq, which is less than the NAC threshold of 66 dBA, Leq. Alternative A would not result in significant adverse effects associated with traffic noise levels for sensitive noise receptors located in the vicinity of SR-20.

Thompson Road

Thompson Road is located adjacent to the March's Point site, approximately 25 feet from nearby and future sensitive noise receptors. One proposed access driveway to the project site is located on Thompson Road. The existing traffic volume on this roadway is 158 vehicles during the peak hour (TIS, **Appendix D**). Alternative A would add 213 vehicle trips during the peak hour to Thompson Road. The existing ambient noise level in the vicinity of Thompson Road was measured at approximately 47.7 dBA, Leq (refer to **Section 3.11**, **Table 3.11-6**). Alternative A would more than double the traffic volume on Thompson Road resulting in an approximately 3.7 dBA, Leq increase in the ambient noise level. With implementation of Alternative A, the ambient noise level on Thompson Road would be approximately 51.4 dBA, Leq, which is less than the NAC of 66 dBA, Leq for residential sensitive noise receptors (**Section 3.11**, **Table 3.11-3**). Therefore, Alternative A would not result in significant adverse effects associated with traffic noise levels for sensitive receptors located along Thompson Road.

Stevenson Road

Stevenson Road is located adjacent to the March's Point site, approximately 50 feet from nearby sensitive noise receptors. Two proposed access driveway to the project site is located on Stevenson Road. The existing traffic volume on this roadway is approximately 70 vehicles during the peak hour (TIS, **Appendix D**). Alternative A would add approximately 54 vehicle trips during the peak hour to Stevenson Road. The existing ambient noise level in the vicinity of Stevenson Road was measured at 47.7 dBA, Leq (refer to **Section 3.11**, **Table 3.11-6**). Alternative A would not double the traffic volume on Stevenson Road resulting in a less than 2.5 dBA, Leq increase in the ambient noise level. With implementation of Alternative A, the ambient noise level on Stevenson Road would be less than 50.2 dBA, Leq, which is less than the NAC of 66 dBA, Leq for residential sensitive receptors (**Section 3.11**, **Table 3.11-3**). Therefore, Alternative A would not result in significant adverse effects associated with traffic noise levels for sensitive receptors located along Stevenson Road.

Other Noise Sources

Commercial uses would bring the possibility of noise due to operations of roof-mounted air handling units associated with building HVAC equipment and noise from loading docks, and the parking lot. The noise levels produced by HVAC systems vary with the capacities of the units, as well as with individual unit design. In this case, HVAC systems on commercial buildings would be located at higher elevations than the residences, so that roof-mounted HVAC equipment has the potential to be heard at nearby sensitive noise receptors. However, given the distance to the nearest sensitive noise receptor, noise from roof mounted HVAC equipment would not be audible. Therefore, Alternative A HVAC noise would not result in significant adverse effects associated with the ambient noise environment.

Idling trucks at Alternative A loading docks have the potential to emit noise of 80 dBA, Leq at 50 feet from the source (WSDOT, 2004). The proposed loading docks will be located approximately 400 feet from the nearest residences located south of the property boundaries. Using the attenuation value of 6.0 (refer to construction analysis above) the ambient noise level at the nearest sensitive noise receptor would be approximately 62 dBA, Leq, which is less than the NAC of 66 dBA, Leq (**Section 3.11**, **Table 3.11-3**). Therefore, Alternative A loading dock noise would not result in significant adverse effects associated with the ambient noise environment.

Parking lot noise would be due mainly to slow moving and idling vehicles, opening and closing doors, and conversation. The noise level in parking lots and structures is dominated by slow moving vehicles; therefore, the ambient noise level in a parking lot would be approximately 60 dBA, Leq, which is less than the NAC of 66 dBA, Leq (WSDOT, 2010). Therefore, Alternative A parking lot noise would not result in significant adverse effects associated with the ambient noise environment.

OPERATION VIBRATION

Commercial uses do not include sources of perceptible vibration. Therefore, operation of Alternative A would not result in significant adverse effects associated with vibration.

4.11.2 ALTERNATIVE B – REDUCED INTENSITY

CONSTRUCTION NOISE

Noise impacts resulting from grading and construction associated with Alternative B would be less than those of Alternative A. During construction of Alternative B, a maximum of 180 one-way worker trips would occur per day, approximately half (90) during the am peak hour and half (90) during the pm peak hour. It is conservatively estimated that an average of 6 material hauling trips per day or approximately one per peak hour would occur during construction. This is equivalent to a total of 98 passenger car trips per peak hour. Construction trips would not double the existing traffic volume and would result in a less than 2.1 dBA Leq increase in the existing ambient noise level. With increased ambient noise level in the vicinity of the project site would be less than 49.8 dBA, Leq, which is less than the FHWA 78 dBA, Leq

threshold. Alternative B would not result in a significant adverse effect to ambient noise levels in the project vicinity from worker and delivery traffic during any phase of construction

Noise resulting from construction activities within the project site from Alternative B would be similar to Alternative A (**Section 4.11.1**). Therefore, Alternative B construction noise would not result in a significant adverse effects associated with the ambient noise environment. Mitigation measures have been included in **Section 5.2.9** to further reduce noise potential construction noise.

CONSTRUCTION VIBRATION

Construction of Alternative B would result in less than vibration effects of Alternative A. Refer to **Section 4.11.1**. Alternative B construction vibration would not result in significant adverse effects associated with the ambient noise environment.

OPERATION NOISE

Traffic

State Route 20

Alternative B would add an additional 141 vehicles per peak hour to SR-20 at buildout (**Appendix D**). Project traffic at buildout would less than double the existing volume of traffic resulting in an increase of the ambient noise level by less than 0.2 dBA, Leq; therefore, the ambient noise level would be approximately 54.3 dBA, Leq, which is less than the NAC threshold of 66 dBA, Leq. Alternative B would not result in significant adverse effects associated with traffic noise levels for sensitive noise receptors located in the vicinity of SR-20.

Thompson Road

Alternative B would add an additional 41 vehicles per peak hour to Thompson Road at build-out (**Appendix D**). Project traffic at buildout would less than double the existing volume of traffic resulting in an increase of the ambient noise level by approximately 1.0 dBA, Leq; therefore, the ambient noise level would be approximately 48.7 dBA, Leq, which is less than the NAC threshold of 66 dBA, Leq. Alternative B would not result in significant adverse effects associated with traffic noise levels for sensitive noise receptors located in the vicinity of Thompson Road.

Stevenson Road

Alternative B would add an additional 21 vehicles per peak hour to Stevenson Road at buildout (**Appendix D**). Project traffic at buildout would less than double the existing volume of traffic resulting in an increase of the ambient noise level by approximately 1.1 dBA, Leq; therefore, the ambient noise level would be approximately 48.8 dBA, Leq, which is less than the NAC threshold of 66 dBA, Leq. Alternative B would not result in significant adverse effects associated with traffic noise levels for sensitive noise receptors located in the vicinity of Stevenson Road.

Other Noise Sources

Noise from stationary sources and parking lot resulting from Alternative B would be similar to Alternative A. Refer to **Section 4.11.1**. Therefore, Alternative B stationary source and parking lot noise would not result in significant adverse effects associated with the ambient noise environment.

OPERATION VIBRATION

Commercial uses do not include sources of perceptible vibration. Therefore, operation of Alternative B would not result in significant adverse effects associated with vibration.

4.11.3 ALTERNATIVE C – RETAIL CENTER

CONSTRUCTION NOISE

Noise impacts resulting from grading and construction associated with Alternative C would similar to thoughts of Alternative A. During construction of Alternative C, a maximum of 200 one-way worker trips would occur per day, approximately half (100) during the am peak hour and half (100) during the pm peak hour. It is conservatively estimated that an average of 8 material hauling trips per day or approximately 1 per peak hour would occur during construction. The total equivalent passenger car trips assumed per peak hour would be 108. Construction trips would not double the existing traffic volume and would therefore result in a less than 2.2 dBA, Leq increase in the existing ambient noise level. With increased ambient noise level in the vicinity of the project site, Alternative C would result in construction noise level of approximately 49.9 dBA, Leq, which is less than the FHWA 78 dBA, Leq threshold. Alternative C would not result in a significant adverse effect to ambient noise levels in the project vicinity from worker and delivery traffic during these any phase of construction.

Noise resulting from construction activities within the project site from Alternative C would be similar to Alternative A (**Section 4.11.1**). Therefore, Alternative C construction noise would not result in significant adverse effects associated with the ambient noise environment. Mitigation measures have been included in **Section 5.2.9** to further reduce noise potential construction noise.

CONSTRUCTION VIBRATION

Construction of Alternative C would result in similar vibration effects of Alternative A. Refer to **Section 4.11.1**. Alternative C construction vibration would not result in significant adverse effects associated with the ambient noise environment.

OPERATION NOISE

Traffic

State Route 20

Alternative C would add an additional 383 vehicles per peak hour to SR-20 at buildout (**Appendix D**). Project traffic at buildout would less than double the existing volume of traffic resulting in an increase of the ambient noise level by less than 0.6 dBA Leq; therefore, the ambient noise level would be less than 54.7 dBA, Leq, which is less than the NAC threshold of 66 dBA, Leq. Alternative C would not result in significant adverse effects associated with traffic noise levels for sensitive noise receptors located in the vicinity of SR-20.

Thompson Road

One proposed access driveway to the March's Point site is located on Thompson Road and three project driveways are located on Stevenson Road. Alternative B would add an additional 48 vehicles per peak hour to Thompson Road at buildout (**Appendix D**). Project traffic at buildout would less than double the existing volume of traffic resulting in an increase of the ambient noise level by approximately 1.2 dBA, Leq; therefore, the ambient noise level would be approximately 48.9 dBA, Leq, which is less than the NAC threshold of 66 dBA, Leq. Alternative B would not result in significant adverse effects associated with traffic noise levels for sensitive noise receptors located in the vicinity of Thompson Road.

Stevenson Road

Alternative C would add an additional 72 vehicles per peak hour to Stevenson Road at buildout (**Appendix D**). Project traffic at buildout would double the existing volume of traffic resulting in an increase of the ambient noise level by less than 3.1 dBA, Leq; therefore, the ambient noise level would be approximately 50.8 dBA, Leq, which is less than the NAC threshold of 66 dBA, Leq. Alternative C would not result in significant adverse effects associated with traffic noise levels for sensitive noise receptors located in the vicinity of Stevenson Road.

Other Noise Sources

Noise from stationary sources and parking lot associated with Alternative C would be similar to or less than the noise associated with Alternative A. Refer to **Section 4.11.1**. Therefore, Alternative C stationary source and parking lot noise would not result in significant adverse effects associated with the ambient noise environment.

OPERATION VIBRATION

Commercial uses do not include sources of perceptible vibration. Therefore, operation of Alternative C would not result in significant adverse effects associated with vibration.

4.11.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

CONSTRUCTION NOISE

Grading and construction associated with Alternative D would be intermittent and temporary in nature. The closest receptors that would be exposed to noise during project construction condominium residents located along Fidalgo Bay Road approximately 140 feet northwest of the Flats site. Construction noise levels at and near the project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips and worker trips have the potential to raise ambient noise levels along local routes, depending on the number of worker/haul trips made and types of vehicles used. All construction traffic and deliveries would access the project site via Fidalgo Bay Road.

During construction of Alternative D a maximum of 200 one-way worker trips would occur per day, approximately half (100) during the am peak hour and half (100) during the pm peak hour. Although construction trips would generally occur outside of the peak hour, it is assumed for this noise analysis that all construction trips occur during the peak traffic hour to provide a worst case scenario analysis. It is estimated that an average of eight daily trip or one peak hour material haul trip would occur during construction. Because trucks are louder than passenger cars, a passenger car equivalence (PCE) multiplier of 8 cars per truck was used (TRB, 2000). Therefore, the total equivalent passenger car trips per peak hour would be 108. The traffic volume on Fidalgo Road would be 40 trips per peak hour during construction (Traffic Impact Study (TIS, 2011, **Appendix D**). The existing ambient noise level in the vicinity of the Flats site was measured at 60.9 dBA, Leq (refer to **Section 3.11**, **Table 3.11-6**). Construction trips would more than double the existing traffic volume and would therefore result in a less than 5.7 dBA, Leq increase in the existing ambient noise level. With increase ambient noise levels on the vicinity of the Flats site, construction noise levels would be less than 66.6 dBA, Leq, which is less than the FHWA 78 dBA, Leq threshold. Alternative A would not result in a significant adverse effect to ambient noise levels in the project vicinity from worker and delivery traffic during any phase of construction.

Construction of Alternative D would include ground clearing, excavation, erection of foundations and buildings, and finishing work. **Table 4.11-1** shows typical stationary point source noise levels at 25 feet during different construction stages.

Stationary point sources of noise attenuate (lessen) at a rate of 6-9 dBA, Leq per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions, topography and type of ground surfaces, noise barriers, etc.) (WSDOT, 2004). An attenuation factor of 6.0 dBA, Leq per doubling of distance is appropriate given the flat topography and lack of ground cover on and in the vicinity of the Flats site. The maximum construction noise at the project site would be 89 dBA, Leq at 25 feet. Using an attenuation factor of 6.0 dBA, Leq per doubling of distance, the maximum noise level at

the nearest sensitive noise receptor, a private residence, would be 81.5 dBA, Leq. The maximum noise level at the nearest sensitive noise receptor would be more than the FHWA threshold of 78 dBA Leq (**Table 3.11-3**). There would be a potentially adverse significant effect due to stationary construction noise. However, with the implementation of mitigation provided in **Section 5.2.9** construction noise would be reduced by more than six dBA, Leq. A 6 dBA, Leq reduction would result in a noise level of 75.5dBA, Leq, which is less than the FHWA threshold of 78 dBA, Leq. Alternative D would not result in an adverse impact to nearby sensitive noise receptors. Mitigation measures have been included in **Section 5.2.9** to further reduce noise potential construction noise.

CONSTRUCTION VIBRATION

Construction activities for Alternative D would consist of using earthmoving equipment shown in **Table 4.11-3**, which can produce detectable or damaging levels of vibration at nearby sensitive land uses, primarily depending on the distance between the source and the nearby sensitive land use. Generally, physical damage is only an issue when construction requires the use of equipment with high vibration levels (i.e., compactors, large dozers, etc) and occurs within 25 feet of an existing structure. **Table 4.11-3** provides estimated vibration levels at 25 feet and 100 feet from construction activities. The predicted PPV levels are below the significance threshold of 0.5 PPV for structures at 25 feet and 0.1 PPV for annoyance of people at 100 feet (FTA, 2006). Therefore, vibration from construction of Alternative D would not result in significant adverse effects to nearby structures and sensitive receptors.

TABLE 4.11-3
ALTERNAIVE D - REFERENCE AND PREDICTED PPV FROM CONSTRUCTION

Equipment	Reference PPV at 25 feet	Predicted PPV at 140 feet
	Inches per Second	
Large bulldozer	0.089	0.046
Excavator	0.089	0.046
Compactor	0.170	0.088
Scaper	0.089	0.046
Loaded trucks	0.076	0.039
Small bulldozer	0.003	0.002

Note: PPV was predicted using the equation $PPV_{predicted} = PPV_{ref} * (D_{ref}/D_{source})^{1.4}$.
Source: FTA, 2006.

OPERATION NOISE

The following identifies potential impacts from project-related noise sources, such as traffic, HVAC systems, parking lot, and deliveries.

Traffic

Fidalgo Bay Road

The major source of noise in the project area is generated by traffic on Fidalgo Bay Road approximately 40 feet from sensitive noise receptors located northwest of the project site. As discussed in the TIS (**Appendix D**), there are approximately 40 vehicles per peak hour on Fidalgo Bay Road adjacent to the project site. Alternative D would add an estimated 95 vehicles per peak hour to Fidalgo Bay Road north of the Flats site. The existing ambient noise level in the vicinity of the project site was measured at 60.9 dBA, Leq (refer to **Section 3.11**, **Table 3.11-6**). Alternative D traffic at buildout would more than triple the existing volume of traffic resulting in an increase of the ambient noise level of approximately 5.3 dBA, Leq; therefore, the ambient noise level would be approximately 66.2 dBA, Leq, which is more than the NAC threshold of 66 dBA, Leq. Therefore, Alternative D would result in a significant and unavoidable adverse effect associated with traffic noise levels for sensitive noise receptors located in the vicinity of Fidalgo Bay Road north of the project site

The nearest sensitive noise receptor to Fidalgo Bay Road south of the Flats site is a residence located 75 feet from the roadway. Alternative D would add an estimated 142 vehicles per peak hour to Fidalgo Bay road south of the Flats site. Alternative D traffic at buildout would more than triple the existing volume of traffic resulting in an increase of the ambient noise level of approximately 6.6 dBA, Leq; therefore, the ambient noise level would be approximately 67.5 dBA, Leq, which is above the NAC threshold of 66 dBA, Leq. Therefore, Alternative D would result in significant and unavoidable adverse effect associated with traffic noise levels for sensitive noise receptors located in the vicinity of Fidalgo Bay Road north of the Flats site

Other Noise Sources

Commercial uses would bring the possibility of noise due to operations of roof-mounted air handling units associated with building HVAC equipment and noise from loading docks, and the parking lot. The noise levels produced by HVAC systems vary with the capacities of the units, as well as with individual unit design. In this case, HVAC systems on commercial buildings would be located at approximately the same elevations as the residences, so that roof-mounted HVAC equipment has the potential to be heard at nearby sensitive noise receptors. However, given the distance to the nearest sensitive noise receptor, noise from roof mounted HVAC equipment would not be audible. Therefore, Alternative D HVAC noise would not result in significant adverse effects associated with the ambient noise environment.

Idling trucks at Alternative A loading docks have the potential to emit noise of 80 dBA at 50 feet from the source (WSDOT, 2004). The proposed loading docks will be located approximately 100 feet from the nearest residences located northwest of the property boundaries. Using the attenuation value of 6.0 (refer to construction analysis above) the ambient noise level at the nearest sensitive noise receptor would be 74.0 dBA, Leq, which is greater than the NAC of 66 dBA, Leq (**Section 3.11**, **Table 3.11-3**). Therefore, Alternative D loading dock noise would result in a significant and unavoidable adverse effect associated with the ambient noise environment.

Parking lot noise would be mainly due to slow moving and idling vehicles, opening and closing doors, and conversation. The noise level in parking lots and structures is dominated by slow moving vehicles; therefore, the ambient noise level in a parking lot is approximately 60 dBA, Leq, which is less than the NAC of 66 dBA, Leq (WSDOT, 2010). Therefore, Alternative D parking lot noise would not result in significant adverse effects associated with the ambient noise environment.

OPERATION VIBRATION

Commercial uses do not include sources of perceptible vibration. Therefore, operation of Alternative D would not result in significant adverse effects associated with vibration.

4.11.5 ALTERNATIVE E – NO ACTION

Under the No Action Alternative, a change in the current land use of the project site is not reasonably foreseeable. None of the potentially effects identified for Alternatives A through D are anticipated to occur.

4.12 HAZARDOUS MATERIALS

This section identifies the potential effects to hazardous materials that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.12**. Cumulative and indirect effects are identified in **Section 4.15** and **Section 4.14,** respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.10**.

ASSESSMENT CRITERIA

Impacts associated with hazardous materials include impacts resulting from a release of hazardous materials and impacts from improper hazardous materials management. A project would be considered to have significant hazardous materials impacts if the project site has existing hazardous materials on-site that would require remediation prior to development of a proposed project. Additionally, if a project would result in the use, handling, or generation of a regulated hazardous material, of which the regulated amounts would increase the potential risk of exposure resulting in reduction of quality of life or loss of life, then the project would have a significant impact.

4.12.1 ALTERNATIVE A – PROPOSED PROJECT

There are no known hazardous materials on the March's Point site. Several documented hazardous materials sites are located within one mile; however, these sites have received either regulatory agency closures or do not pose a significant threat to the environmental quality of the project site due to the nature of the sites and/or the distances involved.

Construction

The possibility exists that undiscovered contaminated soil and/or groundwater is present on the site. Although not anticipated, construction personnel could encounter contamination during construction-related earth moving activities. This could pose a risk to human health and/or the environment. The unanticipated discovery of contaminated soil and/or groundwater could have a potentially significant effect. Mitigation is included in **Section 5.2.10** to reduce potentially significant impacts resulting from the discovery of contaminated soil/groundwater during construction of Alternative A to less than significant.

Hazardous materials used during construction would include substances such as gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. These materials would be used for the operation and maintenance of equipment, and directly in the construction of the facilities. Regular fueling and oiling of construction equipment would be performed daily. The most likely possible incidents would involve the dripping of fuels, oil, and grease from construction equipment. The small quantities of fuel, oil, and grease that may drip would have low

relative toxicity and concentrations. Typical construction management practices limit and often eliminate the potential for such accidental releases. An accident involving a service or refueling truck would present the worst-case scenario for the release of a hazardous substance. Depending on the relative hazard of the hazardous material, if a spill were to occur of significant quantity, the accidental release could pose a hazard to both construction employees and the environment. Accordingly, this is a potentially significant impact. Mitigation is included in **Section 5.2.10** to reduce potentially significant impacts resulting from hazardous materials spills or releases during construction of Alternative A to less than significant.

Operation

As discussed in **Section 3.12.1**, the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) regulations include provisions that require facilities to document the potential risk associated with the storage, use, and handling of toxic and flammable substances (OSHA, 2013). OSHA regulations are codified in 29 CFR Part 1910.

During operation of the casino, the majority of waste produced would be non-hazardous. The small quantities of hazardous materials that would be utilized include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. These materials would be utilized for operation and maintenance of the casino and associated project facilities. The amount and types of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues. If these materials are not stored, handled, or disposed of according to federal, State, and manufacturers' guidelines, a hazardous materials release could occur that would affect surface and subsurface conditions on the site. Mitigation is included in **Section 5.2.10** to reduce potentially significant effects from the use of hazardous materials during the operation of the casino to less than significant.

4.12.2 ALTERNATIVE B – REDUCED INTENSITY

Construction

As discussed under Alternative A, there is no reported hazardous materials contamination on the March's Point site, or on adjacent sites, that would affect surface and/or subsurface conditions on the site. The possibility exists, however, that undiscovered contaminated soil or groundwater exists on the site. Although not anticipated, construction personnel could encounter contamination during construction-related earth moving activities. This could pose a risk to human health and/or the environment. Refer to **Section 4.12.1** for a description of potentially significant effects resulting from construction activities. The unanticipated discovery of contaminated soil or groundwater could have a potentially significant effect. Mitigation is included in **Section 5.2.10** to reduce potentially significant impacts resulting from the discovery of contaminated soils/groundwater or hazardous materials spills/releases during construction of Alternative B to less than significant.

Operation

Although the casino structure under Alternative B is smaller in size than the development under Alternative A, the components are substantially the same. As with Alternative A, hazardous materials may be used, generated, and stored during the operation of the reduced intensity casino. Refer to **Section 4.12.1** for a description of potentially significant effects resulting from hazardous materials usage and storage during project operation. Mitigation is included in **Section 5.2.10** to reduce potentially significant effects from the use of hazardous materials during the operation of Alternative B to less than significant.

4.12.3 ALTERNATIVE C – RETAIL CENTER

Construction

Similar to Alternative A, Alternative C would consist of development of the entire March's Point site, and as discussed under Alternative A, there is no reported hazardous materials contamination on the site. Thus, known hazardous materials would not affect construction. Additionally, there are no adjacent sites with hazardous materials involvement that would affect surface and/or subsurface conditions on the March's Point site. As discussed under Alternative A, the possibility exists, however, that undiscovered contaminated soil or groundwater exists on the site. Although not anticipated, construction personnel could encounter contamination during construction-related earth moving activities. This could pose a risk to human health and/or the environment. Refer to **Section 4.12.1** for a description of potentially significant effects resulting from construction activities. The unanticipated discovery of contaminated soil or groundwater could have a potentially significant effect. Mitigation is included in **Section 5.2.10** to reduce potentially significant impacts resulting from the discovery of contaminated soils/groundwater and hazardous materials spills or releases during construction of Alternative C to less than significant.

Operation

Alternative C consists of the development of retail and accessory commercial uses. The use, generation, and storage of hazardous materials during the operation of Alternative C is likely, although the impacts would be similar to other commercial / light industrial operations of this size and would not pose any unusual handling, storage, or disposal issues. The small quantities of hazardous materials that would be utilized include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. The amount and types of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues. If these materials are not stored, handled, or disposed of according to federal, State, and manufacturers' guidelines, a hazardous materials release could occur that would affect surface and subsurface conditions on the site. Mitigation is included in **Section 5.2.10** to reduce potentially significant effects from the use of hazardous materials during the operation of the retail center to less than significant.

4.12.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

Construction

There is no reported hazardous materials contamination on the Flats site or within one mile that would affect surface and/or subsurface conditions on the site. Thus, known hazardous materials would not affect construction. However, it is possible that undiscovered contaminated soil or groundwater exists on the site. Although not anticipated, construction personnel could encounter contamination during construction-related earth moving activities. This could pose a risk to human health and/or the environment. The unanticipated discovery of contaminated soil or groundwater could have a potentially significant effect.

Mitigation is included in **Section 5.2.10** to reduce potentially significant impacts resulting from the discovery of contaminated soils/groundwater or hazardous materials spills or releases during construction of Alternative D to less than significant.

Operation

Alternative D consists of the development of a casino structure similar in size and design to that described for Alternative A.

During operation of the facilities under Alternative D, the majority of waste produced would be non-hazardous. The small quantities of hazardous materials that would be utilized include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. These materials would be utilized for operation and maintenance of the casino and other project facilities. The amount and types of hazardous materials generated are common to commercial sites and do not pose unusual storage, handling or disposal issues. If these materials are not stored, handled, or disposed of according to federal, State, and manufacturers' guidelines, a hazardous materials release could occur that would affect surface and subsurface conditions on the site. Mitigation is included in **Section 5.2.10** to reduce potentially significant effects from use of hazardous materials during the operation of the casino on the Flats site to less than significant.

4.12.5 ALTERNATIVE E – NO ACTION

Existing uses on the alternative sites would continue under the No Action Alternative. No effects from the use, storage, or handling of hazardous materials would result from the No Action Alternative.

4.13 AESTHETICS

This section identifies the potential direct effects associated with aesthetics that would result from the development of each alternative described in **Chapter 2.0**. Effects are measured against the environmental baseline presented in **Section 3.13**. Cumulative and indirect effects are identified in **Section 4.15** and **Section 4.14**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.11**.

ASSESSMENT CRITERIA

Assessing the impacts of a project on visual resources is in large part subjective by nature. The impact to the viewshed will be defined by the magnitude of the visual impact in terms of distance, viewer position, and the frequency of views. A proposed project would have significant adverse effects if the development were to cast a shadow on private residences or public areas for substantial portions of the day.

4.13.1 ALTERNATIVE A – PROPOSED PROJECT

VISUAL IMPACTS

Development of Alternative A would encompass the majority of the March's Point site. The casino would consist of a one-story structure approximately 30 feet in height. The building would be a combination of glass and metal, with a mixture of natural materials including wood and stone. A porte-cochere located on the northwest side of the casino would serve as the main entrance to the building. Appropriately scaled landscaping, including rock and water features, would enhance the aesthetically pleasing design of the buildings. The casino structure would be bordered by a surface parking lot. A site plan for this alternative appears as **Figure 2-1**.

Although local land use and zoning ordinances would not apply to the parcels once they are acquired in trust, the Tribe intends to develop all projects on its trust lands in a manner that is consistent with certain specified City ordinances and codes.

Effects on Viewsheds Surrounding the Project

In **Section 3.13**, Aesthetics, the viewsheds surrounding the March's Point site are described and analyzed according to criteria expressing the strength of the viewing experience. Impacts to these viewsheds resulting from the build-out of Alternative A are identified below.

Viewshed A

Medium-range views of the March's Point site from State Route 20 (SR-20) would be more apparent for eastbound travelers; however, these views would be relatively short in duration and not within the forward line of sight for drivers. These views would be of the west side of the casino and would include

the porte-cochere and main sign. Landscaping along SR-20 would provide some screening of the site. Impacts to this viewshed would be less than significant.

Viewshed B

Three rural residential houses south of the March's Point site would experience views of the proposed casino. Landscaping along the southern border of the property would provide partial screening of the site from these residences. However, the landscape buffer would not completely obstruct views of the proposed development, especially the parking lot safety lighting. The view from the residences would change from one of an open rural and grassy area, to one of commercial development consisting of the casino set amidst a planned landscape and paved parking. As discussed in **Section 4.9**, Land Use, the visual change is consistent with the Light Manufacturing zoning of the area and inclusion in the Growth Management Area. Thus, the commercial nature of the Proposed Project is not aesthetically inconsistent with long-range plans for the March's Point site. This change is considered moderate for nearby residents as it represents an alteration to their viewshed in a manner consistent with land use plans. Mitigation is provided in **Section 5.2.11** to further reduce this impact.

Shadow, Light and Glare

The one-story casino structure proposed under Alternative A would not cast a shadow on residences situated south of the site. There are no public areas in the immediate vicinity of the March's Point site other than roadways. Alternative A will have no shadow effects on either private residences or public areas.

Development of Alternative A would introduce new sources of light into a commercial/industrial and rural residential setting. In order to reduce the impacts from increased light sources, the design of Alternative A includes lighting systems that would minimize off-site scatter, glare, and provide for public safety (**Section 2.2.1**).

The use of glass panels and reflective ornamental detailing in the project design is unlikely to increase the glare to travelers on SR-20 due to the relative locations of the roadway and casino structure. The casino would be located far enough away from the residences so that shadow, light, and glare impact would be less than significant. Mitigation is provided in **Section 5.2.11** to further reduce this impact.

COMMUNITY CHARACTER

The City Comprehensive Plan governs development of the March's Point site, and gives an indication of the future goals for the area with regard to sense of place, quality of life, and general design. The area is zoned for Light Manufacturing (LM1) and is anticipated to be developed pursuant to this designation (City of Anacortes, 2010).

Aesthetic goals listed in the City Comprehensive Plan and discussed in **Section 3.13**, **Aesthetics** are to preserve natural elements and blend development with the surrounding environment to the extent feasible. Landscaping would provide partial screening on the property perimeters would provide a blending between the proposed development and the surrounding area. The existing and proposed land uses in the area, combined with the existence of a nearby gaming facility indicate that project related impacts to community character would be less than significant.

4.13.2 ALTERNATIVE B – REDUCED INTENSITY

VISUAL IMPACTS

The main visual features under Alternative B would remain the same as those under Alternative A, although the size of the casino and associated parking would be reduced. Additionally, the eastern portion of the site would remain undeveloped as the facility would be oriented toward the west. Refer to Alternative A for a more detailed discussion. A site plan for this alternative appears as **Figure 2-6**. The design of Alternative B would follow the same design and building codes described above for Alternative A.

Effects on Viewsheds Surrounding the Project

Viewshed A

Effects on viewsheds surrounding the March's Point site would be similar to those discussed under Alternative A, as the main visual elements would be the same. Views in Viewshed A that are experienced on SR-20 would be relatively short lived and not within the forward line of sight for drivers; therefore, the impact to Viewshed A would be less than significant.

Viewshed B

As described under Alternative A, the view from the residences located to the south would change from one of an open field, to one of commercial development consisting of the casino and paved surface level parking. As discussed in **Section 4.9**, Land Use, the City Comprehensive Plan anticipates that the site will eventually be developed for industrial land uses (City of Anacortes, 2010). Thus, the commercial nature of Alternative B is not inconsistent with long-range plans for the site. This change is not considered significant for nearby residents even though it represents a change to their viewshed in the short term. Mitigation is provided in **Section 5.2.11** to further reduce this impact.

Shadow, Light and Glare

Under Alternative B, the impacts of shadow on nearby residences are the same as those described under Alternative A. Therefore, as with Alternative A, the impacts from project related shadow from Alternative B would be less than significant.

The development of Alternative B would introduce new sources of light as described under Alternative A. The one-third reduction in size of the casino and parking would reduce the lighting by an equal amount; however, the landscape components of this alternative would be similar in amount, location, and type to those described for Alternative A. The use of glass plans and reflective ornamental detailing is unlikely to increase glare to travelers on SR-20 or for residences to the south due the location of the casino structure. This impact is considered less than significant. Mitigation is provided in **Section 5.2.11** to further reduce this impact.

COMMUNITY CHARACTER

Effects to community character would be similar to those experienced under Alternative A. The impacts to community character would be less than significant.

4.13.3 ALTERNATIVE C – RETAIL CENTER

VISUAL IMPACTS

The main visual features proposed under Alternative C would be similar to those of Alternatives A and B, although the footprint of the structures would be greater and the retail development would place buildings closer to the residential units located south of the March's Point site. The structures would still be one-story and no more than 30 feet tall. The Retail Development would include surface level parking on the March's Point site. A site plan for this alternative appears as **Figure 2-7**.

Effects on Viewsheds Surrounding the Project

Viewshed A

Effects on viewsheds surrounding the project would be substantially similar to those discussed under Alternatives A and B, as the main visual elements would be very similar. Views in Viewshed A that are experienced on SR-20 would be relatively short in duration and not within the line of sight for drivers; therefore impacts to this viewshed would be less than significant.

Viewshed B

Views from residences in Viewshed B would change from one of an open field to one of commercial development and paved parking. As discussed in **Section 4.9**, Land Use, the City Comprehensive Plan anticipates that the site will eventually be developed for industrial land uses (City of Anacortes, 2010). Thus, the commercial nature of Alternative C is not inconsistent with long-range plans for the site. Additionally, the Tribe has agreed to develop the Proposed Project consistent with certain specified city zoning ordinances also described in more detail in **Section 4.9**, Land Use. This change would not be considered significant for nearby residents although it represents a change to their viewshed in the short term. Mitigation is provided in **Section 5.2.11** to further reduce this impact.

Shadow, Light and Glare

Shadow and glare would be similar under Alternative C as with Alternatives A and B. Night time lighting on the March's Point site would be less under Alternative C because the Retail Development would have more restrictive hours of operation than a casino (as proposed under Alternatives A and B). Therefore, the impacts of lights on nearby residences would be less than those described under Alternative A and would be less than significant.

Through the use of downcast and directed lighting, low-pressure sodium bulbs, and strategically positioned lighting fixtures included within the design of Alternative C, the impacts of lighting off site would be minimized and less than significant. Mitigation is provided in **Section 5.2.11** to further reduce this impact.

COMMUNITY CHARACTER

Alternative C would introduce industrial and commercial elements to the March's Point site. The area is zoned Light Manufacturing and is anticipated to be developed consistent with this zoning. Development of a retail facility at the March's Point site would have no effect on community character.

4.13.4 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

VISUAL IMPACTS

Development of the casino and parking lot would encompass the entire Flats site west of the Tommy Thompson Trail. The casino would consist of a one-story structure of approximately 30 feet in height. The building would be a combination of glass and metal, with a mixture of natural materials including wood and stone. A porte-cochere located on the south side of the casino would serve as the main entrance. Appropriately scaled landscaping, including rock and water features, would enhance the aesthetically pleasing design of the buildings. A site plan for this alternative appears as **Figure 2-9**.

Effects on Viewsheds Surrounding the Project

In **Section 3.13**, Aesthetics, the viewsheds surrounding the Flats site are described and analyzed according to criteria expressing the strength of the viewing experience. Impacts to these viewsheds resulting from the build-out of Alternative D are identified below.

Viewshed C

Locating a casino adjacent to the Tommy Thompson Trail would affect the medium-range and close views for pedestrians and bicyclists. Other than perimeter landscaping, there would be little or no screening of the facility and parking lot from the Trail and viewers would see the facility for a moderate period of time due to slow speeds along the trail. Views from the trail are now primarily of an open area and RV parking; this would change to views of commercial development. Other views from the Tommy Thompson Trial include Fidalgo Bay and the refinery complex across the Bay. The impacts to this

viewshed are considered significant and mitigation is provided in **Section 5.0**, which would reduce this impact to a less than significant level.

Viewshed D

Developing the Flats site would alter the views for residents of the waterfront condominium situated to the immediately north of the site. Views from the south facing units would change from open space to a commercial development. Because the casino structure would be one-story (up to 30 feet tall) views of Fidalgo Bay from the condominium would not be obstructed. Measures to screen the facility would not be appropriate because these measures would also screen views of Fidalgo Bay.

The Flats site is zoned Commercial Marine and the site could be developed for water dependent commercial activities (City of Anacortes, 2010). If this were to occur, aesthetic impacts to the condominium would be greater than those associated with the casino project. Water dependent commercial activities would develop up to the shoreline while the casino proposal does not include development east of the Tommy Thompson Trial. Because development of the site for commercial marine activities is allowed in the zoning code and changes to the aesthetic quality are expected, impacts to this viewshed would be less than significant.

Shadow, Light and Glare

The casino would not be taller than 30 feet and would not cast a shadow on private residences or public areas for substantial portions of the day. The impacts of shadow from the development would be less than significant.

The development of Alternative D would introduce new sources of light into a rural residential setting. In order to reduce the impacts from increased light sources, design measures indentified in **Section 2.2.1** would be incorporated into the design of Alternative D. Through the use of downcast and directed lighting, low-pressure sodium bulbs, and strategically positioned lighting fixtures, the impacts of lighting off-site would be minimized and less than significant. The use of glass panels and reflective ornamental detailing in the project design would not increase glare to residences to the north. This impact is not considered significant as also discussed in **Section 4.16.12**. Mitigation is provided in **Section 5.2.11** to further reduce this impact.

COMMUNITY CHARACTER

As with Alternative A, the City Comprehensive Plan is the planning document governing development in this area. The Flats site is zoned as Commercial Marine (City of Anacortes, 2010). The area is anticipated for development and densification, as it is part of the City's Urban Growth Area. In order to attract customers, casinos must be aesthetically pleasing. If Alternative D were selected, the design of the casino would need to preserve natural elements and blend development with the surrounding environment

to the extent feasible as a way to attract customers and ensure success. Although the site is compact, landscaping incorporated into the project would help add natural elements. With anticipated development in the area, the impact to community character would be less than significant.

4.13.5 ALTERNATIVE E – NO ACTION

Under Alternative E, the March's Point site and the Flats site would remain undeveloped in the near term. In the future, the alternative sites could be developed consistent with the City zoning and Comprehensive Plan. For the March's Point site there could be industrial or manufacturing development. The Flats site could house an expansion of the Tribal owned Fidalgo Bay Resort or development of a water dependent commercial activity. These developments would affect surrounding residents who currently have open space and waterfront views of the alternative project sites. However, as this potential future development is planned in the City Comprehensive Plan, any significant impacts would be addressed and/or mitigated through compliance with City ordinances and requirements of the Comprehensive Plan. Therefore, the No Action Alternative would have less than significant effects.

4.14 INDIRECT AND GROWTH-INDUCING EFFECTS

The Council on Environmental Quality (CEQ) Regulations for Implementing the National Environmental Policy Act (NEPA) requires that an Environmental Impact Statement (EIS) analyze both the potential indirect and the "growth-inducing" effects of a proposed project (40 CFR Section 1502.16 [b], 40 CFR Section 1508.8 [b]).

> *…indirect effects…are caused by the action and are later in time or farther removed in the distance, but are still reasonably foreseeable. Indirect effects may include 'growth inducing effects' and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on …natural systems*.

Potential direct impacts caused by the action and which occur at the same time and place as the action, have been discussed in **Sections 4.2** through **4.13,** and cumulative impacts measured in conjunction with other reasonably foreseeable projects, whether past, present, or future, are addressed in **Section 4.15**. The potential indirect effects of off-site traffic improvement mitigation integral to the development of Alternatives A, B, C, and D are discussed independently below. Growth inducing effects are also discussed independently in **Section 4.14.3** since they are a distinct subset of indirect effects. Potential indirect effects associated with proposed alternatives would be minimized to a less than significant level though project design and recommended measures presented in **Section 5.0**. In addition, off-site infrastructure improvements may require approvals and permits from jurisdictional agencies, including the Washington Department of Transportation (WSDOT), Skagit County (County), and the City of Anacortes (City), and therefore may be subject to the Washington State Environmental Policy Act (SEPA). Implementation of permitting and SEPA requirements would further reduce the potential for significant adverse effects from off-site construction projects.

4.14.1 INDIRECT EFFECTS FROM OFF-SITE TRAFFIC MITIGATION IMPROVEMENTS

Mitigation measures have been provided in **Section 5.2.7** to provide for the safe and efficient vehicle and pedestrian movements and maintain traffic levels of service (LOS) in reasonable conformity with applicable City standards or at their pre-development levels. Construction of these improvements could generate indirect impacts in several areas, which are discussed below for each site (March's Point site and Flats site). Roadway improvements, which do not require construction, such as restriping and optimizing signal timing, would not generate significant indirect impacts and are, therefore, not discussed below.

MARCH'S POINT SITE

As described within **Section 4.8**, the traffic improvements recommended for Alternative C would result in the highest level of impact through required mitigation at the State Route 20 (SR-20)/ Thompson Road intersection. The mitigation measures require construction to widen/improve a section of Thompson Road between SR-20 and Summit Park Road (Alternatives A and C) and the removal of existing

vegetation along Stevenson Road (Alternatives A, B, and C). Construction of these improvements could generate indirect impacts in several areas, which are discussed below under each issue area.

FIDALGO BAY RESORT FLATS SITE

The development of Alternative D would require the paving of an existing grass median to create a median refuge lane on the south leg of R Avenue to mitigate potential impacts to circulation from operational traffic volumes. Construction of this improvement could generate indirect impacts in several areas, which are discussed below under each issue area.

ENVIRONMENTAL CONSEQUENCES

Geology and Soils

The construction of roadway improvements would require grading and the introduction of fill material. Changes to topography would be minor due to the topography of the construction area within and adjacent to existing roadways. The increase in impervious surfaces and additional cut-and-fill embankments could result in erosion of soils. Stable fill material, engineered embankments, and erosion control features would be used to reduce the potential for slope instability, subsidence and erosion in accordance with the jurisdictional agency (WSDOT and/or City) requirements for roadway construction. Watering during grading activities would mitigate the effect of wind erosion to the underlying soils. Effects to geology and soils would be less than significant.

With standard construction practices and specifications required by the jurisdictional agency and the Construction General National Pollutant Discharge Elimination System (NPDES) permit program, there would be no adverse effects to geology and soils as a result of off-site traffic mitigation under Alternative A, C, or D.

Water Resources

The development of roadway improvements at the SR-20/Thompson Road intersection could affect water resources due to grading and construction activities and an increase in impervious surfaces. Potential effects include an increase in surface runoff and increased erosion, which could adversely affect surface water quality due to increases in sediment and roadway pollutants such as grease and oil. Additionally, WSDOT is required by State and Federal regulations to have a stormwater permit in areas covered by Phase I and Phase II of the municipal stormwater permit program. WSDOT complies with a statewide permit to promote better management of stormwater runoff from all State highways. The permit covers stormwater runoff from State highways, rest areas, weigh stations, scenic view points, park-and-ride lots, ferry terminals, and maintenance facilities (Ecology, 2012).

Construction of roadway improvements that exceed one acre of land would be required to comply with the NPDES General Construction Permit Program. To comply with the program, a Stormwater Pollution Prevention Plan (SWPPP) would be developed that would include soil erosion and sediment control practices to reduce the amount of exposed soil, prevent runoff from flowing across disturbed areas, slow runoff from the site, and remove sediment from the runoff. A planning level analysis of the roadway improvements found that less than one acre of land would be affected and that an NPDES Construction General Permit would not be required. If a subsequent detailed design indicates that more than one acre could be affected, the project proponents would comply with the WSDOT NPDES permit requirement.

Curb and gutters, inlets, and other drainage facilities would be constructed to meet the standards of the jurisdictional agency and provide adequate facilities to direct stormwater runoff. With incorporation of these drainage features and compliance with the soil erosion and sediment control practices identified in the SWPPP, effects to water resources would be less than significant. Therefore, there would be no significant indirect effects to water resources as a result of off-site traffic mitigation under Alternative A, C, or D.

Air Quality

With the improved circulation resulting from traffic mitigation, the LOS at the impacted intersection would be improved, thereby reducing idling time and associated emissions. Construction generated dust and emissions would be controlled by best management practices (BMPs) mandated by the State of Washington. Construction emissions would be minimal given the temporary nature of construction activities. As traffic improvements would take place within an area in attainment for all criteria air pollutants, corresponding air effects would not be significant.

Biological Resources

A biological survey of proposed intersection improvement area under Alternatives A, B, and C was conducted on October 21 and 22, 2009, May 25 and 26, 2010, and September 22 and 23, 2010. The survey concluded that intersection improvements would take place within nonnative annual grassland and ruderal/disturbed areas and sensitive biological communities, habitat for special status species, and wetlands would not be impacted. Similar to the riparian habitat on site, the vegetation to be removed to provide acceptable site distance does not provide quality wildlife habitat as it extends along the edge of a paved road and is not considered sensitive. There would be no significant indirect effects to biological resources as a result of off-site traffic mitigation under Alternatives A, B, or C.

The off-site intersection improvement area that would be paved under Alternative D is a ruderal/disturbed area that consists of mowed, leveled nonnative annual grassland that is maintained as a median between the north- and south-bound traffic along R Avenue. Although nonnative annual grassland provides a wildlife corridor for migration, the maintained grass median is not likely used as such because it is

surrounded by paved roads and residential and commercial development, which are barriers to wildlife migration, and is continually maintained. There would be no significant indirect effects to biological resources as a result of off-site traffic mitigation under Alternative D.

Cultural Resources

The cultural resources study of the March's Point site, including the proposed road improvement areas under Alternative A and C, found no cultural resources sites and made a recommendation that the development of the site would have no affect on historic properties. No significant impacts to cultural resources would result from off-site traffic improvements under Alternatives A or C. Alternative B improvements would not impact the ground surface therefore removing the potential for impacts to cultural resources.

The grass median proposed for paving under Alternative D is a previously disturbed area surrounded by paved roads and existing residential, commercial, and industrial development. Therefore, paving a previously disturbed median is unlikely to affect unknown cultural resources. No significant impacts to cultural resources would result from off-site traffic improvements under Alternative D.

Socioeconomic Conditions

Off-site traffic improvements would result in short-term disturbances to traffic flows in the immediate vicinity of construction activities. Access to surrounding businesses and residences, as well as the Summit Park Bible Church, would be maintained throughout construction. The area of roadway impacts would be of a limited size and would not create socioeconomic effects. The fair share costs of these roadway improvements would be borne by the Tribe. Therefore, there would be no indirect effects to socioeconomic conditions as a result of off-site traffic mitigation under Alternative A, B, C, or D.

Transportation/Circulation

Off-site traffic mitigation would result in beneficial effects to traffic circulation. Off-site traffic improvements would be limited in scale and duration, resulting only in short-term disturbances to traffic flows. If construction activities require temporary lane closures to accommodate construction equipment, a traffic management plan would be prepared in accordance with the jurisdictional agency requirements, thus avoiding potentially adverse temporary effects.

Land Use

Construction of off-site traffic mitigation would not result in adverse land use effects. The roadway improvements would be in accordance with the jurisdictional agency and would not encroach upon any existing uses; therefore, there would be no indirect effects to land use as a result of off-site traffic mitigation under Alternatives A, C, or D.

Public Services

Traffic improvements may require relocation of utilities in the construction area. These utilities may include overhead electricity lines and telecommunication lines and underground natural gas lines. Relocation of these lines could result in temporary interruptions in service to some homes and businesses in the area. However, because these effects are common when upgrading and maintaining utility services, and because potential service interruptions would be temporary, these effects are considered to be less than significant. No significant effects to police, fire, or emergency medical services would occur as access to homes and businesses would be maintained during the construction period. Therefore, there would be no significant indirect effects to public services as a result of off-site traffic mitigation under Alternatives A, C, or D.

Noise

Construction of intersection improvements would result in minimal noise impacts. Any impacts that may occur would be reduced through Ecology and City regulations including the imposition of construction hours and the use of noise abatement equipment. The proposed Thompson Road/SR-20 improvement is not located on a residential street, and therefore noise would not likely affect sensitive receptors. Intersection improvements located within the residential area of the City under Alternative D would be mitigated in accordance with City policy. Accordingly, no significant indirect noise impacts are would occur as a result of off-site traffic mitigation under Alternatives A, C, and D.

Hazardous Materials

Construction of the off-site roadway improvements could potentially result in negative hazardous materials effects. The accidental release of hazardous materials used during grading and construction activities could pose a hazard to construction employees, surrounding residents, and the environment. Additionally, equipment used during grading and construction activities could ignite dry grasses and weeds in construction areas. However, these hazards, which are common to construction activities, would be minimized with adherence to State and Federal statutes and standard operating procedures, such as refueling in designated areas, storing hazardous materials in approved containers, clearing dried vegetation, and proper response and clean-up measures. Potential indirect hazardous materials impacts from the construction of off-site roadway improvements would be less than significant under Alternatives A, C, and D.

Aesthetics

With the modification and expansion of existing roadways and the removal of existing vegetation along Stevenson Road at the March's Point site, minor visual effects would occur. Road improvements would be made in areas that are already developed with roadway networks. Modified intersections and roadways would conform to modern design standards. Additionally, traffic improvements would not change surrounding land uses and would occur in areas with existing roadway networks. The vegetation

to be removed to provide adequate sight distance would be within the existing right-of-way; thus, removal of vegetation is not aesthetically inconsistent with log-range plans for the roadway. This change would be minimal for nearby residents. No significant indirect effects to aesthetics or community character would occur as a result of off-site traffic mitigation under Alternatives A, B, or C.

Paving of the grass median under Alternative D would not significantly alter the existing viewshed; therefore, no significant indirect effects to aesthetics or community character would occur as a result of off-site traffic mitigation under Alternative D.

4.14.2 GROWTH-INDUCING EFFECTS

NEPA requires that an EIS analyze "growth inducing effects" (40 C.F.R. §1502.16 (b), 40 C.F.R. §1508.8 (b)). A growth inducing effect is defined as one that fosters economic or population growth, or the construction of additional housing. Growth inducement could result if a project established substantial new permanent employment opportunities (e.g., new commercial, industrial, or governmental enterprises) or if it would remove obstacles to population growth (e.g., expansion of a wastewater treatment plant that could allow more construction in the service area). Direct growth inducement is possible if a project contains a component that by definition would lead to "growth," such as the construction of new housing. None of the project alternatives includes direct growth inducement. This section assesses the potential for indirect growth inducement for each development alternative.

ALTERNATIVE A – PROPOSED CASINO PROJECT

Developing Alternative A would result in one-time employment opportunities from construction and permanent employment opportunities from operation of the casino. These opportunities would result from direct, as well as indirect and induced effects. Construction employment would be temporary in nature, and would not be anticipated to result in the permanent relocation of employees into the City or the County.

Alternative A would result in approximately 347 employment opportunities, including direct, indirect, and induced opportunities. Of these, a majority of employment opportunities would be filled by people already residing within the region and would, therefore, not require new housing. As discussed in **Section 4.7.1**, there are anticipated to be approximately 9,700 vacant housing units in the County in 2014. Therefore, based on regional housing stock projections, and current trends in the County housing market data, there are anticipated to be more than enough vacant homes to support any employees who move to the area. As such, Alternative A is not expected to stimulate regional housing development. A significant adverse impact to the housing market would not occur.

Commercial growth resulting from the development of Alternative A could result from fiscal output generated throughout the City and County. Under Alternative A, this output would be generated from direct, indirect, and induced economic activity. Construction and operation activities would result in direct output to the industries discussed in **Section 4.7.1**. Businesses in these sectors would generate growth in the form of indirect output resulting from expenditures on goods and services at other area businesses. In addition, employees would generate growth from induced output resulting from expenditures on goods and services at other area businesses. Indirect and induced output could stimulate further commercial growth; however, such demand would be diffused and distributed among a variety of different sectors and businesses in the City and County. As such, significant regional commercial growth would not be anticipated to occur.

Development in the City or other cities within the County would be subject to the constraints of their respective general plans, local ordinances, and other planning documents. New projects resulting from any induced effect would be subject to appropriate project-level environmental analysis. As discussed above, the minimal amount of commercial growth that may be induced by Alternative A would not result in significant adverse environmental effects.

ALTERNATIVE B – REDUCED INTENSITY PROJECT

Alternative B would generate new employment opportunities that could result in additional housing and commercial demand. Alternative B would result in approximately 232 employment opportunities, including direct, indirect, and induced opportunities. Similar to Alternative A, a majority of positions would be filled with people already living in the region and would, therefore, not require new housing. The effect of housing and potential commercial growth would be comparable but to a lesser extent than Alternative A, since Alternative B is reduced in size. Similar to Alternative A, based on regional housing stock projections, and current trends in the County housing market data, there are anticipated to easily be more than enough vacant homes to support any employees who move to the area. As such, Alternative B is not expected to stimulate regional housing development and significant regional commercial growth would not be anticipated to occur.

Development in the City or other cities within the County would be subject to the constraints of their respective general plans, local ordinances, and other planning documents. New projects resulting from any induced effect would be subject to appropriate project-level environmental analysis. As discussed above, the minimal amount of commercial growth that may be induced by Alternative B would not result in significant adverse environmental effects.

ALTERNATIVE C – RETAIL PROJECT

Alternative C would generate new employment opportunities that could result in additional housing and commercial demand. Alternative C would result in approximately 617 employment opportunities, including direct, indirect, and induced opportunities. Similar to Alternative A, a majority of positions would to be filled with people already residing within the region and would, therefore, not require new housing. The effect of housing and potential commercial growth would be comparable to Alternative A, since the Alternative C development is similar in size. Similar to Alternative A, based on regional housing stock projections, and current trends in County housing market data, there are anticipated to easily be more than enough vacant homes to support any employees who move to the area. As such, Alternative C is not expected to stimulate regional housing development and a significant adverse impact to the housing market would not occur.

Development in the City or other cities within the County would be subject to the constraints of their respective general plans, local ordinances, and other planning documents. New projects resulting from any induced effect would be subject to appropriate project-level environmental analysis. As discussed above, the minimal impact to the County as a result of potential growth inducement would be less than significant.

ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE ALTERNATIVE

Development of Alternative D would generate one-time employment opportunities from construction and permanent employment opportunities from operation of a casino on the Flats site. These opportunities would result from direct as well as indirect and induced effects. Construction opportunities would be temporary in nature, and would not be anticipated to result in the permanent relocation of employees into the County.

Alternative D would result in approximately 347 employment opportunities, including direct, indirect, and induced opportunities. A majority of these positions would be filled with people already residing in the region and would, therefore, not require new housing. As discussed in **Section 4.7.1**, there are anticipated to be approximately 9,700 vacant housing units in the County in 2014. Therefore, based on regional housing stock projections, and current trends in County housing market data, there are anticipated to be more than enough vacant homes to support any employees who move to the area. As such, Alternative D is not expected to stimulate regional housing development. A significant adverse impact to the housing market would not occur.

Developing Alternative D could increase the potential for commercial growth throughout the County by increasing economic activity. Under Alternative D, this output would be generated from direct, indirect, and induced economic activity. Construction and operation activities would result in direct output to the industries discussed in **Section 4.7.1**. Businesses in these sectors would generate growth in the form of

indirect output resulting from expenditures on goods and services at other area businesses. In addition, employees from Alternative D would generate growth from induced output resulting from expenditures on goods and services at other area businesses. Indirect and induced output could stimulate further commercial growth; however, such demand would be diffused and distributed among a variety of different sectors and businesses in the County. As such, significant regional commercial growth would not be anticipated to occur.

Development in the City or other cities within the County would be subject to the constraints of their respective general plans, local ordinances, and other planning documents. New projects resulting from any induced effect would be subject to appropriate project-level environmental analysis. As discussed above, the minimal amount of commercial growth that may be induced by Alternative D would not result in significant adverse environmental effects.

ALTERNATIVE E – NO ACTION/ NO DEVELOPMENT ALTERNATIVE

Under the No Action/No Development Alternative, a change in the current land use of the March's Point site and Flats site are not reasonably foreseeable. None of the adverse or beneficial effects identified for the Proposed Project would be anticipated to occur.

4.15 CUMULATIVE EFFECTS

4.15.1 INTRODUCTION

Cumulative effects are defined as effects to the environment resulting from the incremental effect of the Proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR §1508.7).

A cumulative effects analysis broadens the scope of analysis to include effects beyond those attributable solely to implementation of the alternatives. The purpose of the cumulative effects analysis, as stated by the Council on Environmental Quality (CEQ) "is to ensure that federal decisions consider the full range of consequences" (CEQ, 1997a:3). The process of analyzing cumulative effects, or impacts, requires consideration of cumulative effects issues in each of the traditional components of the Environmental Impact Statement (EIS), including scoping, describing the affected environment, and determining environmental consequences. The incorporation of cumulative effects analysis also aids in the development of alternatives and appropriate mitigation measures.

The analysis in this section considers the incremental effects of the project alternatives on specific resources, ecosystems, and human communities that could occur in conjunction with other reasonably foreseeable actions, projects, and trends. As recommended by CEQ's *Considering Cumulative Effects*, only those potential cumulative effects that are considered to be relevant or consequential have been discussed in depth (CEQ, 1997a:12).

TEMPORAL EXTENT OF ANALYSIS

The time frame for the cumulative effects analysis generally extends to 2035; the Washington State Department of Transportation (WSDOT) planning horizon year (Transportation Engineering Northwest, 2011). The temporal horizon of the Skagit County (County) Comprehensive Growth Management Plan (GMP) is 2025 (Skagit County, 2007). Beyond 2035, information on growth patterns and future activities becomes scarce and speculative. Additionally, the masking of significant impacts by extension of the temporal limits reduces the usefulness of a more extended analysis. For many resources, information is unavailable to extend meaningful analysis to 2035; however, attempts have been made to provide all relevant information.

CUMULATIVE ENVIRONMENT

Substantial changes are not expected to occur in the western County between present and 2035, due to existing trends in population and employment growth combined with a lack of identified projects that are planned or otherwise reasonably expected to occur in the region. In August of 2012 the Samish Indian

Nation (Tribe) received environmental clearance for the development of a proposed gas station on 3.3-acres to the immediate west of the March's Point site at the southeast corner of Thompson Road and State Route 20 (SR-20). Through research of City of Anacortes (City), County, and WSDOT information, no additional development projects within the vicinity of the project sites were identified that are under construction or reasonably foreseeable at the time of analysis (City of Anacortes, 2013). Transportation Engineering NorthWest (TENW) additionally consulted with the County, the City, and WSDOT during preparation of the traffic study for this EIS specifically with respect to the scope of cumulative analysis.

Although no future concrete projects were identified in the immediate vicinity of the project sites, other than the Tribal gas station, it is reasonably foreseeable that some future projects will be constructed at some point prior to the 2035 cumulative year. Therefore, a general analysis of potential future cumulative projects has been included within the analysis in this section. The cumulative environment includes expanded geographic and temporal borders to include the effects on specific resources, ecosystems, and human communities that occur incrementally in conjunction with other potential future actions, projects, and trends.

SIGNIFICANCE OF CUMULATIVE IMPACTS

Some actions, which result in individually insignificant impacts, may have significant impacts when cumulative, synergistic or additive effects are considered. The significance of these effects is particularly evident when impacts pass a threshold, such as causing a jeopardy opinion with regard to endangered species or a nonconformity determination under the Federal Clean Air Act (CAA).

Growth itself is very perceptible and is sometimes regarded by the public as both adverse and an impact. Generally, growth is simply a part of the cumulative environment rather than an effect or result. However, a shift to unplanned and unregulated growth could be a significant impact.

The effects of potential cumulative projects, analyzed in conjunction with the project alternatives, are presented below. Effects are described for each of the subject areas of the environment described in other portions of this EIS.

4.15.2 ALTERNATIVE A – PREFERRED CASINO PROJECT

GEOLOGY AND SOILS

While minimal cut-and-fill would be needed on the March's Point site to facilitate development, the project design ensures that the major topographic features would be preserved. Therefore, no significant changes to the existing land-forms would result. Soil loss could be cumulatively considerable if the project alone would not result in significant loss of topsoil, but taken together with all other developments may result in significant depletion of available soils. Local permitting requirements for construction would address regional geotechnical and topographic conflicts, seismic hazards, and resource extraction

availability. Approved future cumulative developments would follow applicable local permitting procedures. In addition, the project and all other developments that disturb one acre or more must comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Construction Permit, which requires that best management practices (BMPs) be implemented to address water quality degradation by preventing erosion, as outlined in **Section 5.2.1**. Therefore, implementation of Alternative A would not result in significant cumulative effects to geology or soils.

WATER RESOURCES

Cumulative effects to water resources may occur as the result of future developments in combination with development on the March's Point site. Examples of effects include increased sedimentation, increased pollution and increased stormwater runoff. Stormwater discharges from residential and industrial areas are of concern in managing surface water quality. Pollutants that accumulate in the dry summer months, such as oil and grease, asbestos, pesticides, and herbicides, create water quality problems due to their presence in high concentrations during the first major storm event.

The runoff characteristics of a watershed are altered when impervious surfaces replace natural vegetation. Changes in runoff characteristics may increase stream volumes, increase stream velocities, increase peak discharges, shorten the time to peak flows, and lessen groundwater contributions to stream base-flows during non-precipitation periods. Urban areas also have sources of non-point source pollution that can affect regional water quality. Construction and implementation of future transportation and development projects may likewise affect water quality by increasing sedimentation and pollution, and increasing stormwater runoff; however, future projects would include erosion control measures in compliance with the NPDES permit program and Ecology regulations that minimize impacts.

Alternatives A could contribute to changes in runoff characteristics (volume, velocity, and hydrograph) and water quality of the tributaries located near the March's Point site as a result of the conversion of open space to developed land. The Tribe has made appropriate design allowances which will reduce cumulative effects to a less than significant level as described in **Section 2.2.1**.

Due to the size of the adjacent proposed gas station, project construction would include erosion control measures in compliance with the NPDES permit program, as well as BMPs to protection surface and groundwater quality. If other future, unidentified projects were to occur in the study area, it is expected that these also would include erosion control measures in compliance with the NPDES permit program, and would include BMPs to protect surface and groundwater quality. Therefore, Alternative A would not result in or contribute to a significant cumulative water resource effects.

AIR QUALITY

Operational Mobile and Stationary Source Emissions

Operation of Alternative A would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary source emissions from combustion of natural gas in boilers and other equipment. Emission estimates for the cumulative year 2035 are provided in **Table 4.15-1**. Detailed calculations of mobile and stationary source emissions are included in **Appendix E**. The Mobile6.2 model was used to estimate emissions in the year 2035. Increased gas mileage from trucks and vehicles in the future is accounted for in the Mobile6.2 model. The increase in future gas mileage is attributed to improved fuel efficiency technology and stricter federal and state regulations.

TABLE 4.15-1
2035 OPERATION EMISSIONS - ALTERNATIVE A

Sources	Criteria Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	tons per year					
Stationary Source	0.06	0.01	0.11	0.01	0.06	0.02
Mobile Source	2.70	3.60	82.80	0.010	0.30	0.10
Total Emissions	**3.27**	**3.31**	**82.91**	**0.02**	**0.36**	**0.12**
Conformity de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Exceedance of de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Notes: N/A = Not Applicable; de minimus levels are not applicable due to attainment status (refer to Section 3.4)
Source: EIS Appendix E

Past, present and future development projects contribute to a region's air quality conditions on a cumulative basis; therefore by its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of the National Ambient Air Quality Standards (NAAQS). If the emissions from an individual project contribute toward exceedance of the NAAQS, then the project's cumulative impact on air quality would be significant. In developing attainment designations for criteria pollutants, the United States Environmental Protection Agency (EPA) considers the regions past, present and future emission levels. As stated in **Section 3.4** the project site and vicinity is in attainment for all criteria pollutants, therefore, air quality in the region is not cumulatively impacted. Thus, Alternative A would not contribute to a significant cumulative effect to air quality and no mitigation is required.

Carbon Monoxide Hot Spot Analysis

Hot Spot Analysis is conducted on intersections that after mitigation would have a level of service (LOS) of E or F (UC Davis, 1996). After the implementation of recommended mitigation for Alternative A, no intersection would have an LOS or an increase in delay in the cumulative year 2032 that would warrant a Hot Spot Analysis. No significant cumulative impacts would occur and no further analysis is needed.

Climate Change

Climate change is expected to result in global impacts, such as more erratic weather patterns, more frequent droughts, and rising sea level. Climate change is also expected to cause regional and local impacts, such as a reduction of snow pack in the mountain regions, increased drought periods, and reduced water tables.

Development of Alternative A would result in an increase in greenhouse gas (GHG) emissions related to construction, area sources (components of the Proposed Project that directly emit GHGs), and indirect sources related to mobile sources (trips generated), electricity, wastewater processing, and water transport.

Methodology

Two recent federal court decisions (*Massachusetts v. Environmental Protection Agency*, U.S., 1275 S.Ct. 1438, 1462 [2007] and *Center for Biological Diversity v. National Highway Safety Administration*, 508 F.3d 508 [9th Cir. 2007]), CEQ draft Guidance, and slowly increasing scientific consensus have resulted in general guidance regarding appropriate GHG analysis.

The approach used herein involves a combination of quantitative and qualitative analysis focusing on project impacts on federal and state efforts to reduce cumulative GHG emissions. The following analysis is consistent with the CEQ's *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*, released on February 18, 2010, which requires that a NEPA analysis of climate change quantify project-related GHG emissions and mitigate project-related GHG emissions.

As noted in **Section 3.4**, climate change is a global issue that is not being caused by any single development project, but rather by global increases in atmospheric GHG concentrations. Thus, global warming is most effectively addressed on a global level. Washington's global warming policies and legislation (most notably Executive Order 07-02 and SB 6001) are intended to be regional approaches to ensure that statewide emissions are reduced substantially in the future (to levels much lower than existing levels).

Ecology and the Washington Climate Advisory Team (WCAT) proposed a number of strategies and measures in 2007 that will be utilized for the state to meet its emissions reduction targets outlined House Bill 2815. These proposed strategies are outlined in *A Comprehensive Climate Approach for Washington* (Ecology, 2007), released in December 2007. In 2008 WCAT released the document *Leading the Way: Implementing Practical Solutions to the Climate Change Challenge*. This document reinforces the strategies outlined in the 2007 WCAT document and relates specifically to the way the strategies can be pursed. Most of the identified strategies focus on statewide action meant to curb emissions by changing statewide planning or policies rather than changes to individual development projects. However, some of

the strategies may be directly applicable to individual commercial developments. Alternative A was reviewed to determine if it complied with all directly applicable strategies, thereby supporting the state's efforts to significantly reduce its cumulative contribution to global climate change (to levels recommended by the Intergovernmental Panel on Climate Change [IPCC]).

The CEQ has issued draft guidance for evaluating project-level climate change impacts under the National Environmental Policy Act (NEPA), which it is currently in the process of finalizing. The CEQ NEPA Guidance requires that a project's GHG emissions be quantified and an analysis conducted, particularly if the project is projected to directly emit greater than 25,000 metric tons (MT) per year of Carbon Dioxide (CO_2). Although the Proposed Project would not directly emit greater than 25,000 MT per year of CO_2, a full climate change analysis is included below.

Carbon Dioxide Equivalent

Carbon dioxide equivalent (CO_2e) is a method by which GHGs other than CO_2 are converted to a CO_2-like emission value based on a heat-capturing ratio. As shown in **Table 4.15-2**, CO_2 is used as the base and is given a value of one. Methane (CH_4) has the ability to capture 21 times more heat than CO_2; therefore, CH_4 is given a CO_2e value of 21. Emissions are multiplied by the CO_2e value to achieve one GHG emission value. By providing a common measurement, CO_2e provides a means for presenting the relative overall effectiveness of emission reduction measures for various GHGs in reducing project contributions to global climate change.

TABLE 4.15-2
GREENHOUSE GAS CO_2 EQUIVALENT

Gas	CO_2e Value
CO_2	1
CH_4	21
N_2O	310
HFCs/PFCs[1]	6,500
SF_6[1]	23,900

Notes: CO2e =Carbon dioxide equivalent
[1] High-global warming potential pollutants
CH4 = methane, N2O = nitrous oxide
HFCs/PFCs = hydroflourocarbons/perflourocarbons
SF6 = sulfur hexaflouride
Source: IPCC, 2007.

GHG Emission Estimates and Reduction Measures

EPA approved Mobile6.2, AP 42, and OFFROAD 2007 emissions modeling software and emission factors were used to estimate area, construction, and mobile emissions. CH_4 and N_2O emissions from mobile sources were estimated using emission factors from the Local Government Operations Protocols (LGOP, 2008) and converted to CO_2e. Indirect emissions, which include electricity use, water

conveyance, and wastewater treatment, were estimated using Ecology Reporting Rule emission factors. Based on modeled results, direct construction emissions would be approximately 2,469 metric tons (MT) of CO_2. As shown in **Table 4.15-3**, Alternative A would result in direct GHG emissions at 3,561 MT of CO_2e per year, and indirect emissions of 6,135 MT of CO_2e per year, which are well below the CEQ reporting standard of 25,000 MT of CO_2e per year. The primary component of the Proposed Project's GHG emissions is from mobile sources. As noted in **Section 3.4.1**, the federal government has recently enacted measures that would reduce project-related GHG emissions from mobile sources. Alternative A would not result in a significant effect associated with cumulative GHG emissions and climate change.

TABLE 4.15-3
ALTERNATIVE A PROJECT-RELATED GHG EMISSIONS

Alternative A	GHGs	CO_2e Emissions (ST)	Conversion Factor (ST/MT)	GHG Emissions in CO_2e (MT per year)
Direct				
Construction	CO_2	2,713	0.91	2,469
Area	CO_2	1,200	0.91	1,092
			Subtotal	3,561
Indirect				
Mobile	CO_2	5,255	0.91	4,782
Mobile	CH_4/N_2O in CO_2e	33	0.91	30
Electricity Usage	CO_2e			840
Solid Waste	CO_2e			469
Water/Wastewater	CO_2e			30
			Subtotal	6,151
Total Project-Related GHG Emissions				**9,712**

Notes: ST = short tons; MT = metric tons; CO_2e = carbon dioxide equivalent
Source: OFFROAD, 2007, EPA, 2003b; LGOP, 2008.

Additionally, as discussed above and in **Section 3.4**, Washington's policies would result in a reduction of statewide emissions, including indirect emissions resulting from Alternative A, to levels below current background levels. Of the strategies that would ensure a statewide reduction in GHG emissions, five were determined to apply to Alternative A. The other strategies do not apply to because they either apply to state entitlements, planning-level strategies, or industry specific incentives. As presented in **Table 4.15-4**, recommended mitigation measures in **Section 5.2.3** would ensure compliance with applicable WCAT GHG reduction strategies.

BIOLOGICAL RESOURCES

Cumulative biological resources effects would occur if Alternative A, in conjunction with other projects, results in an adverse effect to state or federally listed species; contributes to a reduction in the number of a listed species, affects the species long term sustainability; causes development that permanently disturbs a

wildlife corridor; results in an effect to sensitive habitat that is of regional significance; or results in a conflict with regional conservation goals.

TABLE 4.15-4
CONSITENCY WITH STATE EMISSIONS REDUCTION STRATEGIES

WCAT Number	WCAT 2007 Strategy	Project Consistency
RCI-10	More Stringent Appliance/Equipment/Lighting Efficiency Standards, and Appliance and Lighting Product Recycling and Design	Alternative A would be consistent with this strategy after implementation of mitigation recommended in **Section 5.2.3**.
RCI-11	Policies and/or Programs Specifically Targeting Non-energy GHG Emissions	Alternative A would be consistent with this strategy after implementation of mitigation recommended in **Section 5.2.3**.
T-5	Quantification of GHG impacts of Transportation Plans, Programs, and Projects	Although Alternative A is not a "Transportation Project" there is however a large transportation element involved; therefore this analysis has quantified mobile emissions and is in compliance with strategy T-5.
T-11	Low Carbon Fuel Standard	85 percent of GHG emissions are emitted from mobile sources. Vehicles visiting the casino would be required to comply with this policy strategy. Therefore Alternative 1 is in compliance with this strategy.
AW-3	Significant Expansion of Source Reduction, Reuse, Recycling, and Composting	Alternative A would be consistent with this strategy after implementation of mitigation recommended in **Section 5.2.3**.

Source: Ecology, 2007.

Potential cumulative impacts to biological resources from developing the casino and the cumulative gas station development, both to be located on federal trust property would both require measures to mitigate potential impacts to biological resources. Potential impacts from Alternative A would be reduced to a less than significant level through measures incorporated into project construction and design and mitigation (**Section 5.2.4**). Due to the lack of identified cumulative developments in the project area, other than the gas station project, and since potential future off-site development would follow State or federal environmental requirements, cumulative impacts to biological resources would be considered less than significant.

CULTURAL RESOURCES

No significant cultural resources have been identified within or adjacent to the March's Point site. However, the records search and archival research indicate that the study area is in a region sensitive for prehistoric/pre-contact resources and historical resources. Based on this sensitivity, Alternative A could impact unknown buried archaeological resources, with no surface evidence indicating their presence. Mitigation for potential impacts to unknown cultural resources is specified in **Section 5.2.5.** Significant cumulative impacts to cultural resources could occur if sites were lost, damaged, or destroyed without appropriate recordation or data recovery. Cultural resources are afforded substantial protection through

federal and state regulations the National Historic Preservation Act of 1966 (NHPA), the Washington State Environmental Policy Act (SEPA) and county historic preservation guidance. Alternative A would not contribute towards potential significant cumulative effects on cultural resources, because the design of Alternative A would not impact known cultural resources, construction activities would follow mitigation regarding unknown resources, and potential future developments would follow historic preservation guidance.

SOCIOECONOMIC CONDITIONS

Cumulative socioeconomic effects related to the lifestyle and economic well being of local residents could occur in the project area as the result of Alternative A. Alternative A would introduce new economic activity in the City and surrounding County, which is a beneficial effect to the region. Cumulative non-residential development would also add to the economic activity of the area; however, current economic conditions do not indicate that these cumulative projects taken together would cause any adverse economic conditions such as a shortage of labor or housing. When considered with potential future growth in County through 2035 there may be cumulative socioeconomic effects including impacts to the local labor market, housing availability, and impacts to government. These effects would occur as the region's economic and demographic characteristics change, as the population grows, and as specific industries expand or contract. Planning documents for the County and the City would continue to designate land uses for businesses, industry, and housing, as well as plan public services which would anticipate growth in the region. Further, potential socioeconomic effects of Alternative A would be avoided through compliance with state and local agreements described in **Section 1.5,** including the requirements within the Tribal-State gaming compact. If the adjacent gas station development is able to capture business from casino patrons, the gas station would gain a moderate cumulative economic benefit from developing these two, separate projects in close proximity to each other. Therefore, Alternative A would not contribute to significant cumulative socioeconomic effects.

TRANSPORTATION

No significant new trip generating projects, other than the proposed casino development and the adjacent gas station development, have been identified or approved in the vicinity of the project site in cumulative environment (**Appendix D**). Traffic generated by the proposed gas station development on the southeastern corner of the intersection of Thompson Road and SR-20 is included as part of the background conditions in the Transportation Impact Study (TIS) in **Appendix D**. The increase in traffic generated by Alternative A in the cumulative year would not contribute to unacceptable traffic operations at the study intersections outline in **Section 4.8**. However, without mitigation measures proposed under the opening year condition, these intersections would have unacceptable operating conditions in the cumulative year. Implementation of Mitigation Measures provided in **Section 5.2.7** would restore the intersections to acceptable or pre-development conditions; therefore, development of Alternative A would not contribute towards significant cumulative effects on traffic and circulation

Transit, Bicycle, and Pedestrian Facilities

As discussed in **Section 4.8**, sufficient parking is available onsite and sidewalk and bicycle facilities do not currently provide direct access to the March's Point site. Development of Alternative A would include the construction of a sidewalk along Thompson Road and Stevenson Road frontage, and as no future cumulative development has been noted in the vicinity of the March's Point site, potential cumulative impacts to pedestrian facilities would be less than significant. If the area redevelops at some unforeseen point in the future and sidewalks are installed, the sidewalks along Thompson and Stevenson roads would complement these other improvements.

Development of the casino and the cumulative gas station development would increase density and possibly increase the demand for expanded transit service. Unfortunately, the cumulative effects of the casino are unlikely to be sufficient to warrant extending transit service to the area. Project related ridership in the cumulative year 2035 would be the same as that discussed in **Section 4.8** as no cumulative developments have been identified outside the adjacent gas station. Therefore, in the cumulative year a no significant effects would occur to public transportation.

LAND USE

Cumulative land use impacts within the City and County would be minimal because of the general planning obligations under the State Growth Management Act (GMA), which require the preservation of surrounding rural and resource (agricultural) lands and the limitation of urban development to designated urban growth areas. The County's general planning obligations under the GMA would prevent the conversion of surrounding rural lands to more intense uses. Development within the City and County will be consistent with applicable planning documents and policies, which prevent disorderly growth and incompatible land uses. While Alternative A would not be subject to local land use policies, as discussed in **Section 4.9**, Alternative A would not disrupt neighboring land uses, or otherwise conflict with neighboring land uses, and would not contribute to significant cumulative land use effects.

AGRICULTURE

Agricultural production and viable land for agriculture are both limited in the area. The March's Point site is located in an area designated for commercial development and no agricultural activities exist in the project area. As discussed above, development projects within the City and County will be consistent with their respective documents and policies, which prevent disorderly growth that could result in the conversion of surrounding agricultural lands to urban uses. Because Alternative A would not convert designated agricultural land to urban uses, it would not contribute to significant cumulative effects to agricultural lands.

PUBLIC SERVICES

Water Supply

The City has adequate capacity for the estimated water demands of Alternative A and future development in the area through the recent water treatment plant expansion project and existing water rights of approximately 55 mgd. Estimated future demand in 2029 is approximately 28.7 mgd average and 41 mgd maximum peak demand (City of Anacortes, 2011d)

Improvements made to the water system, and the construction of facilities added to the system are financed through water rates charged to customers, and contributions paid by developers. With the implementation of mitigation measures outlined in **Section 5.2.10**, Alternative A would not result in significant cumulative effects to the City's water supply system.

Wastewater

Currently the wastewater plant (WWTP) serving the City has a treatment capacity of 4.5 million gallons per day (mgd) and a daily flow of approximately 2.05 mgd. There is adequate surplus capacity to accommodate the peak (0.41 mgd) wastewater flows from Alternative A and potential future cumulative development in the area. Potential future upgrades to and expansion of infrastructure, if warranted, would be funded through development fees. With the implementation of mitigation measures described in **Section 5.2.10**, Alternative A would not result in significant cumulative effects to the City's wastewater collection and treatment system.

Solid Waste

The Roosevelt Landfill currently receives approximately 7 million tons per year of solid waste and has a life expectancy of at least 100 years with the cumulative developments and Alternative A (Whiteman, pers. communication, 2011). Projected solid waste generation for Alternative A would be a small contribution to the waste stream and would not substantially decrease the life expectancy of the landfill and, therefore, would not result in significant cumulative effects to solid waste services.

Electricity, Natural Gas, and Telecommunications

Electrical, natural gas, and telecommunications lines run extensively throughout the City and County. Individual projects would be responsible for paying development or user fees to receive electrical or natural gas services. Since potential future cumulative developments would require consultation with these service providers and occur according to planned land uses, capacity would be made available for the projects. While these providers may have the capacity to provide service there may be new infrastructure needed in undeveloped areas. Individual projects would be responsible for paying development or user fees to receive electrical, natural gas, cable, and telephone services. Thus, the cumulative effects would be less than significant.

Law Enforcement

The City of Anacortes Police Department (APD) would provide law enforcement service for Alternative A. The Tribe has offered to enter into an agreement to reimburse the City for reasonable direct and indirect costs incurred in conjunction with providing these services. The APD and Skagit County Sheriff's Department would provide service to other potential future cumulative developments located in the vicinity of the March's Point site. While the cumulative projects may increase demands to law enforcement services, resources to service Alternative A would be provided through the service agreement. New development would fund City and County services including law enforcement through development fees and property tax. Thus development of Alternative A would not create incremental significant effects when combined with the cumulative projects. The cumulative effect is less than significant.

Fire Protection and Emergency Medical Services

The City of Anacortes Fire Department (AFD) would provide fire protection and emergency medical service for Alternative A. As stated as mitigation in **Section 5.2.8**, the Tribe has offered to enter into an agreement to reimburse the City for reasonable direct and indirect costs incurred in conjunction with providing these services to the March's Point site. The AFD and local volunteer fire departments would provide service to other potential future cumulative developments located in the vicinity of the March's Point site. While the cumulative projects may increase demands for fire protection and emergency medical services, the Tribe would pay for the resources to service Alternative A as stipulated in the service agreement with the City. Other new developments would assist in funding any necessary expansion of fire or emergency medical services through property taxes and development fees. Thus development of Alternative A, when combined with other developments in the area, would not create significant cumulative effects on fire or emergency services. The cumulative effect is, therefore, less than significant.

NOISE

Future cumulative projects, developed within the City or County, would be required to comply with City or County noise provisions. These provisions include mitigation requirements when noise levels exceed compatible use standards. With the implementation of mitigation measures outlined in **Section 5.10**, Alternative A would not result in adverse cumulative effects to the ambient noise environment.

HAZARDOUS MATERIALS

Operation of the casino would require the delivery, storage, and use of minor amounts of hazardous materials used in the maintenance of similar commercial developments. As discussed in **Section 4.12**, with the incorporation of the BMPs outlined in **Section 5.2.10,** implementation of Alternative A would not result in significant effects associated with hazardous materials. Potential future cumulative projects, including development of the gas station at the corner of Thompson Road and SR-20, would be required

to follow applicable local, state, and federal regulations concerning hazardous materials management. Additionally, if development projects would disturb over one acre of land, an NPDES General Construction permit would be required. The NPDES permit includes requirements for construction BMPs to minimize the potential for hazardous materials contamination during construction. Therefore, Alternative A would result in a less than significant cumulative effect associated with hazardous materials.

AESTHETICS

Alternative A would result in a shift March's Point site. Landscaping would be used to enhance the visual character of the facilities under Alternative A. While development on the March's Point site and the development of the adjacent gas station would represent a shift from open space to commercial development, it is visually compatible with existing land uses in the project vicinity and would be generally consistent with local policies related to design, landscaping, sign, and lighting ordinances. Potential cumulative effects to visual resources would be less than significant.

4.15.3 ALTERNATIVE B – REDUCED INTENSITY

GEOLOGY AND SOILS

Cumulative effects associated with geology and soil resources resulting from the development of the reduced intensity casino under Alternative B would be similar to Alternative A (refer to **Section 4.15.2** above). Therefore, implementation of Alternative B would not result in significant cumulative effects to geology or soils.

WATER RESOURCES

Cumulative effects associated with water resources resulting from the development of the reduced intensity casino under Alternative B would be similar to Alternative A (refer to **Section 4.15.2** above). Therefore, implementation of Alternative B would not result in significant cumulative effects to water resources.

AIR QUALITY

Operational Mobile and Stationary Source Emissions

Operation of Alternative B would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary source emissions from combustion of natural gas in boilers and other equipment. Emission estimates for the cumulative year 2035 are provided in **Table 4.15-5**. Detailed calculations of mobile and stationary source emissions are included in **Appendix E**. The Mobile6.2 air quality model was used to estimate emissions in the year 2035. Increased gas mileage from trucks and vehicles in the future is accounted for in the Mobile6.2 model. The increase in future gas mileage is attributed to improved fuel efficiency technology and stricter federal and state regulations.

TABLE 4.15-5
2035 OPERATION EMISSIONS - ALTERNATIVE B

Sources	Criteria Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	tons per year					
Stationary Source	0.03	0.00	0.07	0.00	0.03	0.01
Mobile Source	2.60	1.90	58.80	0.10	0.20	0.10
Total Emissions	**2.63**	**1.90**	**58.87**	**0.10**	**0.23**	**0.11**
Conformity de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Exceedance of de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Notes: N/A = Not Applicable; de minimus levels are not applicable due to attainment status (refer to Section 3.4)
Source: EPA, 2003b; AP 42, 1995; AES, 2011d.

As stated in **Section 3.4** the March's Point site and vicinity is in attainment for all criteria pollutants, therefore, air quality in the region is not cumulatively impacted. Thus, Alternative B would not contribute to a significant cumulative effect to air quality.

Carbon Monoxide Hot Spot Analysis

Hot Spot Analysis is conducted on intersections that after mitigation would have a level of service (LOS) of E or F (UC Davis, 1996). Due to the lack of impacted intersections under Alternative B and the LOS of study intersections, a Hot Spot Analysis is not warranted. No significant cumulative impacts would occur and no further analysis is needed.

Climate Change

Methodology

The methodology use to estimate the impact of Alternative B on climate change is the same as Alternative A. Refer to **Section 4.15.2**.

GHG Emission Estimates and Reduction Measures

EPA approved Mobile6.2, AP 42, and OFFROAD 2007 emissions modeling software and emission factors were used to estimate area, construction, and mobile emissions. CH_4 and N_2O emissions from mobile sources were estimated using emission factors from the Local Government Operation Protocol (LGOP, 2008) and converted to CO_2e. Indirect emissions, which include electricity use, water conveyance, and wastewater treatment, were estimated using Ecology Reporting Rule emission factors. Based on modeled results, direct construction emissions would be approximately 2,109 metric tons (MT) of CO_2. As shown in **Table 4.15-6,** Alternative B would result in direct GHG emissions at 2,764 MT of CO_2e per year, and indirect emissions of 4,329 MT of CO_2e per year, which are well below the CEQ reporting standard of 25,000 MT of CO_2e per year. The primary component of Alternative B's GHG emissions is from mobile sources. As noted in **Section 3.4.1**, the federal government has recently enacted

measures that would reduce project-related GHG emissions from mobile sources. Alternative B would not result in a significant effect associated with cumulative GHG emissions and climate change.

TABLE 4.15-6
ALTERNATIVE B PROJECT-RELATED GHG EMISSIONS

Alternative B	GHGs	CO_2e Emissions (ST)	Conversion Factor (ST/MT)	GHG Emissions in CO_2e (MT per year)
Direct				
Construction	CO_2	2,318	0.91	2,109
Area	CO_2	720	0.91	655
			Subtotal	2,764
Indirect				
Mobile	CO_2	3,782	0.91	3,442
Mobile	CH_4/N_2O in CO_2e	23	0.91	21
Electricity Usage	CO_2e			537
Solid Waste	CO_2e			300
Water/Wastewater	CO_2e			19
			Subtotal	4,319
Total Project-Related GHG Emissions				**7,083**

Notes: ST = short tons; MT = metric tons; CO_2e = carbon dioxide equivalent
Source: OFFROAD, 2007; EPA, 2003b; LGOP, 2008.

Additionally, as discussed above and in **Section 3.4**, policies in the State of Washington would result in a reduction of statewide emissions, including indirect emissions resulting from Alternative B, to levels below current background levels. Of the strategies to ensure a statewide reduction in GHG emissions, five were determined to apply to Alternative B. The other strategies do not apply to because they either apply to state entitlements, planning-level strategies, or industry specific incentives. As presented in **Table 4.15-4**, recommended mitigation measures in **Section 5.2.3** would ensure compliance with applicable WCAT GHG reduction strategies.

BIOLOGICAL RESOURCES

Cumulative biological resources effects would occur if Alternative B, in conjunction with other projects, results in an adverse effect to state or federally listed species; contributes to a reduction in the number of a listed species, affects the species long term sustainability; causes development that permanently disturbs a wildlife corridor; results in an effect to sensitive habitat that is of regional significance; or results in a conflict with regional conservation goals.

Potential cumulative impacts to biological resources from developing the casino and the development of the cumulative gas station development, both to be located on federal trust property would both require measures to mitigate potential impacts to biological resources. Potential impacts from Alternative B

would be reduced to a less than significant level through measures incorporated into project construction and design and mitigation (**Section 5.2.4**). Due to the lack of identified cumulative developments in the project area, other than the cumulative gas station project, and since potential future off-site development would follow State or federal environmental requirements, cumulative impacts to biological resources would be considered less than significant.

CULTURAL RESOURCES

No significant cultural resources have been identified within or adjacent to the March's Point site. However, the records search and archival research indicate that the study area is in a region sensitive for prehistoric/pre-contact resources and historical resources. Based on this sensitivity, Alternative B could impact unknown buried archaeological resources, with no surface evidence indicating their presence. Mitigation for potential impacts to unknown cultural resources is specified in **Section 5.2.5.**

Significant cumulative impacts to cultural resources could occur if sites were lost, damaged, or destroyed without appropriate recordation or data recovery. Cultural resources are afforded substantial protection through federal and state regulations including the NHPA, SEPA, and local historic preservation guidance. Because Alternative B would not impact known cultural resources, implement mitigation regarding unknown resources, and potential future development would follow historic preservation guidance, Alternative B it would not contribute towards potential significant cumulative effects.

SOCIOECONOMIC CONDITIONS

Cumulative socioeconomic effects under Alternative B would be similar to those described under Alternative A, but to a lesser extent as a result of the reduced intensity of development on the March's Point site. When considered with potential future growth in western Skagit County through 2035, there may be cumulative socioeconomic effects including impacts to the local labor market, housing availability, schools, increased costs due to problem gambling, and impacts to local government. These effects would occur as the economic and demographic characteristics of the region change, as the population grows, and specific industries expand or contract. Alternative B would introduce new economic activity in the City, although to a lesser extent than Alternative A, which would be a beneficial effect to the region. Further, City and County planning documents will continue to designate land uses for businesses, industry, and housing, as well as plan public services which would anticipate and accommodate growth in the region. Therefore, Alternative B would not contribute to adverse cumulative socioeconomic effects.

TRANSPORTATION

Similar to Alternative A, however at a reduced size, the development of the casino under Alternative B would increase traffic in the cumulative year. The increase in traffic generated by Alternative B in the cumulative year would not contribute to unacceptable traffic operations at the study intersections outline

in **Section 4.8**. However, without mitigation measures proposed under the opening year condition, these intersections would operate unacceptable in the cumulative year. Implementation of mitigation measures provided in **Section 5.2.7** would restore the intersections to acceptable or pre-development conditions; therefore, development of Alternative B would not contribute towards significant cumulative effects on traffic and circulation.

Transit, Bicycle, and Pedestrian Facilities

Cumulative effects associated with transit, bicycle, and pedestrian facilities resulting from the development of the reduced intensity casino under Alternative B would be similar to Alternative A (refer to **Section 4.15.2** above). Therefore, implementation of Alternative B would not result in significant cumulative effects to transit, bicycle, and pedestrian facilities.

LAND USE

Cumulative impacts to land use and agriculture under Alternative B are similar to those described for Alternative A due to the similar size and scope of development on the March's Point site. Potential future cumulative development within the City and County would be consistent with applicable planning documents and policies, which prevent disorderly growth and incompatible land uses. While Alternative B would not be subject to local land use policies, as discussed in **Section 4.9**, Alternative B would not disrupt neighboring land uses, or otherwise conflict with neighboring land uses, and would not contribute to significant cumulative land use effects.

PUBLIC SERVICES

Cumulative impacts to public services are similar to those described for Alternative A, although reduced due to the reduced intensity casino proposed on the March's Point site under Alternative B. While some facilities in Alternative B are smaller, the same public services would be utilized. This also applies to the cumulative effects of possible mitigation including connection to the City water and wastewater systems. Compensation commitments in **Section 5.2.8** would reduce cumulative effect to less than significant levels.

NOISE

Cumulative noise impacts from construction and operation of Alternative B are similar to those described for Alternative A due to the smaller size and scope of development on the Thompson Road site. Potential future cumulative projects, developed within the City or County, would be required to comply with City or County noise provisions. These provisions include mitigation requirements when noise levels exceed compatible use standards. With the implementation of mitigation measures outlined in **Section 5.10**, Alternative B would not result in adverse cumulative effects to the ambient noise environment.

HAZARDOUS MATERIALS

Cumulative effects associated with hazardous materials resulting from Alternative B would be similar to Alternative A (refer to **Section 4.15.2**). Potential future cumulative projects would be required to follow applicable local, state, and federal regulations concerning hazardous materials management. Additionally, if development projects would disturb over one acre of land, an NPDES General Construction permit would be required. The NPDES permit includes requirements for construction BMPs to minimize the potential for hazardous materials contamination during construction. Therefore, Alternative B would result in a less than significant cumulative effect associated with hazardous materials.

AESTHETICS

Cumulative impacts to visual resources are similar to, but less than, those described for Alternative A. While development on the site would represent a shift from open space to commercial development, it is visually compatible with existing land uses in the project vicinity and would be generally consistent with local policies related to design, landscaping, sign, and lighting ordinances. Potential cumulative effects to visual resources under Alternative C would be less than significant.

4.15.4 ALTERNATIVE C – RETAIL CENTER

GEOLOGY AND SOILS

Cumulative effects associated with geology and soils resulting from Alternative C would be similar to Alternative A (refer to **Section 4.15.3**). Therefore, implementation of Alternative C would not result in significant cumulative effects to geology or soils.

WATER RESOURCES

Cumulative effects associated with water resources resulting from Alternative C would be similar to Alternative A (refer to **Section 4.15.3**). Therefore, implementation of Alternative C would not result in significant cumulative effects to water resources.

AIR QUALITY

Operational Mobile and Stationary Source Emissions

Operation of Alternative C would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary source emissions from combustion of natural gas in boilers and other equipment. Emission estimates for the cumulative year 2035 are provided in **Table 4.15-7**. Detailed calculations of mobile and stationary source emissions are included in **Appendix E**. The Mobile6.2 air quality model was used to estimate emissions in the year 2035. Increased gas mileage from trucks and vehicles in the future is accounted for in the Mobile6.2 model. The increase in future gas mileage is attributed to improved fuel efficiency technology and stricter federal and state regulations.

TABLE 4.15-7
2035 OPERATION EMISSIONS - ALTERNATIVE C

Sources	Criteria Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	tons per year					
Stationary Source	0.04	0.00	0.08	0.00	0.04	0.01
Mobile Source	6.80	5.10	157.40	0.20	0.50	0.20
Total Emissions	**6.84**	**5.10**	**157.48**	**0.20**	**0.54**	**0.21**
Conformity de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Exceedance of de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Notes: N/A = Not Applicable; de minimus levels are not applicable due to attainment status (refer to Section 3.4)
Source: EPA, 2003b; AP 42, 1995; AES, 2011d.

As stated in **Section 3.4** the project site and vicinity is in attainment for all criteria pollutants, therefore, air quality in the region is not cumulatively impacted. Thus, Alternative C would not contribute to a significant cumulative effect to air quality.

Carbon Monoxide Hot Spot Analysis

Hot Spot Analysis is conducted on intersections that after mitigation would have a LOS of E or F (UC Davis, 1996). After the implementation of recommended mitigation in **Section 5.2.8** for Alternative C, no intersection would have an LOS or an increase in delay in the cumulative year 2035 that would warrant a Hot Spot Analysis. No significant cumulative impacts would occur and no further analysis is needed.

Climate Change

Methodology

The methodology use to estimate Alternative C's impact on climate change is the same as Alternative A. Refer to **Section 4.15.2**.

GHG Emission Estimates and Reduction Measures

EPA approved Mobile6.2, AP 42, and OFFROAD 2007 emissions modeling software and emission factors were used to estimate area, construction, and mobile emissions. CH_4 and N_2O emissions from mobile sources were estimated using emission factors from the LGOP (LGOP, 2008) and converted to CO_2e. Indirect emissions, which include electricity use, water conveyance, and wastewater treatment, were estimated using (Ecology) Reporting Rule emission factors. Based on modeled results, direct construction emissions would be approximately 2,376 MT of CO_2. As shown in **Table 4.15-8**, Alternative C would result in direct GHG emissions at 3,195 MT of CO_2e per year, and indirect emissions of 10,386 MT of CO_2e per year, which are well below the CEQ reporting standard of 25,000 MT of CO_2e per year. The primary component of the Alternative C's GHG emissions is from mobile sources. As

noted in **Section 3.4.1**, the federal government has recently enacted measures that would reduce project-related GHG emissions from mobile sources. Alternative C would not result in a significant effect associated with cumulative GHG emissions and climate change.

TABLE 4.15-8
ALTERNATIVE C PROJECT-RELATED GHG EMISSIONS

Alternative C	GHGs	CO_2e Emissions (ST)	Conversion Factor (ST/MT)	GHG Emissions in CO_2e (MT per year)
Direct				
Construction	CO_2	2,611	0.91	2,376
Area	CO_2	900	0.91	819
			Subtotal	3,195
Indirect				
Mobile	CO_2	10,122	0.91	9,211
Mobile	CH_4/N_2O in CO_2e	62	0.91	56
Electricity Usage	CO_2e			689
Solid Waste	CO_2e			378
Water/Wastewater	CO_2e			25
			Subtotal	10,359
Total Project-Related GHG Emissions				**13,554**

Notes: ST = short tons; MT = metric tons; CO_2e = carbon dioxide equivalent
Source: OFFROAD, 2007; EPA, 2003b; LGOP, 2008.

Additionally, as discussed above and in **Section 3.4**, state policies would result in a reduction of statewide emissions, including indirect emissions resulting from Alternative C, to levels below current background levels. Of the strategies that would ensure a statewide reduction in GHG emissions, only five were determined to apply to Alternative C. The other strategies do not apply to because they either apply to state entitlements, planning-level strategies, or industry specific incentives. As presented in **Table 4.15-4**, recommended mitigation measures in **Section 5.2.3** would ensure compliance with applicable WCAT GHG reduction strategies.

BIOLOGICAL RESOURCES

Cumulative biological resources effects would occur if Alternative C, in conjunction with other projects, results in an adverse effect to state or federally listed species; contributes to a reduction in the number of a listed species, affects the species long term sustainability; causes development that permanently disturbs a wildlife corridor; results in an effect to sensitive habitat that is of regional significance; or results in a conflict with regional conservation goals.

Potential impacts to biological resources on the March's Point site and on the adjacent gas station development, including impacts to migratory birds, would be reduced to a less than significant level

through measures incorporated into project construction and design and mitigation (**Section 5.2.4**). Due to the lack of identified cumulative developments in the project area and since off-site development would be required to follow State or federal environmental requirements, cumulative impacts to biological resources under Alternative C would be considered less than significant.

CULTURAL RESOURCES

No significant cultural resources have been identified within or adjacent to the greater March's Point site that includes both the retail development and the gas station. However, the records search and archival research indicate that the study area is in a region sensitive for prehistoric/pre-contact resources and historical resources. Based on this sensitivity, Alternative C could impact unknown buried archaeological resources, with no surface evidence indicating their presence. Mitigation for potential impacts to unknown cultural resources is specified in **Section 5.2.5**.

Significant cumulative impacts to cultural resources could occur if sites were lost, damaged, or destroyed without appropriate recordation or data recovery. Cultural resources are afforded substantial protection through federal and state regulations including the NHPA, SEPA, and local historic preservation guidance. Because Alternative C would not impact known cultural resources on the greater March's Point site, implement mitigation regarding unknown resources, and potential future development would follow historic preservation guidance, Alternative C it would not contribute towards potential significant cumulative effects.

SOCIOECONOMIC CONDITIONS

Alternative C would introduce a new source of economic activity in the County. The creation of jobs and increased sales tax revenue that would result from the development of Alternative C and other potential future developments planned through 2035 are beneficial effects. Cumulative socioeconomic effects under Alternative C would be similar to those described under Alternative A but to a lesser extent as a result of the differing components of the project. Potential socioeconomic effects of Alternative C would be avoided through implementation of the mitigation measures described in **Section 5.2.6** and through compliance with state and local agreements described in **Section 1.5**. Therefore, Alternative C would not contribute to significant cumulative socioeconomic effects.

TRANSPORTATION

Similar to Alternative A, the development of the retail center under Alternative C would increase traffic in the cumulative year. The increase in traffic generated by Alternative C in the cumulative year would not contribute to unacceptable traffic operations at the study intersections outlined in **Section 4.8**. However, without mitigation measures proposed under the opening year condition, these intersections would operate unacceptable in the cumulative year. Implementation of mitigation measures provided in **Section 5.2.7** would restore the intersections to acceptable or pre-development conditions; therefore,

development of Alternative C would not contribute towards significant cumulative effects on traffic and circulation

Transit, Bicycle, and Pedestrian Facilities

Cumulative effects associated with transit, bicycle, and pedestrian facilities resulting from the development of the retail center under Alternative C would be similar to Alternative A (refer to **Section 4.15.2** above). Therefore, implementation of Alternative C would not result in significant cumulative effects to transit, bicycle, and pedestrian facilities.

LAND USE

Cumulative impacts to land use under Alternative C are similar to those described for Alternatives A and B. The proposed retail center would provide additional employment for new residents to the area but is not likely to provide significant services to residential customers. The addition of the retail center is unlikely to provide a significant incentive to induce for additional growth in the region. Cumulative land use effects would be less than significant.

PUBLIC SERVICES

Cumulative impacts to public services as a result of Alternative C are similar to those described for Alternatives A and B. While facilities differ in Alternative C, the same public services would be utilized. This also applies to the cumulative effects of mitigation in **Section 5.2.9** including connection to the City water and wastewater collection systems and the reliance upon City police and fire protective services. Compensation commitments in **Section 5.2.8** would reduce cumulative effect to less than significant levels.

NOISE

Potential cumulatively adverse effects to ambient noise environment for Alternative C would be similar to those of Alternative A, albeit to a lesser extent due to the reduced hours of operation of the retail development. Future cumulative projects, developed within the City or County, would be required to comply with City or County noise provisions. These provisions include mitigation requirements when noise levels exceed compatible use standards. Therefore, implementation of Alternative C would also result in minimal adverse cumulative effects to ambient noise environment.

HAZARDOUS MATERIALS

Cumulative effects associated with hazardous materials resulting from Alternative C would be similar to Alternative A (refer to **Section 4.15.2**). With the implementation of mitigation measures outlined in **Section 5.2.10**, Alternative C would not result in significant cumulative impacts associated with hazardous materials.

AESTHETICS

Cumulative impacts to visual resources are similar to those described for Alternative A. Alternative C would result in a shift from an undeveloped landscape to views of a developed area. Landscaping would be used to enhance the visual character of the facilities under Alternative A. While development on the site would represent a shift from open space to commercial development, it is visually compatible with existing land uses in the project vicinity and would be generally consistent with local policies related to design, landscaping, sign, and lighting ordinances. Potential cumulative effects to visual resources under Alternative C would be less than significant.

4.15.5 ALTERNATIVE D – FIDALGO BAY RESORT FLATS SITE

The Flats site is located approximately 2.6 miles northwest of the cumulative gas station development being considered on the corner of Thompson Road and SR-20. The distance between the Flats site and the only other known proposed development in the area reduces many of the potential environmental links, to both the natural and manmade elements of the environment, between the projects.

GEOLOGY AND SOILS

Some cut-and-fill slopes would be needed on the Flats site. However, the project design ensures that the major topographic features (i.e., hills and slopes) would be preserved. Local permitting requirements for construction would address regional geotechnical and topographic conflicts, seismic hazards, and resource extraction availability. Potential future cumulative developments would follow applicable local permitting procedures. In addition, Alternative D and all other future cumulative developments that disturb one acre or more must comply with the requirements of the NPDES Construction General Permit, which requires that BMPs be implemented to address water quality degradation by preventing erosion. Therefore, implementation of Alternative D would not result in significant cumulative effects to geology or soils when considered in combination with other known development projects in the area.

WATER RESOURCES

Cumulative effects to water resources may occur as the result of future developments in combination with development on the Flats site. Alternative D could contribute to changes in runoff characteristics (volume, velocity, and hydrograph) and water quality on the Flats site as a result of the conversion of open space to developed land. The Tribe has made appropriate design allowances which will reduce cumulative effects to a less than significant level as described in **Section 2.2.1**.

If future, unidentified projects were to occur in the study area, it is expected that these also would include erosion control measures in compliance with the NPDES permit program, and would include BMPs to protect surface and groundwater quality. Therefore, Alternative D would not result in or contribute to a significant cumulative water resource effects.

AIR QUALITY

Operational Mobile and Stationary Source Emissions

Operation of Alternative D would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary source emissions from combustion of natural gas in boilers and other equipment. Emission estimates for the cumulative year 2035 are provided in **Table 4.15-9**. Detailed calculations of mobile and stationary source emissions are included in **Appendix E**. The Mobile6.2 air quality model was used to estimate emissions in the year 2035. Increased gas mileage from trucks and vehicles in the future is accounted for in the Mobile6.2 model. The increase in future gas mileage is attributed to improved fuel efficiency technology and stricter federal and state regulations.

TABLE 4.15-9
2035 OPERATION EMISSIONS - ALTERNATIVE D

Sources	Criteria Pollutants					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	tons per year					
Stationary Source	0.05	0.01	0.10	0.01	0.05	0.02
Mobile Source	4.70	3.50	85.10	0.20	0.30	0.20
Total Emissions	**4.75**	**3.51**	**85.20**	**0.21**	**0.35**	**0.22**
Conformity de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Exceedance of de minimus Levels	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Notes: N/A = Not Applicable; de minimus levels are not applicable due to attainment status (refer to Section 3.4)
Source: EPA, 2003b; AP 42, 1995; AES, 2011d.

As stated in **Section 3.4** the Flats site and vicinity is in attainment for all criteria pollutants, therefore, air quality in the region is not cumulatively impacted. Thus, Alternative D would not contribute to a significant cumulative adverse effect to air quality.

Climate Change

Methodology

The methodology use to estimate Alternative D's impact on climate change is the same as Alternative A. Refer to **Section 4.15.2**.

GHG Emission Estimates and Reduction Measures

EPA approved Mobile6.2, AP 42, and OFFROAD 2007 emissions modeling software and emission factors were used to estimate area, construction, and mobile emissions. CH_4 and N_2O emissions from mobile sources were estimated using emission factors from the LGOP (LGOP, 2008) and converted to CO_2e. Indirect emissions, which include electricity use, water conveyance, and wastewater treatment, were estimated using (Ecology) Reporting Rule emission factors. Based on modeled results, direct construction emissions would be approximately 2,469 MT of CO_2. As shown in **Table 4.15-10**, Alternative D would result in direct GHG emissions at 3,452MT of CO_2e per year, and indirect emissions

of 7,933 MT of CO_2e per year, which are well below the CEQ reporting standard of 25,000 MT of CO_2e per year. The primary component of the Alternative D's GHG emissions is from mobile sources. As noted in **Section 3.4.1**, the federal government has recently enacted measures that would reduce project-related GHG emissions from mobile sources. Alternative D would not result in a significant effect associated with cumulative GHG emissions and climate change.

TABLE 4.15-10
ALTERNATIVE D PROJECT-RELATED GHG EMISSIONS

Alternative D	GHGs	CO_2e Emissions (ST)	Conversion Factor (ST/MT)	GHG Emissions in CO_2e (MT per year)
Direct				
Construction	CO_2	2,713	0.91	2,469
Area	CO_2	1,080	0.91	983
			Subtotal	3,452
Indirect				
Mobile	CO_2	7,202	0.91	6,554
Mobile	CH_4/N_2O in CO_2e	44	0.91	40
Electricity Usage	CO_2e			840
Solid Waste	CO_2e			469
Water/Wastewater	CO_2e			30
			Subtotal	7,933
Total Project-Related GHG Emissions				**11,385**

Notes: ST = short tons; MT = metric tons; CO_2e = carbon dioxide equivalent
Source: OFFROAD, 2007; EPA, 2003b; LGOP, 2008.

Additionally, as discussed above and in **Section 3.4**, state policies would result in a reduction of statewide emissions, including indirect emissions resulting from Alternative D, to levels below current background levels. Of the strategies that would ensure a statewide reduction in GHG emissions, five were determined to apply to Alternative D. The other strategies do not apply to because they either apply to state entitlements, planning-level strategies, or industry specific incentives. As presented in **Table 4.15-4**, recommended mitigation measures in **Section 5.2.3** would ensure compliance with applicable WCAT GHG reduction strategies.

BIOLOGICAL RESOURCES

Cumulative effects to biological resources would occur if Alternative D, in conjunction with potential future cumulative projects, would result in an significant effect to federally listed species, contribute to a reduction in the number of a listed species that would affect the species long term sustainability, cause development that permanently disturbs a wildlife corridor, results in an effect to sensitive habitat that is of regional significance, or results in a conflict with regional conservation goals.

Wildlife and Habitats

As identified in **Section 4.5**, the majority of impacts from Alternative D are on disturbed areas. These habitats provide limited resources for wildlife, are primarily inhabited by animal species accustomed to human disturbances, and are not considered sensitive habitats. As disruption of low quality habitat would not result in a significant effect to biological resources. No significant cumulative effects would occur from Alternative D.

Federally Listed Species/Migratory Birds

Potential impacts to federally listed species on the Flats site, including impacts to migratory birds, would be reduced to a less than significant level through measures incorporated into project construction and design and mitigation (**Section 5.2.4**). Due to the lack of identified cumulative developments in the project area and since off-site development would follow State or federal environmental requirements, cumulative impacts would be considered less than significant.

Wetlands and/or Waters of the U.S.

Approximately .006 acres of waters of the U.S. may be impacted by Alternative D. Due to the lack of identified cumulative developments in the project area and since off-site development would follow State or federal environmental requirements, Alternative D would not result in cumulative effects to potential waters of the U.S.

CULTURAL RESOURCES

A cultural resources study and field survey was conducted for the Flats site in 2009 by AES. The report is presented as **Appendix C**. With the implementation of mitigation in **Section 5.2.5**, development proposed under Alternative D would not affect known historic properties.

Mitigation for potential impacts to unknown cultural resources consist of following procedures specified in **Section 5.0** in instances where Federal funding licensing or permitting requires compliance with the NHPA. Other instances would require compliance with the SEPA or County regulations and requirements to consult with and/or notify the SHPO. Accordingly, there would be no significant cumulative impacts to cultural resources as a result of Alternative D.

SOCIOECONOMIC CONDITIONS

Cumulative socioeconomic effects related to the lifestyle and economic well being of local residents could occur in the project area as the result of Alternative D. Alternative D would introduce new economic activity in the City and surrounding County, which is a beneficial effect to the region. When considered with potential future growth in County through 2035 there may be cumulative socioeconomic effects including impacts to the local labor market, housing availability, and impacts to government. These effects would occur as the region's economic and demographic characteristics change, as the

population grows, and as specific industries expand or contract. Planning documents for the County and the City would continue to designate land uses for businesses, industry, and housing, as well as plan public services which would anticipate growth in the region. Further, potential socioeconomic effects of Alternative D would be avoided through compliance with state and local agreements described in **Section 1.5,** including the requirements within the Tribal-State gaming compact. Due to the distance between the Flats site and the cumulative gas station project, placing the casino on the Flats site is unlikely to generate any cumulative economic benefits to the gas station project. Therefore, Alternative D would not contribute to significant cumulative socioeconomic effects.

TRANSPORTATION/CIRCULATION

Similar to Alternative A, the development of the casino at the Flats site would increase traffic in the cumulative year. The increase in traffic generated by Alternative D in the cumulative year would not contribute to unacceptable traffic operations at the study intersections outline in **Section 4.8**. However, without mitigation measures proposed under the opening year condition, these intersections would operate unacceptable in the cumulative year. Implementation of Mitigation Measures provided in **Section 5.2.7** would restore the intersections to acceptable or pre-development conditions; therefore, development of Alternative D would not contribute towards significant cumulative effects on traffic and circulation

Transit, Bicycle, and Pedestrian Facilities

Cumulative effects associated with transit, bicycle, and pedestrian facilities resulting from the development of the casino on the Flats site would be similar to Alternative A (refer to **Section 4.15.2** above) with the exception that no cumulative developments are located in the immediate vicinity of the site. The existing Tommy Thompson Trail, to the immediate east of the Flats site provided access to the urban center of the City to the north. Local transit does not provide service the Flats site or other existing facilities along Fidalgo Bay Road. Therefore, implementation of Alternative D would not result in significant cumulative effects to transit, bicycle, and pedestrian facilities.

LAND USE

Because the Flats site is already designated for urban development, cumulative land use impacts are limited. The development of the Flats site with a casino complex would not alter the land use character of this area. Currently, the area is marked for marine industrial/commercial and residential growth, primarily in urban growth areas. Potential future cumulative projects must meet applicable local land use regulations and mitigate their impacts under SEPA. Therefore, the cumulative effect would be less than significant.

PUBLIC SERVICES

Water Supply

Alternative D and other potential future cumulative developments in the City would be served through the City's existing network and planned improvements. The City water treatment facility and allocated water rights are available for future development within the City service area. Through mitigation provided in **Section 5.2.8**, the Tribe intends to contract for service with City through a services agreement. Thus, the cumulative effect to municipal water suppliers would be less than significant.

Wastewater

Under Alternative D, mitigation in **Section 5.2.8** would require the Tribe to contract with the City to use their wastewater system and fund improvements necessary to provide wastewater service to the Flats site. Other potential future cumulative developments located within City limits would be served through the City wastewater system. To receive wastewater service from the City, new developments would be responsible for their share of needed improvements. Thus, the cumulative effect to municipal wastewater suppliers would be less than significant.

Solid Waste

The Roosevelt Landfill currently receives approximately 7 million tons per year of solid waste and has a life expectancy of at least 100 years with the cumulative developments and Alternative D (Whiteman, pers. communication, 2011). Projected solid waste generation for Alternative D would be a small contribution to the waste stream and would not substantially decrease the life expectancy of the landfill and, therefore, would not result in significant cumulative effects to solid waste services.

Electricity, Natural Gas, and Telecommunications

Electrical, natural gas, and telecommunications lines run extensively throughout the City and the County. Individual projects would be responsible for paying development or user fees to receive electrical or natural gas services. Since potential future cumulative developments would require consultation with these service providers and occur according to planned land uses, capacity would be made for the projects. While these providers may have the capacity to provide service there may be new infrastructure needed in undeveloped areas. Individual projects would be responsible for paying development or user fees to receive electrical, natural gas, cable, and telephone services. Thus, the cumulative effects would be less than significant.

Law Enforcement

APD would provide law enforcement service to Alternative D. In order to receive law enforcement services the Tribe has offered to enter into a contractual agreement with the City and reimburse it for costs associated with providing service to the Flats site. While potential future cumulative projects may increase demands to law enforcement services, resources to service Alternative D would be provided

through an agreement with the City. Thus Alternative D would not create incremental significant effects when combined with the cumulative projects. The cumulative effect is less than significant.

Fire Protection and Emergency Medical Services

AFD would provide law enforcement service to Alternative D. Under Alternative D, mitigation is provided in which the Tribe would contract with AFD and fund improvements and personnel to service the site. While the potential future cumulative projects may increase demands to fire protection and emergency medical services, through mitigation provided in **Section 5.2.8**, resources to service Alternative D would be provided. Thus Alternative D would not create incremental significant effects when combined with the cumulative projects. This cumulative effect would be less than significant.

NOISE

Operation of the casino would require the delivery, storage, and use of minor amounts of hazardous materials used in the maintenance of similar commercial developments. As discussed in **Section 4.12**, with the incorporation of the BMPs outlined in **Section 5.2.10,** implementation of Alternative D would not result in significant effects associated with hazardous materials management. Potential future cumulative projects would be required to follow applicable local, state, and federal regulations concerning hazardous materials management. Additionally, if development projects would disturb over one acre of land, an NPDES General Construction permit would be required. The NPDES permit includes requirements for construction BMPs to minimize the potential for hazardous materials contamination during construction. Therefore, Alternative D would result in a less than significant cumulative effect associated with hazardous materials.

AESTHETICS

Alternative D would result in a shift from an undeveloped landscape to views of a developed area. Development would encompass most of the Flats site. Landscaping would be used to enhance the visual character of the facilities under Alternative D. While development on the site would represent a shift from open space to commercial development, it is visually compatible with existing land uses in the project vicinity and would be generally consistent with local policies related to design, landscaping, sign, and lighting ordinances. Potential cumulative effects to visual resources would be less than significant.

The Flats site is currently undeveloped. Development of Alternative D would encompass most of the site. The Flats site is zoned Commercial Marine and the site could be developed for water dependent commercial activities. Landscaping would be used to enhance the visual character of the facilities under Alternative D. Increased development along Fidalgo Bay Road is consistent with the planned urbanization of the site and surrounding, and would follow applicable design, landscaping, sign, and lighting ordinances. This cumulative effect would be less than significant.

4.15.6 ALTERNATIVE E – NO ACTION

Under Alternative E, the proposed development would not take place, the trust acquisition and reservation proclamation would not occur, and no project-related activities would occur in these areas. Therefore, the No Action Alternative would not result in adverse cumulative effects.

SECTION 5.0

MITIGATION MEASURES

SECTION 5.0

MITIGATION MEASURES

5.1 INTRODUCTION

Mitigation measures are required for all of a proposed project's effects on the environment where it is feasible to do so (40 CFR Sections 1502.14(f) and 1502.16(h); CEQ 40 Most Asked Questions, 19a). NEPA regulations define mitigation as "avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; compensating for the impact by replacing or providing substitute resources or environments" (40 CFR Section 1508.20). These principles have been applied to guide design and siting criteria for the alternatives. Where potential effects on the environment were identified in early stages of project design and in Environmental Impact Statement (EIS) preparation, appropriate changes in the project description were made to minimize or eliminate them. Additionally, the following section provides measures to address specific effects identified in the preparation of the EIS or to further reduce the impacts to less than significant levels.

To ensure that the mitigation measures recommended to reduce significant impacts to a less-than-significant level are enforceable, mitigation measures are included as an integral part of the project description, required by and enforceable under Federal law, enforceable by the Tribe through tribal environmental laws, enforceable through the Tribal-State Compact for Class III Gaming, and/or enforceable by the Bureau of Indian Affairs (BIA).

5.2 MITIGATION MEASURES

5.2.1 GEOLOGY AND SOILS

The following mitigation measure shall be implemented for Alternatives A, B, C, and D:

A. The Tribe shall comply with the General Construction National Pollutant Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection Agency (EPA). As required by the NPDES permit, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared that addresses potential water quality impacts associated with construction of the project. The

SWPPP will include provisions for erosion prevention and sediment control and control of other potential pollutants.

The SWPPP will describe construction practices, stabilization techniques and structural Best Management Practices (BMPs) that are to be implemented to prevent erosion and minimize sediment transport. BMPs shall be inspected, maintained, and repaired to assure continued performance of their intended function. Reports summarizing the scope of these inspections, the personnel conducting the inspection, the dates of the inspections, major observations relating to the implementation of the SWPPP, and actions taken as a result of these inspections shall be prepared and retained as part of the SWPPP. The SWPPP shall include, as appropriate, the following requirements:

- Stripped areas shall be stabilized through temporary seeding using dryland grasses.
- Conveyance channels and severe erosion channels shall be mulched or matted to prevent excessive erosion.
- Exposed stockpiled soils shall be covered with plastic covering to prevent wind and rain erosion.
- The construction entrance shall be stabilized by the use of rip-rap, crushed gravel, or other such material to prevent the track-out of dirt and mud.
- Construction roadways shall be stabilized through the use of frequent watering, stabilizing chemical application, or physical covering of gravel or rip-rap.
- Filter fences shall be erected at all onsite stormwater exit points and along the edge of graded areas to stabilized non-graded areas and control siltation of onsite stormwater.
- Dust suppression measures included in Section 5.2.3 Air Quality shall be implemented to control the production of fugitive dust and prevent wind erosion of bare and stockpiled soils.

5.2.2 WATER RESOURCES

SURFACE WATER

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

Construction Impacts

A. As described under **Section 5.2.1**, Geology and Soils, prior to construction, an NPDES General Construction permit shall be obtained from the USEPA and a SWPPP shall be prepared and approved by the USEPA. The SWPPP shall describe construction practices, stabilization techniques and structural BMPs that are to be implemented to prevent erosion and minimize sediment transport as outlined above.

Operational Impacts

B. The Tribe shall incorporate source control BMPs to prevent the contamination of surface water and groundwater by polluted stormwater. Source control BMPs may include but are not limited to the following:

- Trash storage areas for receptacles will be designed to minimize stormwater runoff contact with disposed solid trash. Trash receptacles will contain lids and be placed on impervious pavement. Trash receptacles along with signs encouraging use of trash receptacles will be placed in common areas to reduce littering.
- Waste materials dumped into storm drain inlets will be prohibited with visible signs. All storm drain inlets located within the project boundaries will be stenciled with the message "Only rain down the drain" or a comparable statement.
- Educational materials will be provided to employees on measures to prevent stormwater pollution. Good housekeeping practices such as not littering, regular sweeping, and maintenance of vehicles can reduce runoff pollution.
- Guidance for proper handling of fertilizers, pesticides, cleaning solutions, and other common harmful chemicals will be provided to appropriate employees. Additionally, proper disposal of wash water, sweepings, and yard clippings will also be required.
- Landscaping for the project will be designed by a landscape architect and will include vegetation and an efficient irrigation system. Efficient irrigation systems maximize infiltration, provide retention, and slow runoff. Placement of vegetation and pervious surfaces at the outlet of runoff from impervious surfaces can help reduce the stormwater flow volume and level of contaminants. Pervious surfaces will be specified wherever reasonable and feasible.
- Landscaping will not be overwatered. Automated irrigation systems will be designed to prevent runoff at all times, including rain gauge equipment tied to the logic controls that shut down the system based on rainfall to prevent unnecessary irrigation cycles. Periodic visual inspection by maintenance staff to detect leaks will be implemented.
- Loading docks will be properly designed to reduce stormwater pollution. Design aspects can include covered docks or spill collection in the bay. Runoff must not be directed to depressed docks and direct connection to a storm drain is prohibited.
- On-site restaurants will have contained areas and sinks with sanitary sewer connections for disposal of wash water containing food wastes.
- Fertilizer use shall be limited to the minimum amount necessary and shall be adjusted for the nutrient levels in the water used for irrigation. Fertilizer shall not be applied immediately prior to an anticipated rain.

C. The Tribe shall incorporate treatment BMPS into the design of stormwater collection system to prevent the contamination of surface and groundwater by polluted stormwater. Treatment BMPs shall include but are not limited to the following:

- Inlet filters: Inlet filters shall be sized based on water quality flow rate.
- Detention Basins: The detention basin shall be sized for flood control attenuation and required the water quality volume.

5.2.3 AIR QUALITY

CONSTRUCTION IMPACTS

The following construction BMPs shall be implemented for Alternatives A, B, C, and D:

A. The Tribe shall control fugitive dust emissions (PM_{10}) during construction through the following actions, as applicable:

   - Spray exposed soil with water or other suppressant.
   - Minimize dust emissions during transport of fill material or soil by wetting down loads, ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks, and/or covering loads.
   - Promptly clean up spills of transported material on public roads.
   - Restrict traffic on site to reduce soil disturbance and the transport of material onto roadways.
   - Locate construction equipment and truck staging areas away from sensitive receptors as practical and in consideration of potential effects on other resources.
   - Provide wheel washers to remove particulate matter that would otherwise be carried off site by vehicles to decrease deposition of particulate matter on area roadways.
   - Cover dirt, gravel, and debris piles as needed to reduce dust and wind-blown debris.

B. The Tribe shall control emissions of volatile organic compounds (VOC), nitrogen oxides (NOx), sulfur oxides (SOx), and carbon monoxide (CO) whenever reasonable and practicable by requiring all diesel-powered equipment be properly maintained and minimizing idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. Since these emissions would be generated primarily by construction equipment, machinery engines shall be kept in good mechanical condition to minimize exhaust emissions.

C. The Tribe shall require all diesel powered equipment with a rating of 50 horsepower or greater to be equipped with diesel particulate filters.

D. If air quality complaints are made regarding the project, a representative of the Tribe shall meet with the complainant and appropriate regulatory agencies to address the issue.

OPERATIONAL IMPACTS

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

E. The Tribe shall provide transportation (e.g., shuttles) to nearby population centers, major transit stations, and multi-modal centers.

F. The Tribe shall ensure the use of clean fuel vehicles in the vehicle fleet where practicable.

G. The Tribe shall provide preferential parking for vanpools and carpools.

H. The Tribe shall provide on-site pedestrian facility enhancements such as walkways, benches, proper lighting, and building access, which are physically separated from parking lot traffic.

I. The Tribe shall provide adequate ingress and egress at entrances to the casino to minimize vehicle idling and traffic congestion.

5.2.4 BIOLOGICAL RESOURCES

The following mitigation measure shall be implemented for Alternatives A, B, C, and D:

A. Potential "water of the U.S" on the March's Point site shall be avoided if possible. If not possible, a permit will be obtained from the USACE prior to any discharge of dredged or fill material into waters of the U.S. A Nationwide Permit may be required since the development of any of the alternatives may result in impacts to less than 0.5 acres of potential waters of the U.S. on the March's Point site. The Tribe will comply with all the terms and conditions of the permit and compensatory mitigation will be in place prior to any direct effects to waters of the U.S. At minimum, mitigation measures require the creation of wetlands at a 1:1 ratio for any affected waters of the U.S. The USEPA will require a 401 Water Quality Certification permit prior to the USACE issuance of a 404 permit. Mitigation will be implemented in compliance with any permits.

B. A qualified biologist will conduct a preconstruction survey to determine the presence of roosting bats prior to commencement of construction activities and removal of trees. The preconstruction survey shall be conducted when bats are expected to be present and active. If no special status species of bats are roosting, then no further mitigation is required beyond documenting the results of the preconstruction survey in letter report for the Tribe's records. If roosting bats are present, the biologist will recommend appropriate bat exclusion devices (i.e., light weight polypropylene netting (0.16-inch mesh), plastic sheeting, tube-type excluders, etc.) that would be installed during a period in the day when the biologist determines that the roost site is not being occupied

by the bat. The appropriate bat exclusion devices will be installed prior to commencement of construction activities.

C. If feasible, tree removal activities will occur outside of the nesting season (the nesting season extends from March 1 to September 15). If tree removal activities are to be conducted during the nesting season, a preconstruction survey for nesting birds protected under the Migratory Bird Treaty Act (MBTA) within proposed disturbance areas will be conducted by a qualified biologist within 14 days prior to the anticipated date of the tree removal. If construction activities or tree removal activities are delayed or suspended for more than 14 days following the preconstruction survey, the project site shall be resurveyed. A copy of the preconstruction survey shall be submitted to the Tribe for their records. If an active nest is located within a tree anticipated for removal or is identified within 250 feet of construction activities, specific mitigation measures will be developed in consultation with the USFWS. At a minimum, these measures will include a 250-foot no-work buffer that will be maintained between the nest and construction activities until the USFWS approves of any other mitigation and any trees proposed for removal will be postponed until a qualified biologist has determined the young have fledged and are independent of the nest site.

D. The Tribe will comply with the best management practices and mitigation measures identified in **Sections 2.2**, **5.2.1**, **5.2.2**, and **5.2.10** to ensure that the project would not degrade water quality within designated bull trout critical habitat and essential fish habitat (EFH) and Chinook salmon EFH.

The following mitigation measure shall be implemented for Alternative D:

E. A qualified biologist will conduct a preconstruction survey for bald eagle nests within one-mile of the project site. If an active nest is located within one mile of construction activities, the Tribe will comply with the recommendations identified in the USFWS (2007b) *National Bald Eagle Management Guidelines and Conservation* to avoid disturbing nesting bald eagles and their young. If the active nest is visible from the project site, recommendations include maintaining a buffer of at least 660 feet between construction activities and the nest, restricting all clearing, external construction, and landscaping activities within 660 feet of the nest until the nesting season over the bald eagle nesting season in the Pacific Northwest is from January 1 through August 15), and maintaining and establishing landscape buffers. If the active nest is not visible from the project site recommendations include maintaining a buffer of at least 660 feet between construction activities and the nest and maintaining and establishing landscape buffers.

5.2.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

A. In the event of any inadvertent discovery of prehistoric or historic archaeological resources or paleontological resources during construction-related earth-moving activities, all such finds shall be subject to Section 106 of the National Historic Preservation Act as amended (36 CFR 800). Specifically, procedures for post-review discoveries without prior planning pursuant to 36 CFR 800.13 shall be followed. All work within 50 feet of the find shall be halted until a professional archaeologist can assess the significance of the find. If any find is determined to be significant by the archaeologist, then representatives of the Tribe shall meet with the archaeologist to determine the appropriate course of action, including the development of a Treatment Plan, if necessary. All significant cultural materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional archaeologist according to current professional standards.

B. If human remains are discovered during ground-disturbing activities on Tribal lands, the Tribal Official and BIA representative shall be contacted immediately. No further disturbance shall occur until the Tribal Official and BIA representative have made the necessary findings as to the origin and disposition. If the remains are determined to be of Native American origin, the BIA representative shall notify a Most Likely Descendant (MLD). The MLD is responsible for recommending the appropriate disposition of the remains and any grave goods.

C. In the event of accidental discovery of paleontological materials during ground-disturbing activities, a qualified paleontologist shall be contacted to evaluate the significance of the find and collect the materials for curation as appropriate.

The following mitigation measure shall be implemented for Alternative D:

D. An archaeological monitor and/or a tribal monitor shall be present to observe all ground disturbing activities during construction and to ensure implementation of all mitigation measures.

E. The parking lot shall be reconfigured to avoid the previously identified on-site cultural resource area, or the resource shall be preserved in place by covering with protective fill material and then sealing the area with impervious parking lot material.

5.2.6 SOCIOECONOMIC CONDITIONS

None warranted.

5.2.7 TRANSPORTATION/CIRCULATION

The following mitigation measures shall be implemented for Alternatives A, B, and C:

A. The Tribe shall remove existing vegetation on the project property east of the Stevenson Road east access and shall fund 100 percent of the removal of vegetation east of the project site within the City's right-of-way on Stevenson Road, which would result in an acceptable sight distance to the east of the March's Point site.

B. The Tribe shall implement and pay a fair share contribution to the following mitigation measures for all alternatives, which would reduce effects associated with pedestrian and transit facilities:

- Sidewalks and pathways shall be planned and constructed on the March's Point site to connect site development to transit stops and public path and bikeways to encourage and facilitate use of transit and non-motorized travel modes.
- The Tribe shall implement the regional Commute Trips Reduction (CTR) programs, including employee trip reductions programs, employee shuttles and other similar means of achieving commute trip reduction.

The following mitigation measure shall be implemented for Alternative C:

C. Under Alternative C only, the Tribe shall fund 100 percent of the cost to construct a separate northbound left- and right-turn lane (for a northbound left, through and right turn lane) with an optimized signal split, 90-second cycle length, and a northbound left-turn with a minimum of 200 feet with taper at Intersection #1 – SR-20 / Thompson Road. In addition, the Tribe shall fund 100 percent to construct a southbound left-turn at Intersection #2 – Thompson Road / Summit Park Road and only provide a right-in, right-out and left-out along with through in/out movements along Summit Park Road and the proposed site access connection.

The following mitigation measures shall be implemented for Alternative D:

D. The Tribe shall fund 100 percent of the cost to close the intersection at SR-20 Spur / Fidalgo Bay Road and restripe Fidalgo Bay Road to make it a one-way northbound roadway from the SR-20 Spur to Weaverling Road.

E. The Tribe shall fund 100 percent of the cost to construct a median refuge lane on the south leg of R Avenue, which allows westbound left-turns from 30th Avenue at the intersection of 30th Street / R Avenue and provide directional signage to route traffic SR-20 to 30th Street then R Avenue to SR-20.

Although the following mitigation measure is not warranted by unacceptable traffic conditions, the Tribe will voluntarily fund the following roadway improvement to improve traffic operations and reduce queuing impacts along Thompson Road for Alternative A:

F. The Tribe shall fund 100 percent of the cost to construct a separate northbound left-turn/through lane (for a northbound left and through lane) with an optimized signal split, 90-second cycle length, and a northbound left-turn with a minimum of 135 feet with taper at Intersection #1 – SR-20 / Summit Park Road.

5.2.8 PUBLIC SERVICES

WATER SUPPLY

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

A. The Tribe shall enter into an agreement with the City of Anacortes for municipal water service to the project site.

B. Water conservation measures shall be implemented, including low flow fixtures and electronic dispensing devices in faucets.

WASTEWATER SERVICE

The following mitigation measure shall be implemented for Alternatives A, B, C, and D:

C. The Tribe shall obtain a services agreement with the City of Anacortes to provide municipal sewer service.

SOLID WASTE

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

D. Construction waste shall be recycled to the fullest extent practicable.

E. Environmentally preferable materials shall be selected, to the extent practical, for construction of facilities.

F. A solid waste management plan shall be adopted by the Tribe that addresses recycling and solid waste reduction on site. These measures shall include, but not be limited to, the installation of a trash compactor for cardboard and paper products, and annual waste stream analysis.

G. Recycling bins shall be installed throughout the facilities for glass, cans and paper products.

H. Decorative trash and recycling receptacles shall be placed strategically throughout the site to encourage people not to litter.

I. Security guards shall be trained to discourage littering on site.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

J. The Tribe shall contact the Utility Notification Center, which provides a free "Dig Alert" to all excavators (e.g., contractors, homeowners, and others) in Washington. This call shall automatically notify all utility service providers at the excavator's work site. In response, the utility service providers shall mark or stake the horizontal path of underground facilities, provide information about the facilities, and/or give clearance to dig.

K. Buildings shall be thoroughly insulated and weatherized so as to minimize energy loss due to heating and cooling waste. Doors and windows shall be regularly inspected for air leaks, and shall be caulked or weather-stripped as appropriate where leaks are identified. Storm windows and double-paned glass shall be used to the extent practicable, shall be maintained in good repair, and shall be weatherized. New windows shall meet energy-saving criteria set forth by the National Fenestration Rating Council (NFRC). Caulk and sealant shall be used as appropriate to prevent air leaks where plumbing, ducting, or electrical wiring penetrates through exterior walls, floors, ceilings, and soffits over cabinets. Rubber gaskets shall be installed as appropriate behind outlet and switch plates on exterior walls. Exterior walls shall be sealed with appropriate sealants.

L. For heating systems, filters on furnaces shall be cleaned or changed once a month or as needed. Energy-efficient equipment, such as appliances bearing the ENERGY STAR® logo, shall be selected for purchase and installation.

M. The selected heating, ventilation, and air conditioning (HVAC) system shall minimize the use of energy by means of using high efficiency variable speed chillers, high efficiency low emission steam and/or hot water boilers, variable speed hot water and chilled water pumps, variable air volume air handling units, and air-to-air heat recovery where appropriate.

N. Energy efficient lighting shall be installed throughout the facilities. Dual-level light switching shall be installed in support areas to allow users of the buildings to reduce lighting energy usage when the task being preformed does not require all lighting to be on. Day lighting controls shall be installed near windows to reduce the artificial lighting level when natural lighting is available. Controls shall be installed for exterior lighting so it is turned off during the day.

PUBLIC HEALTH AND SAFETY

The following mitigation measures shall be implemented for Alternative C:

O. The Tribe shall adopt and comply with standards no less stringent than federal public health standards for food and beverage handling.

P. The Tribe shall develop the retail structure in accordance with the International Building Code.

Q. The Tribe shall allow inspection of food and beverage services by appropriate health inspectors, during normal hours of operation, to assess compliance with applicable standards.

LAW ENFORCEMENT

The following mitigation measures shall be implemented for Alternatives A, B, and D:

R. In accordance with Item C-1 Section XIV, Public Health and Safety, of the Tribal-State Compact for Class III Gaming, the Tribe shall contribute to a fund for purposes of providing assistance to non-tribal service agencies.

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

S. The Tribe shall provide on-site security for casino operations to reduce and prevent criminal and civil incidents.

T. All parking areas shall be well lit and monitored by parking staff, and/or roving security guards at all times during operation. This will aid in the prevention of auto theft and other similar criminal activity.

U. Areas surrounding the gaming facilities shall have "No Loitering" signs in place, be well lit and be patrolled regularly by roving security guards. This will aid in the prevention of illegal loitering and all crimes that relate to, or require, illegal loitering.

V. The Tribe shall provide traffic control with appropriate signage and the presence of peak-hour traffic control staff. This would aid in the prevention of off-site parking, which could create possible security issues.

W. The Tribe shall conduct background checks of all gaming employees and ensure that all employees meet licensure requirements established by the Indian Gaming Regulatory Act (IGRA) and the Tribe's Gaming Ordinance.

X. The Tribe shall adopt a Responsible Alcoholic Beverage Policy that shall include, but not be limited to, checking identification of patrons and refusing service to those who have had enough to drink.

Y. Prior to operation the Tribe shall enter into agreements to reimburse the City of Anacortes Police Department and the Skagit County Sheriff's Office for reasonable direct and indirect costs incurred in conjunction with providing law enforcement services.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICE

The following mitigation measures shall be implemented for Alternatives A, B, and D:

Z. In accordance with Item C-1 Section XIV, Public Health and Safety, of the Tribal-State Compact for Class III Gaming, the Tribe shall contribute to a fund for purposes of providing assistance to non-tribal service agencies.

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

AA. During construction, any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws. Staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak.

BB. Prior to operation the Tribe shall enter into a service agreement to reimburse the City of Anacortes Fire Department for additional demands caused by the operation of the facilities on trust property. The agreement shall address any required conditions and standards for emergency access and fire protection systems.

5.2.9 NOISE

The following mitigation measure shall be implemented for Alternatives A, B, C, and D:

A. Construction using heavy equipment shall not be conducted between 10:00 p.m. and 7:00 a.m. Additionally, the following measures shall be used to minimize impacts from noise during work hours (7:00 a.m. to 10:00 p.m.):

- All engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits.

- Loud stationary construction equipment shall be located as far away from residential receptor areas as feasible.
- All diesel engine generator sets shall be provided with enclosures.

5.2.10 HAZARDOUS MATERIALS

The following mitigation measures shall be implemented for Alternatives A, B, C, and D:

A. Hazardous materials must be stored in appropriate and approved containers in accordance with applicable regulatory agency protocols.

B. Potentially hazardous materials, including fuels, shall be stored away from drainages and secondary containment shall be provided for all hazardous materials stored during construction and operation.

C. Vehicles and equipment used during construction shall be provided proper and timely maintenance to reduce potential for mechanical breakdowns leading to a spill of materials into water bodies.

D. Fuel, oil, and hydraulic fluids shall be transferred directly from a service truck to construction equipment tanks and shall not otherwise be stored onsite. Paint, thinner, solvents, cleaners, sealants, and lubricants used during construction shall be stored in a locked utility building, handled per the manufacturers' directions, and replenished as needed.

E. In the event that contaminated soil and/or groundwater are encountered during construction related earth-moving activities, all work shall be halted until a professional hazardous materials specialist or a qualified environmental professional can assess the extent of contamination. If contamination is determined to be significant, representatives of the Tribe shall consult with EPA to determine the appropriate course of action, which may include the development of a Sampling Plan and Remediation Plan.

5.2.11 AESTHETICS

The following BMPs shall be implemented for Alternatives A, B, C, and D:

A. Placement of lights on buildings shall be designed so as not to cast light or glare offsite.

B. Shielding, such as with a horizontal shroud, shall be used for all outdoor lighting so as to ensure it is downcast.

C. Timers shall be utilized so as to limit lighting to necessary times.

D. All exterior glass shall be non-reflective low-glare glass.

E. Screening features and natural elements should be integrated into the landscaping design of the alternatives to screen the view of the facilities from existing residences directly adjacent to the project site.

5.2.12 LAND USE

The following mitigation measure shall be implemented for Alternative D:

A. In accordance with the Coastal Zone Management Act (CZMA), to the maximum extent practicable, development of the Flats site shall be consistent with the applicable enforceable policies of the State of Washington Shoreline Management Act (SMA) and City of Anacortes Shoreline Master Program (SMP).

SECTION 6.0

CONSULTATION AND COORDINATION/ LIST OF PREPARERS

SECTION 6.0

CONSULTATION AND COORDINATION/ LIST OF PREPARERS

6.1 LEAD AGENCY

Bureau of Indian Affairs

Stanley Speaks, Regional Director

Dr. B.J. Howerton, M.B.A, Environmental Services Manager

6.2 COOPERATING AGENCIES

Samish Indian Tribe

Tom Wooten, Tribal Chairman

Tim King, Vice Chairman

Dana Matthews, Secretary

Tamara Rogers, Treasurer

Shawn MacAvoy, Tribal Council

Gary D. Hatch, Tribal Council

Dave Blackinton, Tribal Council

Leslie Eastwood, General Manager

City of Anacortes

The Honorable Dean Maxwell, Mayor

6.3 FEDERAL AGENCIES

U.S. Department of Interior, Fish and Wildlife Service

Jeffrey Chan, Division of Fisheries

U.S. Environmental Protection Agency

Dennis McLerran, Regional Director

6.4 STATE AND LOCAL AGENCIES AND UTILITIES

Washington State Department of Ecology

Jeannie Summerhays, Director, Northwest Regional Office

Washington State Department of Transportation
Roland Storme, WSDOT Mount Baker Area, Development Services Manager

City of Anacortes Fire Department
Jack Kennedy, Fire Marshal

City of Anacortes Police Department
John Small, Patrol Captain

City of Anacortes Planning and Community Development Department
Ryan Larson, Director

City of Anacortes Public Works Department
Fred Buckenmeyer, Public Works Director
Terry Nemeth, Water Maintenance Supervisor
Paul A. Randall-Gutter, Engineering Division Manager

Skagit County Board of County Commissioners
Ron Wesen, County Commissioner, District 1

6.5 ENVIRONMENTAL CONSULTANTS

Analytical Environmental Services (AES)

Principal-in-Charge:	David Zweig, P.E.
Project Director:	Ryan Lee Sawyer, AICP
Project Managers:	David Sawyer, B.A. Bibiana Alvarez, B.S
Technical Staff:	Kelly Bayne, M.S. (Biological Resources) Dana Hirschberg (Graphics) Glenn Mayfield, B.A. (Graphics) Jacqueline McCrory, B.A. (Aesthetics and Land Use) Erin Quinn, B.S. (Noise and Air Quality) Chad Steinwand, B.A. (Geology and Soils, Public Services) Ashley Wells, B.A. (Socioeconomics) Eben Margolis (Socioeconomics)

SECTION 7.0

ACRONYMS

SECTION 7.0

ACRONYMS

A

AASHTO	American Association of State Highway and Transportation Officials
ABAG	Association of Bay Area Governments
AD	Anno Domini
ADT	Average Daily Traffic
AES	Analytical Environmental Services
AFD	Anacortes Fire Department
AMR	American Medical Response
amsl	Above Mean Sea Level
AL	Action Level
ALPHA-BHC	Alpha-benzene hexachloride
APA	American Psychiatric Association
APD	Anacortes Police Department
APE	Area of Potential Effect
APGSA	Association of Problem Gambling Service Administrators
APN	Assessor's Parcel Number
ARPA	Archaeological Resources Protection Act
ASD	Anacortes School District
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
AST	Aboveground Storage Tank
ASTM	American Society of Testing Materials

B

BA	Biological Assessment
Beta-BHC	Beta-benzene hexachloride
bgs	Below Ground Surface
BIA	Bureau of Indian Affairs
BMPs	Best Management Practices
BOD	Biological Oxygen Demand
BP	Before Present

C

°C	Degrees in Celsius
CAA	Federal Clean Air Act
CAPs	Criteria Air Pollutants
CAFE	Corporate Average Fuel Economy
CCP	County Comprehensive Plan
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Index System

CFR	Code of Federal Regulations
cfs	Cubic Feet Per Second
CH_4	Methane
CM	Commercial Marine
cm	Centimeters
cmbs	Centimeters Below Surface
CNEL	Community Noise Equivalent Level
CNG	Cascade Natural Gas
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
CORRACTS	Corrective Action Report System
CORTESE	State index of properties with hazardous waste
CPP	County-wide Planning Policies
CPSC	Consumer Product Safety Commission
CSCSL	Confirmed and Suspected Contaminated Sites List
CSWMP	Comprehensive Solid Waste Management Plan
CvA	Cove Silty Clay Loam (0 to 3 percent slopes)
CWA	Federal Clean Water Act
CZMA	Coastal Zone Management Act

D

DAHP	Department of Archaeology and Historic Preservation
dB	Decibel
dBA	A-Weighted Decibel
DCE	Documented Categorical Exclusion
DCH	Ditch
DDD	Dichlorodiphenyldichloroethane
DDT	Dichlorodiphenyltrichloroethane
DEED RSTR	Deed Restriction
DEIS	Draft Environmental Impact Statement
DGER	Division of Geology and Earth Resources
DNR	Department of Natural Resources
DO	Dissolved Oxygen
DOH	Department of Health
DOT	Department of Transportation
DPM	Diesel Particulate Matter
DPS	Distinct Population Segment

E

EA	Environmental Assessment
Ecology	Washington State Department of Ecology
EDR	Environmental Data Resources, Inc.
EDNA	Environmental Designation for Noise Abatement
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EMFAC	Emission Factor
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
EO	Executive Order
EPA	United States Environmental Protection Agency

ESA	Environmental Site Assessment
ESU	Evolutionary Significant Unit
ETS	Environmental Tobacco Smoke

F

°F	Degrees in Fahrenheit
FBI	Federal Bureau of Investigation
FDA	Food and Drug Administration
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FF&E	Furniture, Fixture and Equipment
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIP	Federal Implementation Plans
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
FR	Federal Register
Ft.	Fort
FTA	Federal Transit Administration
FTE	Full-time Equivalent
FWPCA	Federal Water Pollution Control Act
FY	Fiscal Year

G

GAA	General Allotment Act
GFA	Gaming Floor Area
GHG	Greenhouse Gas
GIS	Geographic Information System
GLO	General Land Office
GMA	Growth Management Act
GMP	Growth Management Plan
GOIA	Washington Governor's Office of Indian Affairs
gpd	Gallons Per Day
gpm	Gallons Per Minute
g/vmt	Grams Per Vehicle Miles Traveled

H

HAP	Hazardous Air Pollutants
HAZNET	Hazardous Waste Information System
HB	House Bill
HCM	Highway Capacity Manual
HFCs/PFCs	Hydroflourocarbons/Perflourocarbons
hp	Horsepower
H.R. 2764	House of Representatives Bill 2764
HRA	Heritage Research Associates, Inc.
HUD	U.S. Department of Housing and Urban Development
H:V	Horizontal to Vertical
HVAC	Heating, Ventilation, and Air Conditioning
Hz	Hertz

I

I	Interstate
ICC(A)	Indian Claims Commission (Act)
IFC	International Fire Code
IF-NRL	Industrial Forest-Natural Resource Lands
IGRA	Indian Gaming Regulatory Act
IMPLAN	Impact Analysis for Planning
IPCC	Intergovernmental Panel on Climate Change
IRA	Indian Reorganization Act
IRIS	Integrated Risk Information System
ITE	Institute of Transportation Engineers

K

K-9	Canine
km	Kilometers
km^2	Square Kilometers
kv	Kilovolts
kW	Kilowatt

L

lbs	Pounds
LESA	Land Evaluation and Site Assessment
L_{dn}	Day-Night Average Sound Level
L_{eq}	Average Sound Level
LID	Local Improvement District
LM	Light Manufacturing
LOS	Level of Service
LUST	Leaking Underground Storage Tank

M

MADR	Modified Access Decision Report
MBR	Membrane Bioreactor Plant
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MFS	Minimal Functional Standards
MGD	Million Gallons Per Day
mg/L	Milligrams Per Liter
m/L	Milliliters
MLD	Most Likely Descendent
mm	Millimeter
MMIS	Modified Mercalli Intensity Scale
MMscf	Million Standard Cubic Feet
MOBILE 6.2	Vehicle Emission Modeling Software (EPA)
MOU	Memorandum of Understanding
mph	Miles Per Hour
MRSC	Municipal Research and Services Center of Washington
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSAT	Mobile Source Air Toxic

MW	Megawatt

N

N	Nitrogen
N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAGPRA	Native American Graves Protection and Repatriation Act
NASS	National Agriculture Statistical Service
NB	Northbound
NEPA	National Environmental Policy Act
NERRS	National Estuarine Research Reserve System
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFA	No Further Action
NFPA	National Fire Protection Administration
NFRAP	No Further Remediation Planned
NGISC	National Gambling Impact Study Commission
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration (NHTSA)
NIGC	National Indian Gaming Commission
NMFS	National Marine Fisheries Service
NO	Nitrogen Oxide
no.	Number
NOAA	National Oceanic and Atmospheric Administration
N_2O	Nitrous Oxide
NOA	Notice of Availability
NOI	Notice of Intent
NORC	National Opinion Research Center
NO_x	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPS	National Park Service
NPSGSC	National Public Sector Gaming Study Commission
NRC	National Research Council
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
NTU	Nephelometric Turbidity Units
NW	Northwest
NWCAA	Northwest Clean Air Agency
NWP	Nationwide Permit

O

O_3	Ozone
OAHP	Washing State Office of Archaeology and Historic Preservation
OFM	Office of Financial Management
OSHA	Occupational Safety and Health Administration

P

P	Phosphorus
Pb	Lead
PCB	Polychlorinated biphenyls
PCE	Passenger Car Equivalence
PEMC	Palustrine Emergent Seasonally Flooded
PL 280	Public Law 83-280
PM	Particulate Matter
PM_{10}	Particulate Matter Less Than 10 Micrometers in Diameter (inhalable particulate matter)
$PM_{2.5}$	Particulate Matter Less Than 2.5 Micrometers in Diameter
POTW	Publicly Owned Treatment Facility
ppb	Parts Per Billion
ppm	Parts Per Million
PPV	Peak Particle Velocity
PSD	Prevention of Significant Deterioration
PSE	Puget Sound Energy
PUD	Public Utilities District

R

RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
RCW	Revised Code of Washington
REC	Recognized Environmental Condition
ROD	Record of Decision
ROG	Reactive Organic Gasses
RPA	Register of Professional Archaeologists
RTC	Regional Transportation Council
RV	Recreational Vehicle

S

S	Sulfur
(S)- #	Sample Location Number
SA	Site Assessment
SAO	Washington State Auditor's Office
SB	Southbound
SB	Senate Bill
SCL	State Equivalent Comprehensive Environmental Response List
SCS	Soil Conservation Service
SEPA	State Environmental Policy Act
(sf)	Square Feet
SF_6	Sulfur Hexaflouride
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SMA	State of Washington Shoreline Management Act
SMP	Shoreline Master Program
SOP	Standard Operating Procedure
SO_x	Sulfur Oxide Gasses
SO_2	Sulfur Dioxide
SP	Shovel Probe

SPL	State Equivalent Priority
SQG	Small Quantity Generator
SR	State Route
SWAC	Solid Waste Advisory Committee
SWAT	Special Weapons and Tactics
SWD	Solid Waste Division
SWLF	Solid Waste Landfill
SWMP	Stormwater Management Program
SW/MWMP	Solid Waste/Moderate Waste Management Plan Update
SWPPP	Stormwater Pollution Prevention Plan

T

TAC	Toxic Air Contaminant
TAP	Toxic Air Pollutant
TAS	Treatment as State
TENW	Transportation Engineering NorthWest
TIA	Transportation Impact Analysis
TIS	Traffic Impact Study
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Loads
TNM	Traffic Noise Model
tpy	Tons Per Year
TRB	Transportation Research Board
TRIS	Toxic Release Inventory Database
TSD	Treatment, Storage, Disposal Facility
TSP	Total Suspended Particulates
TSS	Total Suspended Solids

U

UBC	Uniform Building Code
UC	University of California
UGA	Urban Growth Area
UGB	Urban Growth Boundary
U.S.	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank

V

VOC	Volatile Organic Compounds
Vol.	Volume
VLT	Video Lottery Terminal

W

WAC	Washington Administrative Code
WB	Westbound
WCAT	Washington Climate Action Team

WDFW	Washington Department of Fish and Wildlife
WDGER	Washington Division of Geology and Earth Resources
WNHDB	Washington National Heritage Database
WNHP	Washington Natural Heritage Program
WOFM	Washington Office of Financial Management
WRIA	Water Resource Inventory Area
WSDNR	Washington State Department of Natural Resources
WSDOT	Washington State Department of Transportation
WTP	Water Treatment Plant
WTPO	Water Treatment Plant Operator
WUTC	Washington Utilities and Transportation Commission
WWTP	Wastewater Treatment Plant

SECTION 8.0

REFERENCES

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REFERENCES

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APPENDICES

APPENDIX A

Cooperating Agency Letters

Samish Indian Nation
OF WASHINGTON

November 21, 2011

Stanley Speaks

Director Northwest Regional Office

Bureau of Indian Affairs

911 NE 11th

Portland, Oregon 97232

Dear Mr. Speaks:

The Samish Indian Nation is confirming our intent to participate as a cooperating agency in the EIS process for the Samish Casino project. We are looking forward to providing input and comments throughout the EIS review process.

Sincerely,

Thomas Wooten

Chairman

Cc: Tribal Council

Dr. BJ Howerton

MAILING ADDRESS: P.O. BOX 217 ANACORTES, WA. 98221
OFFICE: 2918 COMMERCIAL AVE. ANACORTES, WA. 98221
PHONE: (360) 293-6404 FAX: (360) 299-0790 www.samishtribe.nsn.us

Anacortes Planning, Community & Economic Development Dept.
Permit Center
P.O. Box 547, Anacortes, WA 98221-0547 PH (360) 293-1901
Ryan Larsen, *Planning, Community and Economic Development Director* FAX (360) 293-1938
Don Measamer, *Assistant Director, Building Official*

November 2, 2011

Bureau of Indian Affairs
Attn.: Stanley Speaks, Regional Director, NW Regional Office
911 NE 11th Avenue
Portland, OR 97232

Re: Cooperating Agency – Samish Indian Nation Casino Project

Dear Mr. Speaks,

Thank you for your letter of October 6, 2011 inviting the City of Anacortes to participate as a cooperating agency in the EIS process for the Samish Indian Nation casino project. The City accepts this role and looks forward to participating in review of the project and providing input as the process moves forward.

Sincerely,

Ryan C.

Ryan C. Larsen
Director - Planning, Community & Economic Development Department

cc: Mayor H. Dean Maxwell
Fred Buckenmeyer, Public Works Director

Washington State Department of Transportation
Paula J. Hammond, P.E.
Secretary of Transportation

Northwest Region
15700 Dayton Avenue North
P.O. Box 330310
Seattle, WA 98133-9710

206-440-4000
TTY: 1-800-833-6388
www.wsdot.wa.gov

November 1, 2011

RECEIVED
NOV 07 REC'D
Division of Environmental Cultural & Safety

Stanley M. Speaks
Regional Director
United States Department of the Interior
Bureau of Indian Affairs
Northwest Regional Office
911 N.E. 11th Avenue
Portland, Oregon 97232-4169

Dear Mr. Speaks:

Thank you for your October 6 letter to Secretary Hammond inviting the Washington State Department of Transportation (WSDOT) to become a cooperating agency in the development of the Environmental Impact Statement (EIS) for the Samish Indian Nation's proposed trust acquisition and casino project. We will participate in the EIS process; however, we respectfully decline the invitation to be a cooperating agency.

We have an excellent relationship with the Samish Indian Nation and have had discussions with them on this site located within the city of Anacortes as it relates to the state highway. Further to this point, we fully anticipate that they would seek our advice on an EIS or other mechanism if this project could create any potentially detrimental effect on the state transportation system.

As the EIS process progresses, please feel free to contact our region's point person for this matter, Todd Carlson, Planning and Engineering Services Manager, (360) 757-5780 or CarlsoT@wsdot.wa.gov.

Sincerely,

Lorena Eng, P.E.
Northwest Region Administrator

LEE/tc/fd

cc: Dr. B.J. Howerton
Paula Hammond
Megan Cotton
Todd Carlson

APPENDIX B

Notices

projector, such as maximum image size, color characteristics, factory pre-set timings, and frequency range limits. We find that the assembly and programming operations performed in Taiwan are sufficiently complex and meaningful so as to create a new article with a new character, name and use. *See, for e.g.,* HQ H034843 and H100055. Moreover, we note that some of the Chinese modules were made using Taiwanese parts. Through the operations undertaken in Taiwan, the individual parts lose their identities and become integral to the new and different article, i.e., the projector. *See Belcrest Linens.* Accordingly, we find that the country of origin of the projector is Taiwan.

HOLDING:

Based on the facts in this case, we find that the assembly and programming operations performed in Taiwan substantially transform the non-TAA country components of the projector. Therefore, the country of origin of the Model A and Model B projectors is Taiwan for purposes of U.S. government procurement.

Notice of this final determination will be given in the **Federal Register**, as required by 19 C.F.R. § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 C.F.R. § 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 C.F.R. § 177.30, any party-at-interest may, within 30 days of publication of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Sandra L. Bell, *Executive Director, Regulations and Rulings Office of International Trade.*

[FR Doc. 2011–20452 Filed 8–10–11; 8:45 am]

BILLING CODE 9111–14–P

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Notice of Intent To Prepare an Environmental Impact Statement for the Proposed Samish Indian Nation Fee-to-Trust Acquisition and Casino Project, Skagit County, WA

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice.

SUMMARY: The Bureau of Indian Affairs (BIA) as lead agency is gathering information necessary for preparing an Environmental Impact Statement (EIS) in connection with the Samish Indian Nation's (Tribe's) application for a proposed 11.41-acre fee-to-trust transfer and casino project to be located in Anacortes, Washington. The purpose of the proposed action is to improve the economic status of the tribal government so it can better provide housing, health care, education, cultural programs, and other services to its members. This notice also announces a public scoping meeting to identify potential issues and content for inclusion in the EIS.

DATES: Written comments on the scope of the EIS will be accepted until September 16, 2011. The public scoping meeting will be held on September 14, 2011, from 6 p.m. to 9 p.m. PDT, or until the last comment is heard.

ADDRESSES: You may mail or hand carry written comments to Mr. Stanley Speaks, Northwest Regional Director, Bureau of Indian Affairs, Northwest Region, 911 NE 11th Avenue, Portland, Oregon 97232. Please include your name, return caption, address and ''DEIS Scoping Comments, Samish Indian Nation Casino Project'' on the first page of your written comments. The public scoping meeting will be held at Fidalgo Bay Resort Community Center, 4701 Fidalgo Bay Road, Anacortes, WA 98221.

FOR FURTHER INFORMATION CONTACT: Dr. B.J. Howerton, Environmental Protection Specialist, BIA Northwest Region, (503) 231–6749.

SUPPLEMENTARY INFORMATION: The proposed action would transfer approximately 11.41 acres of land from fee to trust status. After the transfer, the Tribe would develop a casino, parking, and other supporting facilities. The property is located within the incorporated boundaries of the City of Anacortes, Washington, southeast of the intersection of Thompson Road and State Route 20. Areas of environmental concern identified for analysis in the EIS include land resources, water resources, air quality, noise, biological resources, cultural resources, resource use patterns, traffic and transportation, public health/environmental hazards, public services and utilities, socioeconomics, environmental justice, and visual resources/aesthetics. Alternatives identified for analysis include the proposed action, a no-action alternative, a reduced-intensity development alternative, a non-gaming alternative, and an alternate site location alternative. The range of issues and alternatives is open to revision based on comments received in response to this notice. Additional information, including a map of the project site, is available by contacting the person listed in the **FOR FURTHER INFORMATION CONTACT** section of this notice. Other related approvals may be required to implement the project, including approval of the Tribe's fee-to-trust application, determination of the site's eligibility for gaming, compliance with the Clean Water Act, and local service agreements. To the extent applicable, the EIS will identify and evaluate issues related to these approvals.

Public Comment Availability

Comments, including names and addresses of respondents, will be available for public review at the address shown in the **ADDRESSES** section, during regular business hours, 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask in your comment that your personal identifying information be withheld from public review, we cannot guarantee that this will occur.

Authority

This notice is published in accordance with sections 1503.1 of the Council on Environmental Quality Regulations (40 CFR parts 1500 through 1508) and section 46.305 of the Department of the Interior Regulations (43 CFR part 46), implementing the procedural requirements of NEPA, as amended (42 U.S.C. 4321 *et seq.*), and is in the exercise of authority delegated to the Assistant Secretary—Indian Affairs, by part 209 of the Departmental Manual.

Dated: July 29, 2011.

Larry Echo Hawk,

Assistant Secretary—Indian Affairs.

[FR Doc. 2011–20476 Filed 8–10–11; 8:45 am]

BILLING CODE 4310–W7–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLCA 942000 L57000000 BX0000]

Filing of Plats of Survey: California

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The plats of survey and supplemental plats of lands described below are scheduled to be officially filed in the Bureau of Land Management California State Office, Sacramento, California, thirty (30) calendar days from the date of this publication.

ADDRESSES: A copy of the plats may be obtained from the California State Office, Bureau of Land Management, 2800 Cottage Way, Sacramento,

SKAGIT PUBLISHING

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Heather Hernandez, Publisher

Affidavit of Publication in the matter of SVH-508871
In the Superior Court of the State of Washington In and For Skagit County

STATE OF WASHINGTON
County of Skagit *ss*

The undersigned, being first duly sworn on oath deposes that he/she is principal clerk of the Skagit Valley Herald, a daily newspaper. That said newspaper has been approved as a legal newspaper by the Superior Court of Skagit County and is now and has been for more than six months prior to the publication hereinafter referred to, published in the English language continually as a daily newspaper in Skagit County, Washington, and it is now and during all of said time was printed at an office maintained at the aforesaid place of publication of said newspaper.

That the annexed is a true copy of an advertisement, with publication dates, as it was published in regular issues (and not in supplemental form) of said newspaper commencing with the issue of August 12, 2011 and ending with the issue of August 12, 2011.

That such newspaper was regularly distributed to its subscribers during all of said period and the full amount of the fee charged for the foregoing is the sum of $352.50.

clerk

Date: August 15 , 2011

Subscribed and sworn to before me this
15th Day of August, 2011
Notary Public and for the State of Washington
Clerk's filing stamp

JAMES J. SARRO NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 11-19-14

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs
Environmental Impact Statement for the Proposed Samish Indian Nation Fee-to-Trust Acquisition and Casino Project, City of Anacortes, Skagit County, Washington.

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice.

SUMMARY: This notice advises the public that the Bureau of Indian Affairs (BIA) as lead agency intends to gather information necessary for preparing an Environmental Impact Statement (EIS) in connection with the Samish Indian Nation's (Tribe) application for a proposed 11.41-acre fee-to-trust transfer and casino project to be located in Anacortes, Skagit County, Washington. The purpose of the proposed action is to improve the economic status of the Tribal Government so it can better provide housing, health care, education, cultural programs, and other services to its members. This notice also announces a public scoping meeting to identify potential issues and content for inclusion in the EIS.

DATES: Written comments on the scope of the EIS will be accepted until September 16, 2011. The public scoping meeting will be held on September 14, 2011 from 6 p.m. to 9 p.m. PDT, or until the last comment is heard.

ADDRESSES: You may mail or hand carry written comments to Mr. Stanley Speaks, Northwest Regional Director, Bureau of Indian Affairs, Northwest Region, 911 NE 11th Avenue, Portland, Oregon, 97232. Please include your name, return caption, address and "DEIS Scoping Comments, Samish Indian Nation 11.41-Acre Fee-to-Trust Casino Project" on the first page of your written comments. The public scoping meeting will be held at Fidalgo Bay Resort Community Center, 4701 Fidalgo Bay Road, Anacortes, WA 98221.

FOR FURTHER INFORMATION CONTACT: Dr. B.J. Howerton, Environmental Protection Specialist, BIA Northwest Region, (503) 231-6749.

SUPPLEMENTARY INFORMATION:
The proposed action would transfer approximately 11.41 acres of land from fee to trust status, upon which the Tribe would develop a casino, parking, and other supporting facilities. The property is located within the incorporated boundaries of the City of Anacortes, WA, southeast of the intersection of Thompson Road and State Route-20. Areas of environmental concern identified for analysis in the EIS include land resources, water resources, air quality, noise, biological resources, cultural resources, resource use patterns, traffic and transportation, public health/environmental hazards, public services and utilities, socioeconomics, environmental justice, and visual resources/aesthetics. Alternatives identified for analysis include the proposed action, a no-action alternative, a reduced-intensity development alternative, a non-gaming alternative, and an alternative site location alternative. The range of issues and alternatives are open to revision based on comments received in response to this notice. Additional information, including a map of the project site, is available by contacting the person listed in the FOR FURTHER INFORMATION section of this notice. Other related approvals may be required to implement the project, including approval of the Tribe's fee-to-trust application, determination of the site's eligibility for gaming, compliance with the Clean Water Act, and local service agreements. To the extent applicable, the EIS will identify and evaluate issues related to these approvals.

PUBLIC COMMENT AVAILABILITY
Comments, including names and addresses of respondents, will be available for public review at the BIA address shown in the ADDRESSES section, during regular business hours, 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment including your personal identifying information may be made publicly available at any time. While you can ask in your comment that your personal identifying information be withheld from public review, the BIA cannot guarantee that this will occur.

AUTHORITY: This notice is published in accordance with sections 1503.1 and 1506.6 of the Council on Environmental Quality Regulations (40 CFR Parts 1500 through 1508) implementing the procedural requirements of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321-4345 et seq.), and the Department of the Interior Manual (516 DM 16), and is in the exercise of authority delegated to the Assistant Secretary Indian Affairs by 209 DM 8.1.

Published
August 12, 2011
SVH-508871

SKAGIT PUBLISHING

1215 Anderson Road • P.O. Box 578 • Mount Vernon • WA • 98273 • t: 360.424.3251 • f: 360.424.5300

Heather Hemandez, Publisher

Affidavit of Publication in the matter of AA-508882
In the Superior Court of the State of Washington In and For Skagit County

STATE OF WASHINGTON
County of Skagit *ss*

The undersigned, being first duly sworn on oath deposes that he/she is principal clerk of the Anacortes American, a weekly newspaper. That said newspaper has been approved as a legal newspaper by the Superior Court of Skagit County and is now and has been for more than six months prior to the publication hereinafter referred to, published in the English language continually as a weekly newspaper in Skagit County, Washington, and it is now and during all of said time was printed at an office maintained at the aforesaid place of publication of said newspaper.

That the annexed is a true copy of an advertisement, with publication dates, as it was published in regular issues (and not in supplemental form) of said newspaper commencing with the issue of August 17, 2011 and ending with the issue of August 17, 2011.

That such newspaper was regularly distributed to its subscribers during all of said period and the full amount of the fee charged for the foregoing is the sum of $182.42

clerk

Date: August 18 , 2011

Subscribed and sworn to before me this
18th Day of August, 2011
Notary Public and for the State of Washington
Clerk's filing stamp

JAMES J. SARRO NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 11-19-14

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs
Environmental Impact Statement for the Proposed Samish Indian Nation Fee-to-Trust Acquisition and Casino Project, City of Anacortes, Skagit County, Washington.

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice.

SUMMARY: This notice advises the public that the Bureau of Indian Affairs (BIA) as lead agency intends to gather information necessary for preparing an Environmental Impact Statement (EIS) in connection with the Samish Indian Nation's (Tribe) application for a proposed 11.41-acre fee-to-trust transfer and casino project to be located in Anacortes, Skagit County, Washington. The purpose of the proposed action is to improve the economic status of the Tribal Government so it can better provide housing, health care, education, cultural programs, and other services to its members. This notice also announces a public scoping meeting to identify potential issues and content for inclusion in the EIS.

DATES: Written comments on the scope of the EIS will be accepted until September 16, 2011. The public scoping meeting will be held on September 14, 2011 from 6 p.m. to 9 p.m. PDT, or until the last comment is heard.

ADDRESSES: You may mail or hand carry written comments to Mr. Stanley Speaks, Northwest Regional Director, Bureau of Indian Affairs, Northwest Region, 911 NE 11th Avenue, Portland, Oregon, 97232. Please include your name, return caption, address and "DEIS Scoping Comments, Samish Indian Nation 11.41-Acre Fee-to-Trust Casino Project" on the first page of your written comments. The public scoping meeting will be held at Fidalgo Bay Resort Community Center, 4701 Fidalgo Bay Road, Anacortes, WA 98221.

FOR FURTHER INFORMATION CONTACT: Dr. B.J. Howerton, Environmental Protection Specialist, BIA Northwest Region, (503) 231-6749.

SUPPLEMENTARY INFORMATION:
The proposed action would transfer approximately 11.41 acres of land from fee to trust status, upon which the Tribe would develop a casino, parking, and other supporting facilities. The property is located within the incorporated boundaries of the City of Anacortes, WA, southeast of the intersection of Thompson Road and State Route-20. Areas of environmental concern identified for analysis in the EIS include land resources, water resources, air quality, noise, biological resources, cultural resources, resource use patterns, traffic and transportation, public health/environmental hazards, public services and utilities, socioeconomics, environmental justice, and visual resources/aesthetics. Alternatives identified for analysis include the proposed action, a no-action alternative, a reduced-intensity development alternative, a non-gaming alternative, and an alternative site location alternative. The range of issues and alternatives are open to revision based on comments received in response to this notice. Additional information, including a map of the project site, is available by contacting the person listed in the FOR FURTHER INFORMATION section of this notice. Other related approvals may be required to implement the project, including approval of the Tribe's fee-to-trust application, determination of the site's eligibility for gaming, compliance with the Clean Water Act, and local service agreements. To the extent applicable, the EIS will identify and evaluate issues related to these approvals.

PUBLIC COMMENT AVAILABILITY
Comments, including names and addresses of respondents, will be available for public review at the BIA address shown in the ADDRESSES section, during regular business hours, 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment including your personal identifying information may be made publicly available at any time. While you can ask in your comment that your personal identifying information be withheld from public review, the BIA cannot guarantee that this will occur.

AUTHORITY: This notice is published in accordance with sections 1503.1 and 1506.6 of the Council on Environmental Quality Regulations (40 CFR Parts 1500 through 1508) implementing the procedural requirements of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321-4345 et seq.), and the Department of the Interior Manual (516 DM 16), and is in the exercise of authority delegated to the Assistant Secretary Indian Affairs by 209 DM 8.1.

Published
August 17, 2011
AA-508882

APPENDIX C

Cultural Resources Studies
(Confidential Material-Bound Separately)

CULTURAL RESOURCES REPORT
BOUND SEPARATELY*

*** THE CULTURAL RESOURCE REPORT HAS BEEN BOUND SEPARATELY TO PROTECT POTENTIALLY SENSITIVE INFORMATION ABOUT THE LOCATION AND NATURE OF CULTURAL RESOURCES.**

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

August 6, 2012

Mr. Chuck James
Bureau of Indian Affairs
911 NE 11th Avenue
Portland, Oregon 97232

Re: 14.84 Samish Indian Nation Fee to Trust Project
Log No.: 080212-11-BIA

Dear Mr. James;

Thank you for contacting our department. We have reviewed the copy of the professional archaeological survey report you provided for the proposed 14.84 Samish Indian Nation Fee to Trust Project at March Point, Anacortes, Skagit County, Washington.

We concur with your Determination of No Historic Properties Affected.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity must stop, the area secured, and the concerned tribes and this office notified.

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(360) 586-3080
email: rob.whitlam@dahp.wa.gov

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

August 6, 2012

Mr. Chuck James
Bureau of Indian Affairs
911 NE 11th Avenue
Portland, Oregon 97232

Re: 2.4 Acre Samish Indian Nation Fee to Trust Project
Log No.: 080212-12-BIA

Dear Mr. James;

Thank you for contacting our department. We have reviewed the copy of the professional archaeological survey report you provided for the proposed 2.4 Acre Samish Indian Nation Fee to Trust Project on the Fildago Bay Resort Flats, Anacortes, Skagit County, Washington.

We concur with your Determination of No Adverse Effect based upon the stipulation for avoidance and protection of 45SK43.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity must stop, the area secured, and the concerned tribes and this office notified.

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(360) 586-3080
email: rob.whitlam@dahp.wa.gov

APPENDIX D

Traffic Impact Study

Samish Tribe Casino
Anacortes, WA

Transportation Impact Study

November 22, 2011

Prepared for:
Analytical Environmental Services
1801 7th Street, Ste 100
Sacramento, CA 95811

Prepared by:

Transportation Engineering NorthWest, LLC

Transportation Engineering/Operations ♦ Impact Studies ♦ Transportation Planning ♦ Demand Forecasting

Seattle Office: PO Box 65254 ♦ Seattle, WA 98155 ♦ Office/Fax (206) 361-7333 ♦ Toll Free (888) 220-7333

Table of Contents

List of Figures and Tables

INTRODUCTION

This study summarizes transportation impacts associated with the *Samish Tribe Casino* development. Based on correspondence with the City of Anacortes, Skagit County and Washington State Department of Transportation (WSDOT) the following tasks were undertaken to analyze traffic impacts associated with the proposed action:

- Assessment of existing transportation conditions and operations through data collection efforts and field reconnaissance.
- Estimation of daily and p.m. peak vehicular project trip generation.
- Assignment of daily and p.m. peak hour project trips onto the existing roadway network.
- Evaluation of level of service (LOS) impacts at the following off-site and site access intersections during the p.m. peak hour:

  Thompson Road Site

  1. State Route 20 (SR-20) at Thompson Road
  2. Summit Park Road/Site Access Intersection at Thompson Road
  3. Stevenson Road at Thompson Road
  4. SR 20 and Reservation Road
  5. Stevenson Road at Reservation Road
  6. West Proposed Site Access at Stevenson Road
  7. Center Proposed Site Access at Stevenson Road
  8. East Proposed Site Access at Stevenson Road

  Weaverling Spit Site

  1. SR 20 Spur and Fidalgo Bay Road
  2. SR 20 Spur Westbound Exit at Fidalgo Bay Road
  3. Weaverling Road at Fidalgo Bay Road
  4. SR 20 Spur at R Avenue
  5. 34th Street at R Avenue
  6. 30th Street at R Avenue
  7. SR 20 with SR 20 Spur (Main signalized intersection on SR 20 connecting mainland to SR 20/Anacortes)
  8. Proposed Site Access at Fidalgo Bay Road

- Evaluation of site access, safety, and circulation issues.
- Assessment of public transportation services and nonmotorized facility impacts.
- Identification of mitigation measures to maintain acceptable levels of mobility and safety based upon the City of Anacortes, Skagit County and WSDOT standards and guidelines.

Project Description

The *Samish Tribe Casino* development proposes to construct a Class 3 gaming facility of up to 50,000 square feet in gross floor area and would include a 100-seat restaurant and 50-seat lounge. Full build-out of the project is anticipated by the year 2013.

There are two separate locations within the City of Anacortes, WA under consideration (a project site vicinity map is shown in **Figures 1** and **2** of both locations):

1) Thompson Road site is generally located at the southeast corner of Thompson Road and SR 20. Vehicular site access is proposed via three new site driveways onto Stevenson Road and one new site driveway onto Thompson Road, which would align with Summit Park Road to the west.
2) Weaverling Spit site which is generally located north of Fidalgo Bay Road somewhat west of Weaverling Road. Vehicular site access is proposed via one primary driveway and one secondary driveway onto Fidalgo Bay Road.

The Class 3 gaming facility would be analyzed for construction at both site alternative locations. A site plan for each future build alternative site location is illustrated in **Figures 3, 3a,** and **4** (Thompson Road site), and **Figure 5** (Weaverling Spit site).

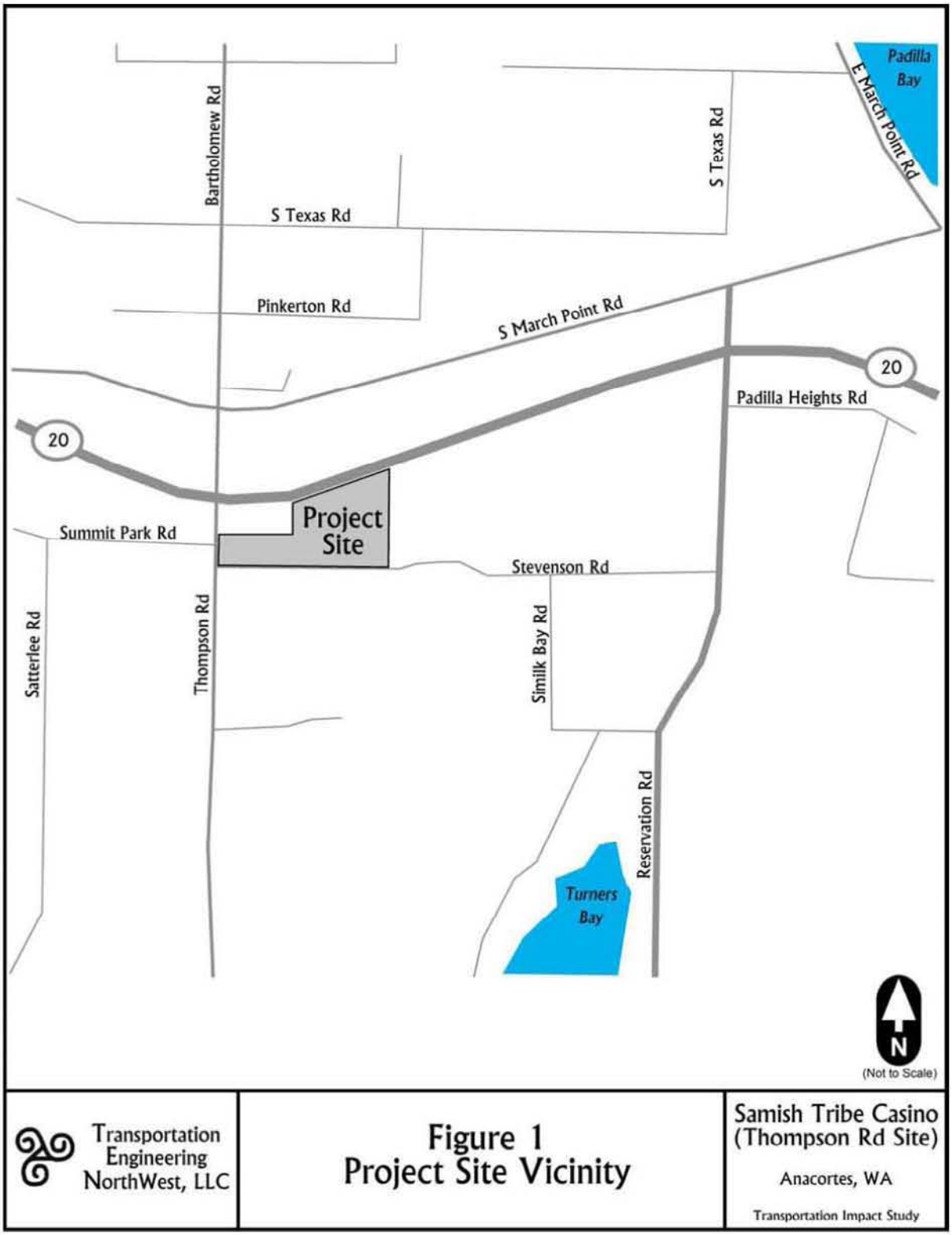
As part of the project, the following alternatives would be analyzed for traffic impacts, to include the following scenarios:

Thompson Road & Weaverling Spit site

- **Alternative A** - Proposed Project at the Thompson Road/SR 20 Interchange.
- **Alternative D** – Weaverling Spit Site similar to the Proposed Project.
- **No Action Alternative E** – No development. An 8-vehicle fuel position gas/service station with convenience market would be analyzed as a pipeline project under cumulative impacts for construction.

Thompson Road site

- **Alternative B** - Class 3 gaming facility of up to 35,000 square feet in gross floor area to include a 100-seat restaurant and 50-seat lounge.
- **Alternative C** - Construct a 120,000 square foot discount store and up to 17,000 square feet of retail.


Padilla Bay
E March Point Rd
Bartholomew Rd
S Texas Rd
S Texas Rd
Pinkerton Rd
S March Point Rd
20
Padilla Heights Rd
20
Project Site
Summit Park Rd
Stevenson Rd
Satterlee Rd
Thompson Rd
Similk Bay Rd
Reservation Rd
Turners Bay
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 1
Project Site Vicinity
Samish Tribe Casino
(Thompson Rd Site)
Anacortes, WA
Transportation Impact Study


20
R Ave
34th St
Fidalgo Bay Rd
Commercial Ave
20
Project Site
Weaverling Rd
Fidalgo Bay
March's Point Rd
O Ave
Haddon Rd
Whistle Lake Rd
Spradley Rd
N Texas Rd
Oil King Alley
Bartholomew Rd
Fidalgo Bay Rd
S Texas Rd
S Fidalgo Bay Rd
S March Point Rd
Summit Park Rd
20
20
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 2
Project Site Vicinity
Samish Tribe Casino
(Weaverling Spit Site)
Anacortes, WA
Transportation Impact Study

Transportation Engineering NorthWest, LLC

Figure 3
Alternative A (Casino)
Site Plan

Samish Tribe Casino
(Thompson Rd Site)
Anacortes, WA
Transportation Impact Study

Transportation Engineering NorthWest, LLC

Figure 3a
Alternative B (Casino)
Site Plan

Samish Tribe Casino
(Thompson Rd Site)
Anacortes, WA
Transportation Impact Study

Transportation Engineering NorthWest, LLC

Figure 4
Alternative C (Commercial) Site Plan

Samish Tribe Casino
(Thompson Rd Site)
Anacortes, WA
Transportation Impact Study

(Not to Scale)

Transportation Engineering NorthWest, LLC

Figure 5
Alternative D (Casino)
Site Plan

Samish Tribe Casino
(Weaverling Spit Site)
Anacortes, WA
Transportation Impact Study

EXISTING CONDITIONS

This section describes existing transportation system conditions in the study area. It includes an inventory of existing roadway conditions, collision history, traffic volumes, intersection levels of service, public transportation services, nonmotorized transportation facilities and planned roadway improvements.

Roadway Conditions

The following paragraphs describe existing arterial roadways that would be used as major routes for site access. Roadway characteristics are described in terms of number of lanes, posted speed limits and shoulder types and widths.

Thompson Road Site

SR 20 is an urban principal highway as classified by the WSDOT. Adjacent to the project site in the vicinity of Thompson Road, the roadway consists of 4 lanes with 12-foot travel lanes and 4- to 10-foot paved shoulders. The speed limit is posted at 55 mph.

Stevenson Road is classified by the City of Anacortes as a two-lane *local* roadway. The total pavement width is approximately 21 feet. The posted speed limit is 35 mph.

Thompson Road is a two-lane *local* roadway. The total pavement width varies from 22 to 24 feet, with 3- to 4-foot gravel shoulders. The speed limit is posted at 35 mph.

Summit Park Road is classified by the City of Anacortes as a two-lane *local* roadway, with a pavement width of approximately 22 feet. The posted speed limit is 35 mph.

Reservation Road is a two-lane roadway with 11-foot travel lanes and 4- to 7-foot paved shoulders. This roadway is classified by the City of Anacortes as a *minor arterial* between SR 20 and Stevenson Road. The speed limit is posted at 35 mph.

Weaverling Spit Site

SR 20 is an urban principal highway as classified by the WSDOT. Adjacent to the project site, the roadway consists of 4 lanes with 12-foot travel lanes and 4- to 10-foot paved shoulders. The speed limit is posted at 55 mph. Within the commercial/retail area of Anacortes, two travel lanes with a two-way center left turn lane, curbs, gutters, sidewalks and parking are provided on both sides of the street. Bicycle lanes are provided on the east side of the street. The curb-to-curb pavement width is 60 feet. The speed limit is posted at 30 mph.

Fidalgo Bay Road is a two-lane *local* roadway. The total pavement width is approximately 24 feet. The posted speed limit is 25 mph.

Weaverling Road is classified by the City of Anacortes as a two-lane *local* roadway. The total pavement width is approximately 24 feet. The speed limit is posted at 25 mph.

30th Street is a two-lane *local* roadway with parking, curb and gutter on both sides of the street. The curb-to-curb pavement width is approximately 44 feet. There is no posted speed limit sign. The pavement is in fair to good condition.

34th Street is a two-lane *local* roadway with curbs, gutters and sidewalks on the north side of the street. Gravel/grass shoulders are provided on the south side of the street. There is no posted speed limit sign. The pavement is in fair condition with small patches in poor condition in the vicinity of V Avenue.

R Avenue is a four-lane *minor arterial* between the SR 20 Spur and 22nd Street with curbs, gutters and sidewalks on both sides of the street and 1- to 4-foot paved shoulders. A landscaped median with breaks to allow for left turns and refuge are provided a various intersections. Travel lanes are 11 to 12 feet in width. The speed limit is posted at 35 mph.

Collision History

The frequency and severity of collisions are commonly weighted against speed, volume, and functional classification of a roadway segment or intersection. These variables are all considered in evaluating safety.

The average annual collision rate is calculated by summing the total number of collisions that occurred at a specified intersection or roadway segment during the past three years, and dividing the total by three. Collision data for an intersection is also measured by collision rates per million entering vehicles (MEV). Collisions per MEV reflect the number of vehicles traveling through an intersection, providing a different indication of design-related versus volume-related incidences.

Table 1 summarizes historical collision data as provided by the WSDOT for the most recent 3-year period between January 1, 2008 to December 31, 2010 at all study intersections. There was one fatality at Intersection #4 (Thompson Road Site) – SR 20 / Reservation Road during the identified 3-year period. This fatality was not related to the intersection as an apparently ill driver overturned their own vehicle. No other vehicles were involved in the collision.

At the Thompson Road Site, Intersection #4 – SR 20 / Reservation Road experienced almost 6 collision per year. At the Weaverling Spit site, Intersection #7 – SR 20 / SR 20 Spur experienced roughly 11 collisions per year. There were no collisions reported at Intersection #3 – Weaverling Road / Fidalgo Bay Road during the 3-year historical period. The number of collisions occurring at these intersections were generally attributed to the high traffic volumes traveling through the intersections, negligent driving, and drivers following too closely. All other study intersections experience 4 or fewer collisions per year.

At the Weaverling Spit site, Intersection # 2 – SR 20 Spur Westbound Exit / Fidalgo Bay Road experienced just over 3 collisions per MEV, however, this intersection experienced less than 1 collision per year. All other study intersections at both alternative sites experience fewer than 2.00 collisions per MEV, which means that they have a relatively reasonable number of collisions occurring at the intersections per the number of traffic volumes traveling through the intersections.

Table 1: January 1, 2008 – December 31, 2010 Historical Collision Rates

ID #	Intersections	Fatal Collisions	Injury Collisions	Property Damage Only Collisions	Total Collisions	Average Annual Collision Rate	Collision Rate per MEV
Thompson Road Site							
1	SR 20 / Thompson Rd	0	3	4	7	2.33	0.22
2	Summit Park Road / Site Access Intersection / Thompson Road	0	0	1	1	0.33	0.87
3	Stevenson Rd / Thompson Rd	0	0	1	1	0.33	0.91
4	SR 20 / Reservation Rd	1	9	7	17	5.67	0.58
5	Stevenson Rd / Reservation Rd	0	1	0	1	0.33	0.33
Weaverling Spit Site							
1	SR 20 Spur / Fidalgo Bay Rd	0	4	8	12	4.00	0.56
2	SR 20 Spur Westbound Exit / Fidalgo Bay Rd	0	2	0	2	0.67	3.32
3	Weaverling Rd / Fidalgo Bay Rd	0	0	0	0	0.00	0.00
4	SR 20 Spur / R Ave	0	6	6	12	4.00	0.44
5	34th St / R Ave	0	2	1	3	1.00	0.21
6	30th St / R Ave	0	1	2	3	1.00	0.22
7	SR 20 / SR 20 Spur	0	12	21	33	11.00	0.97

Source: WSDOT Statewide Travel & Collision Data Office, Obtained August & September 2011.
MEV - Million entering vehicles.

Existing Traffic Volumes

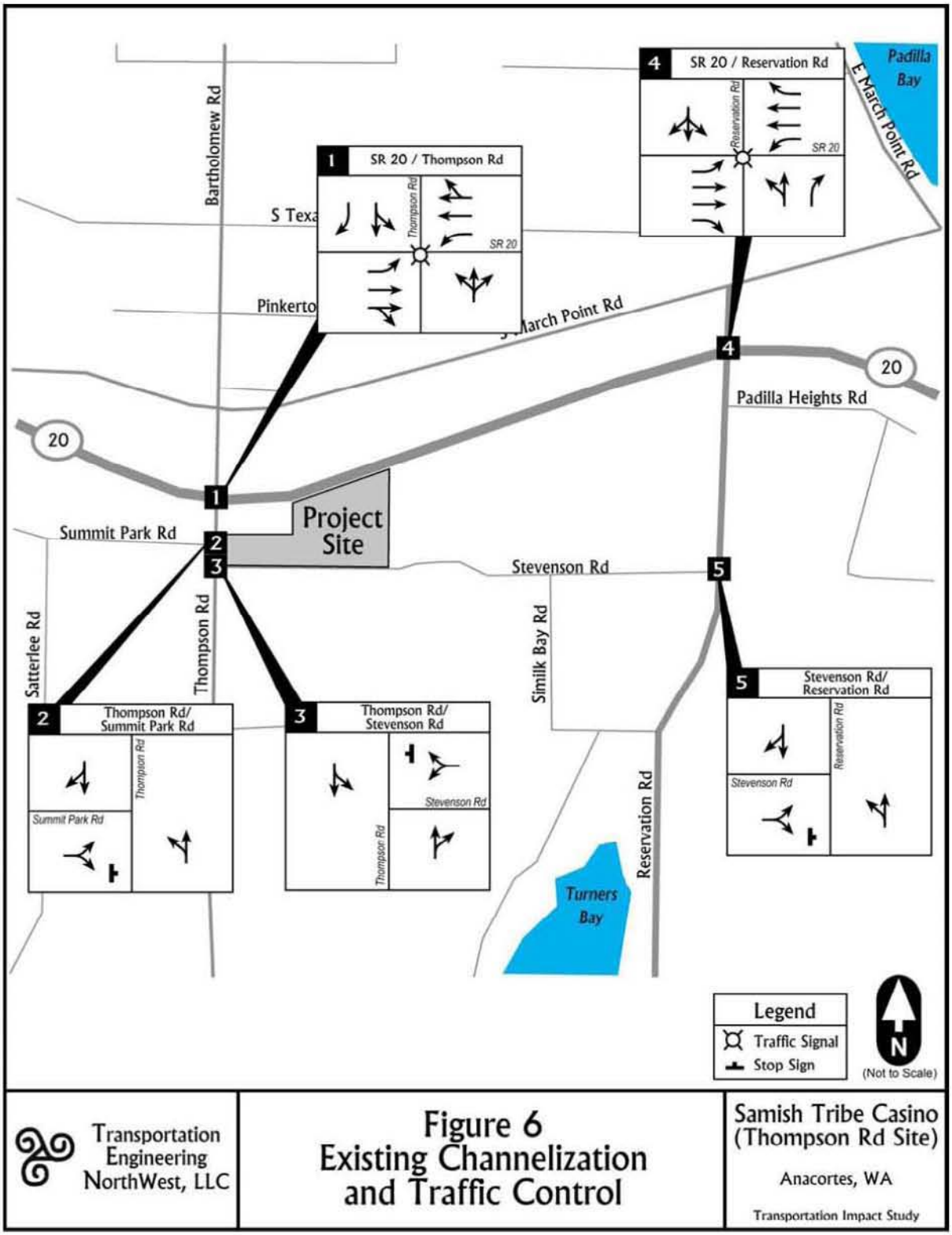
Figures 6 and **7** summarize existing channelization and traffic control at all study intersections at each alternative site. **Figures 8** and **9** highlight existing year 2011 p.m. peak period turning movements at study intersections for each alternative site.

Average weekday daily traffic volumes represent the number of vehicles traveling a roadway segment over a 24-hour period on an average weekday. Peak hour traffic volumes typically represent the highest hourly volume of vehicles of the average day passing through an intersection during a typical 4-6 p.m. peak period. Therefore, the p.m. peak hour volumes were used to evaluate traffic impacts that would occur as a result of the development.

Daily traffic counts were provided by WSDOT. All Traffic Data Services Inc. conducted p.m. peak hour traffic counts at all study intersections in August 2011. Traffic counts are provided in **Appendix A**. A review of peak hour historical traffic counts between 2000 and 2009 on SR 20 in the vicinity of both project sites indicates a growth rate of less than 1 to 1 percent per year. Traffic volumes not counted in the year 2011 were factored by a "worst-case" 2 percent per year to estimate 2011 existing traffic volumes.

Intersection Level of Service

Level of service (LOS) serves as an indicator of the quality of traffic flow at an intersection or along a road segment. The LOS grading ranges from A to F, such that LOS A is assigned when minimal delays are present and low volumes are experienced. LOS F indicates long delays and/or forced flow.


Bartholomew Rd
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SR 20 / Thompson Rd
Thompson Rd
SR 20
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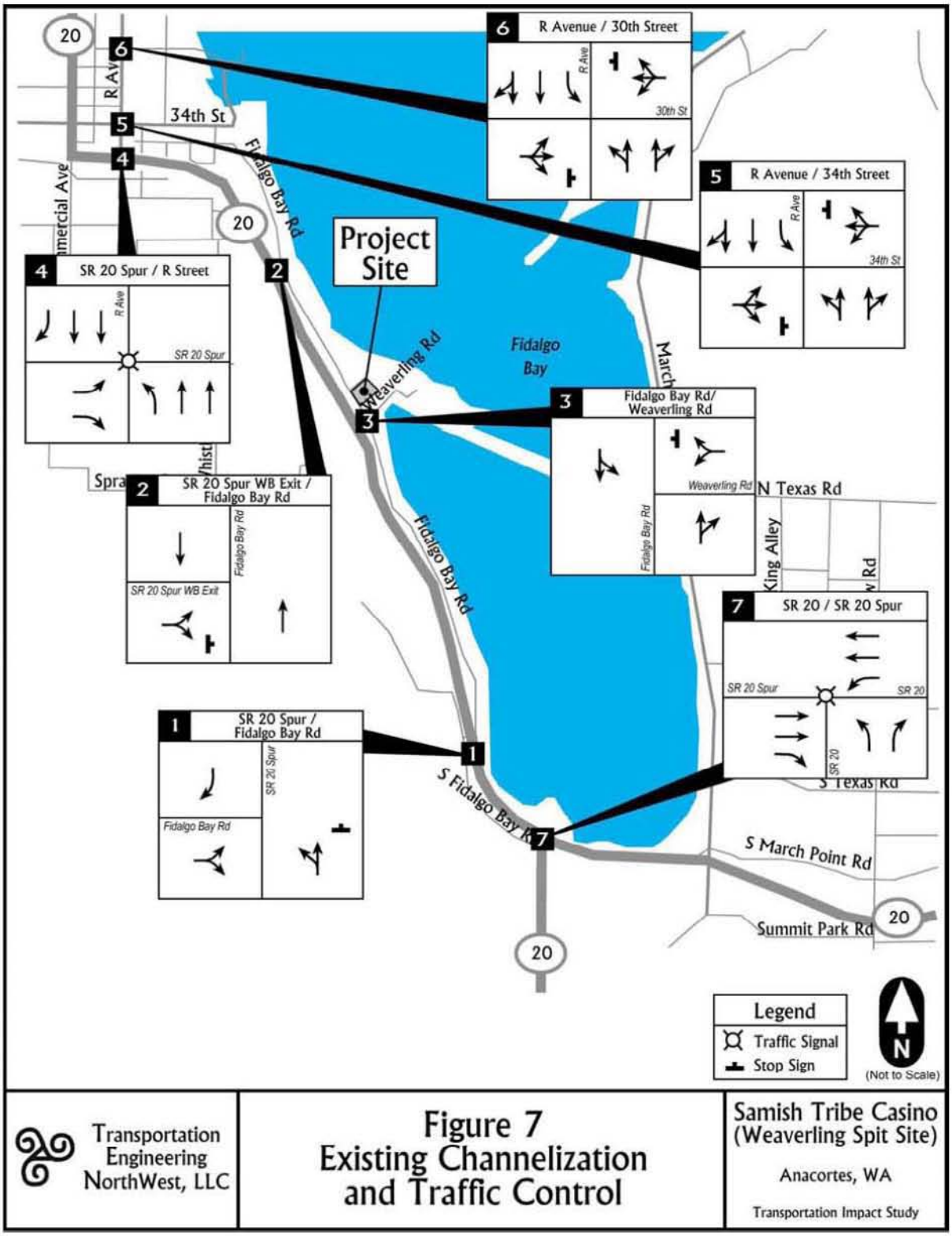
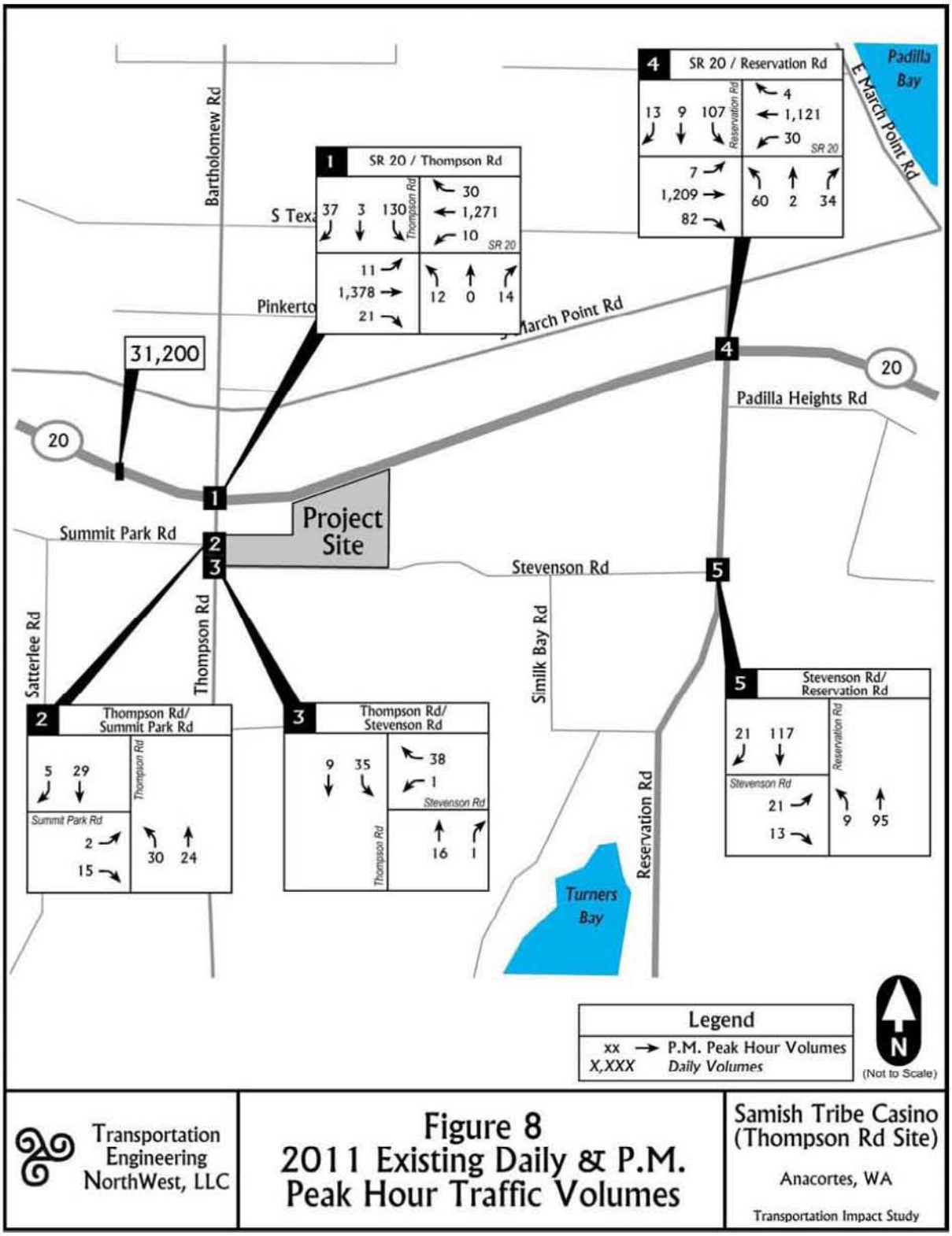
SR 20 / Reservation Rd
Reservation Rd
SR 20
Padilla Bay
E March Point Rd
March Point Rd
20
Padilla Heights Rd
Project Site
Summit Park Rd
Stevenson Rd
Satterlee Rd
Thompson Rd
Similk Bay Rd
Reservation Rd
2
Thompson Rd/
Summit Park Rd
Summit Park Rd
3
Thompson Rd/
Stevenson Rd
Stevenson Rd
5
Stevenson Rd/
Reservation Rd
Stevenson Rd
Turners Bay
Legend
Traffic Signal
Stop Sign
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 6
Existing Channelization and Traffic Control
Samish Tribe Casino
(Thompson Rd Site)
Anacortes, WA
Transportation Impact Study



Transportation Engineering NorthWest, LLC

Figure 7
Existing Channelization and Traffic Control

Samish Tribe Casino (Weaverling Spit Site)
Anacortes, WA
Transportation Impact Study


Bartholomew Rd
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E March Point Rd
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Padilla Heights Rd
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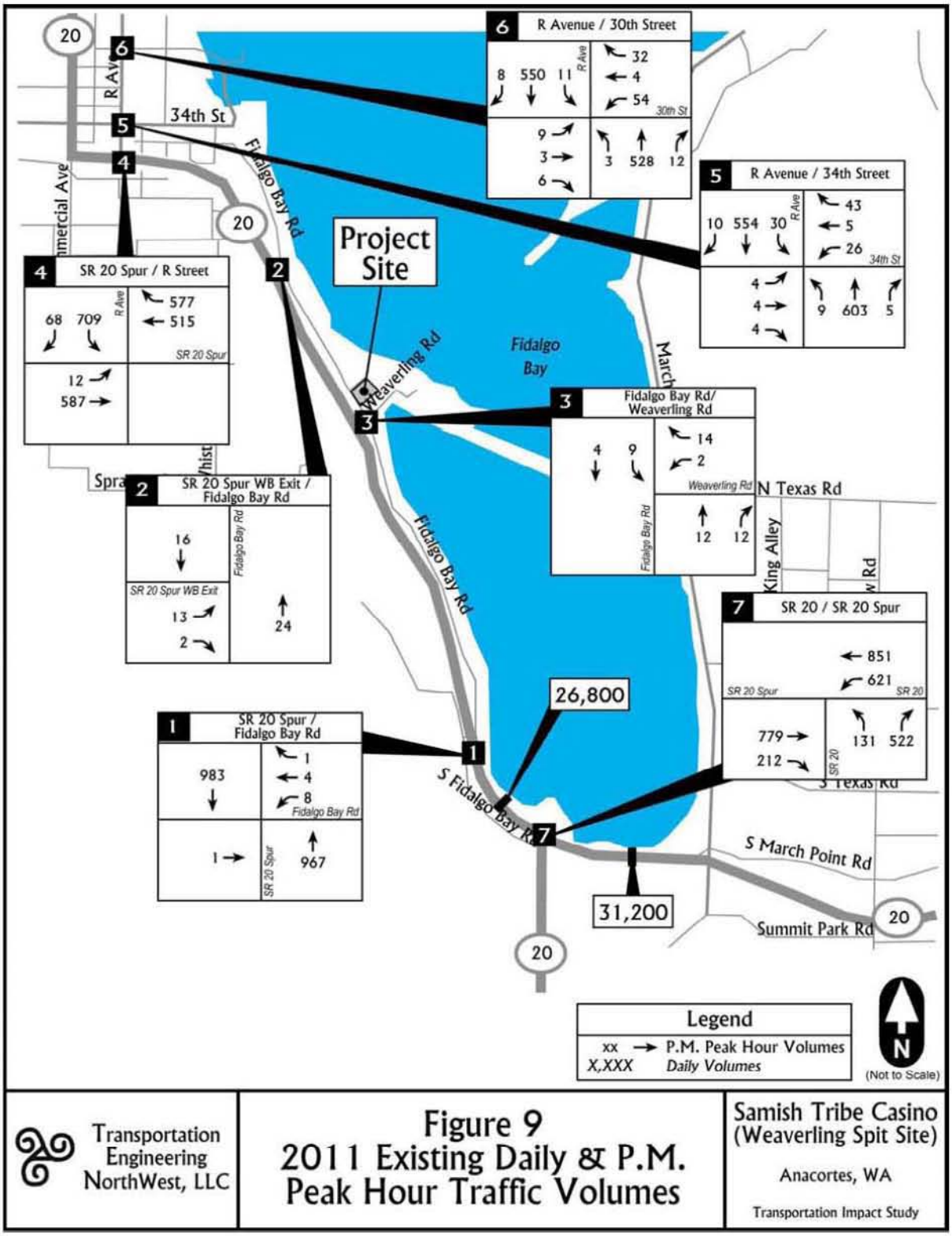
31,200
Project Site
Summit Park Rd
Satterlee Rd
Thompson Rd
Stevenson Rd
Similk Bay Rd
Reservation Rd
Turners Bay
1 SR 20 / Thompson Rd
37 3 130
30
1,271
10
SR 20
11
1,378
21
12 0 14
4 SR 20 / Reservation Rd
13 9 107
4
1,121
30
7
1,209
82
60 2 34
2 Thompson Rd/ Summit Park Rd
5 29
Summit Park Rd
2
15
30 24
3 Thompson Rd/ Stevenson Rd
9 35
38
1
Stevenson Rd
16 1
5 Stevenson Rd/ Reservation Rd
21 117
Stevenson Rd
21
13
9 95
Legend
xx → P.M. Peak Hour Volumes
X,XXX Daily Volumes
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 8
2011 Existing Daily & P.M. Peak Hour Traffic Volumes
Samish Tribe Casino (Thompson Rd Site)
Anacortes, WA
Transportation Impact Study



Transportation Engineering NorthWest, LLC

Figure 9
2011 Existing Daily & P.M. Peak Hour Traffic Volumes

Samish Tribe Casino (Weaverling Spit Site)
Anacortes, WA
Transportation Impact Study

Table 2 summarizes the delay range for each level of service at signalized and unsignalized intersections. The methods used to calculate the levels of service are described in the updated *2000 Highway Capacity Manual* (Special Report 209, Transportation Research Board). The measure of effectiveness for signalized intersections is average control delay, defined as the total time vehicles are stopped at an intersection approach during a specified time period divided by the number of vehicles departing from the approach in the same time period.

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, and increased travel time. The delay experienced by a motorist is made of up a number of factors that relate to traffic control, geometries, traffic demand, and incidents. Total control delay is the difference between the travel time actually experienced and the *reference travel time* that would result during base conditions (i.e., the absence of traffic control, geometric delay, any incidents, or as a result other vehicles). LOS F at signalized intersections is often considered unacceptable to most drivers, but does not automatically imply that the intersection is over capacity. Jammed conditions could occur on one or all approaches, with periods of long delays and drivers waiting for multiple signal cycles to progress through the intersection.

For unsignalized intersections, a level of service and estimate of average control delay is determined for each minor or controlled movement based upon a sequential analysis of gaps in the major traffic streams and conflicting traffic movements. In addition, given that unsignalized intersections create different driver expectations and congestion levels than signalized intersections, their delay criteria are lower. Control delay at unsignalized intersections include deceleration delay, queue move-up time, stopped delay in waiting for an adequate gap in flows through the intersection, and final acceleration delay.

Intersection LOS were calculated using the methodology and procedures outlined in the 2000 *Highway Capacity Manual*, Special Report 209, Transportation Research Board (TRB), using the *Synchro6* and *HCS2000* software programs.

Table 2: Level of Service Criteria at Intersections

Level of Service	*Signalized Intersection* Delay Range (sec)	*Unsignalized Intersection* Delay Range (sec)
A	≤ 10	≤ 10
B	> 10 to ≤ 20	> 10 to ≤ 15
C	> 20 to ≤ 35	> 15 to ≤ 25
D	> 35 to ≤ 55	> 25 to ≤ 35
E	> 55 to ≤ 80	> 35 to ≤ 50
F	≥ 80	≥ 50

Source: "Highway Capacity Manual", Special Report 209, Transportation Research Board, 2000, Update.

In accordance with Transportation Plan Policy 2.7 of the *2007 City of Anacortes Transportation Plan*, the level of service standards for intersections within the City of Anacortes are LOS D on SR 20, Principal Arterials and Central Business District Streets; and LOS C on minor arterials, collector streets and local roadways.

Existing p.m. peak hour levels of service at all study intersections are summarized in **Tables 3** and **4** at both alternative site locations. At the Thompson Road site, all study intersections operate at LOS B or better under existing p.m. peak hour conditions. At the Weaverling Spit site, eastbound and westbound movements at Intersection #1 SR 20 Spur / Fidalgo Bay Rd currently operate at LOS F. All other signalized intersections and stop controlled-movements at unsignalized intersections operate at LOS D or better under existing p.m. peak hour conditions. Detailed level of service summary worksheets are provided in **Appendix B**.

Table 3: 2011 Existing P.M. Peak Intersection Levels of Service (Thompson Road Site)

Signalized Intersections	*Control Type*	LOS	Delay
#1 – SR 20 / Thompson Rd	*Signalized*	B	12
#4 – SR 20 / Reservation Rd	*Signalized*	B	14
Unsignalized Intersections	***Control Type***	**LOS**	**Delay**
#2 – Summit Park Rd / Thompson Rd / Project Site Driveway	*EB*	A	9
	SB Left	A	7
#3 – Stevenson Rd / Thompson Rd	*WB*	A	9
	NB Left	A	7
#5 – Stevenson Rd / Reservation Rd	*EB*	B	10
	SB Left	A	8

Note: Analysis based on *Synchro 6 and HCS 2000, Traffic Signal Coordination Software* results using HCM 2000 control delays (seconds) and LOS.

Table 4: 2011 Existing P.M. Peak Intersection Levels of Service (Weaverling Spit Site)

Signalized Intersections	*Control Type*	LOS	Delay
#4 – SR 20 Spur / R Ave	*Signalized*	D	36
#7 – SR 20 / SR 20 Spur	*Signalized*	C	31
Unsignalized Intersections	***Control Type***	**LOS**	**Delay**
#1 – SR 20 Spur / Fidalgo Bay Rd	*EB*	F	77
	WB	F	70
	NB Left	B	11
	SB Left	B	11
#2 – SR 20 Spur WB Exit / Fidalgo Bay Rd	*WB*	A	9
#3 – Weaverling Rd / Fidalgo Bay Rd	*WB*	A	9
	SB Left	A	7
#5 – 34th St / R Ave	*EB*	C	24
	WB	C	21
	NB Left	A	9
	SB Left	A	9
#6 – 30th St / R Ave	*EB*	C	19
	WB	C	22
	NB Left	A	9
	SB Left	A	9

Note: Analysis based on *Synchro 6 and HCS 2000, Traffic Signal Coordination Software* results using HCM 2000 control delays (seconds) and LOS.

Public Transportation Services

Skagit Transit provides service to the Anacortes and Skagit County area. However, there are no transit stops that are within walking distance of either of the alternative sites.

Nonmotorized Transportation Facilities

There are little to no shoulders on roadways adjacent to the project site alternative locations.

Planned Roadway Improvements

A review of planned transportation improvements within the study area was conducted. The following paragraphs outline these planned improvements, however, given funding limitations and the planned buildout of either potential site, none were assumed to be completed in the context of the transportation impact analysis.

The City of Anacortes' *Six-Year Capital Facilities Plan, 2012-2017*, identified the following capacity-related transportation improvement projects that would be impacted by vehicular trips from the proposed development:

- **T-507: Fidalgo Bay Road Reconstruction from V Avenue to SR 20.** Reconstruct the roadway, including curb and gutter. The total cost of the project is estimated to be $2,315,000. Project completion is anticipated for 2017.
- **T-817: 34th Street from V Avenue to Fidalgo Bay Road Improvements.** Rebuild the roadway and complete curb, gutter and sidewalks gaps. The total cost of the project is estimated to be $605,000. Project completion is anticipated for 2014.

WSDOT's Project Index identified the following capacity-related transportation improvement projects that would be impacted by vehicular trips from the proposed development:

- **SR 20 Sharpes Corner Vicinity Interchange.** Improve the Sharpes Corner intersection to relieve congestion and improve safety. The total cost of the project is estimated to be $23,600,000. This project is currently on hold and will resume when funding is reallocated to the project. Given the level of funding required to complete this project, it is considered a 10+ year project and was not assumed to be completed in the context of this traffic study.

TRANSPORTATION IMPACT ANALYSIS

The following section describes transportation impacts the proposed *Samish Tribe Casino* development would have on the surrounding arterial network and critical intersections in the site vicinity. The discussion includes non-project related traffic forecasts, new trips generated by the proposed development, distribution and assignment of new project trips, impacts on roadways, levels of service at nearby significant intersections, and impacts to site access, safety, and circulation issues, public transportation services and nonmotorized facilities.

Alternatives Analysis

The following future alternatives were analyzed in 2013:

Thompson Road & Weaverling Spit site

- **No Action Alternative E** – No development on the project site.
- **Alternative A** – Proposed Project at the Thompson Road/SR 20 Interchange.
- **Alternative D** – Weaverling Spit Site similar to the Proposed Project.

Thompson Road site

- **Alternative B** – Class 3 gaming facility of up to 35,000 square feet in gross floor area to include a 100-seat restaurant and 50-seat lounge.
- **Alternative C** – Construct a 120,000 square foot discount store and up to 17,000 square feet of specialty retail.

Non-Project Traffic Forecasts

For the purpose of this traffic analysis, year 2013 was selected as the build-out year based upon anticipated completion of the *Samish Tribe Casino* development. As stated previously, a 2 percent per year growth rate was used to estimate a "worst-case" traffic scenario. Therefore, existing traffic volumes were factored by 2 percent per year to estimate year 2013 baseline conditions without the proposed development.

In addition to the background growth rate, traffic volumes from the following vicinity pipeline project was also used to arrive at 2013 baseline traffic volumes: Gas Station with Convenience Market with 8 vehicle fueling positions to be located adjacent to the project site at the southeast corner of SR 20 / Thompson Road.

2013 traffic volume forecast estimates at study intersections and the site access intersection are provided in **Appendix C**.

Project Trip Generation

This section summarizes trip generation methodology and estimates for the Casino under Alternatives A, B, C, and D.

Casino Trip Generation

Table 5 summarizes vehicle trip generation rates of a proposed casino development (Alternative A, B, and D) with surveys from similar facilities in Arizona, California and Washington. Average trip generation rates were determined based on total size of facility using all 5 facilities. As shown, trip generation rates were found to be 52.5 during the weekday daily, 62.6 during the weekend daily, 4.1 during the weekday p.m. peak hour, and 4.7 during the weekend peak hour. These average trip generation rates were used to estimate trip generation of the proposed *Samish Tribe Casino*.

Table 5: Published Casino Trip Generation Rates per 1,000 Square-Feet in Gross Floor Area

Facility	Total Size[1] (1,000 sf)	Daily Weekday	Daily Weekend	Weekday PM Peak Hour			Weekend Peak Hour
				Rate	In	Out	
Shingle Springs CA	238.5	39.4	59.1	5.0	53%	47%	6.9
Casino AZ	140.0	105.6	118.4	7.4	47%	53%	7.7
EQC (Tacoma, WA)	587.2	33.9	37.3	2.9	70%	30%	3.4
EQC (Fife WA)	125.1	91.0	116.7	3.1	47%	53%	2.6
Snoqualmie Hills WA	170.6	62.8	69.4	5.2	51%	49%	5.5
Average Trip Generation Rates		**52.5**	**62.6**	**4.1**	**59%**	**41%**	**4.7**

1 – Based on 1,000 Square Feet of Gross Floor Area.

Commercial Trip Generation

Average trip rate equations compiled by the Institute of Transportation Engineers (ITE) *Trip Generation, 8th Edition*, 2008, were used to estimate weekday daily and p.m. peak hour traffic that would be generated by the proposed development (Alternative C) with the proposed new Specialty Retail (ITE Land Use Code 814), Free-Standing Discount Store (ITE Land Use Code 815), and High-Turnover (Sit-Down) Restaurant (ITE Land Use Code 932).

Average Pass-by Rates

Pass-by trips are those traveling on streets immediately adjacent to the site with easy access. Diverted trips are those that are traveling on other streets that will change their existing travel pattern and divert to the site.

Pass-by trips are not considered to have direct impacts on the adjacent transportation facilities because they would be there anyway. It is only the impacts created by existing trips diverted onto different routes and by "new" trips, which would not be made unless the retail redevelopment occurred, that are considered to be site-specific transportation impacts.

Pass-by rates equations identified in the ITE *Trip Generation Handbook*, 2004, for Free-Standing Discount Store. Total trips were reduced by 28 percent to take into account pass-by assumptions.

Project Trip Generation Summary

As shown in **Table 6**, Alternative A (50,000 square foot casino) would generate an estimated total of approximately 2,600 daily and 206 p.m. peak hour vehicular trips (122 entering and 84 exiting) during the weekday and 3,100 daily and 237 peak hour vehicular trips during the weekend. Alternative B (35,000 square foot casino) would generate an estimated total of approximately 1,800 daily and 144 p.m. peak hour vehicular trips (85 entering and 59 exiting) during the weekday and 2,200 daily and 166 peak hour vehicular trips during the weekend.

As shown in **Table 7**, Alternative C (commercial) would generate an estimated net total of approximately 5,700 daily and 479 p.m. peak hour vehicular trips (236 entering and 242 exiting) during the weekday.

Table 6: Project Trip Generation (Alternative A & B - Casino)

Alternative	Land Use	Size[1]	Weekday				Weekend	
			P.M. Peak Hour			Daily Trips	Peak Hour	Daily
			Enter	Exit	Total			
A	Casino	50 SF GFA	122	84	206	2,600	237	3,100
B	Casino	35 SF GFA	85	59	144	1,800	166	2,200

1 – SF GFA is 1,000 Square Feet of Gross Floor Area.

Table 7: Net Weekday Project Trip Generation (Alternative C - Commercial)

Land Use	ITE Land Use Code[1]	Size[2]	P.M. Peak Hour			Daily Trips
			Enter	Exit	Total	
Specialty Retail	814	17 SF GLA	20	26	46	750
Free-Standing Discount Store	815	120 SF GFA	300	300	600	6,900
Less Discount Store Pass-by Trips (28 percent)			*-84*	*-84*	*-168*	*-1,900*
Net Project Trip Generation			**236**	**242**	**479**	**5,700**

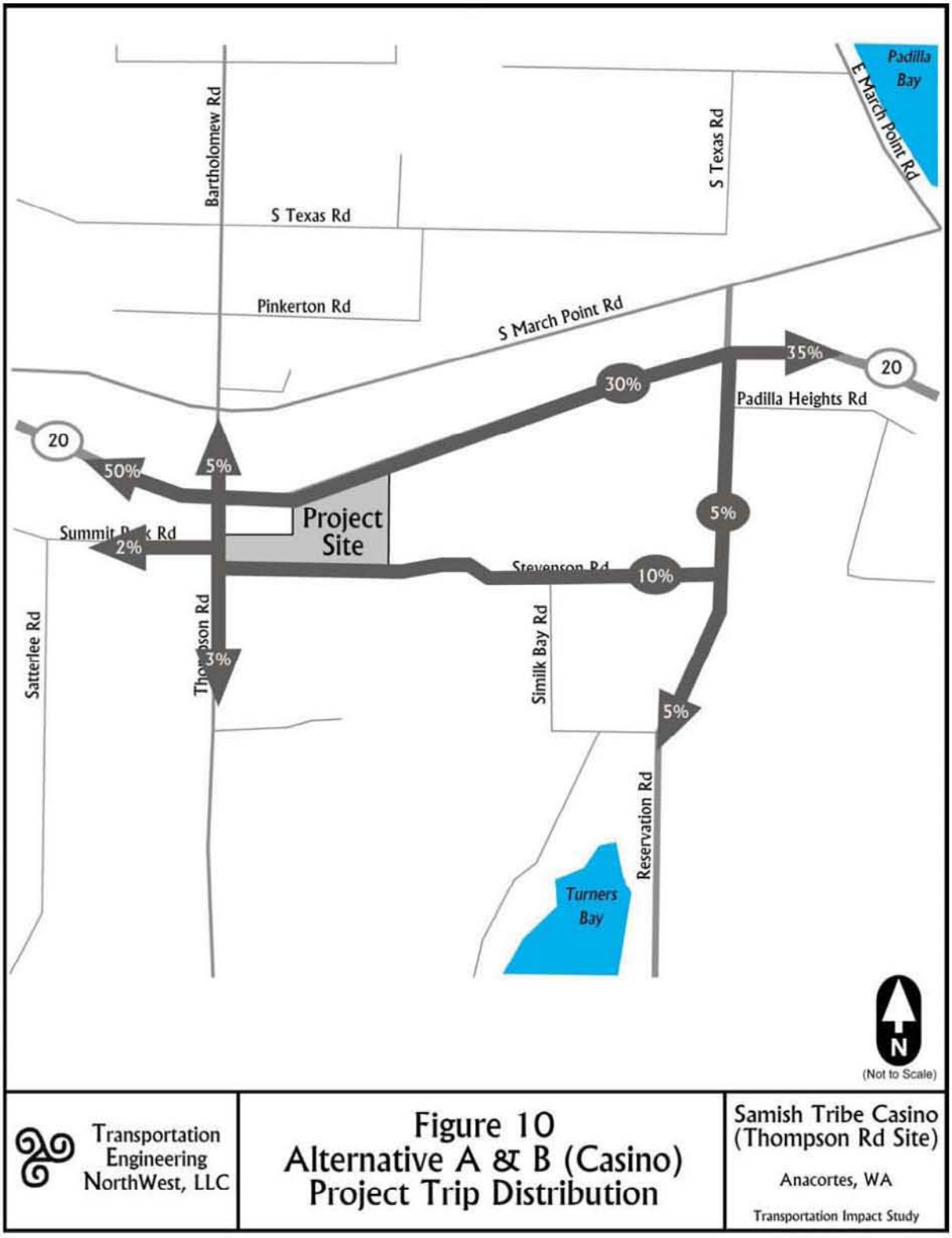
1 - ITE *Trip Generation Manual*, 8th Edition, 2008.
2 – SF GFA is 1,000 Square Feet of Gross Floor Area and VFP is Vehicle Fueling Position.

Trip Distribution and Assignment

Thompson Road Site

Based on review of existing traffic volumes, standard engineering practices and guidelines, project trip distribution was assumed to follow these basic patterns from the proposed action (distribution is shown in **Figure 10** for the Alternative A and B only):

- 52 percent West via SR 20 and Summit Park Road;
- 35 percent East via SR 20;
- 5 percent North via Bartholomew Road; and
- 8 percent South via Reservation Road and Thompson Road.


Padilla Bay
E March Point Rd
Bartholomew Rd
S Texas Rd
S Texas Rd
Pinkerton Rd
S March Point Rd
35%
20
30%
Padilla Heights Rd
20
50%
5%
Project Site
5%
2%
10%
Satterlee Rd
Thompson Rd
3%
Similk Bay Rd
5%
Reservation Rd
Turners Bay
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 10
Alternative A & B (Casino)
Project Trip Distribution
Samish Tribe Casino
(Thompson Rd Site)
Anacortes, WA
Transportation Impact Study

Based on review of existing traffic volumes, standard engineering practices and guidelines, project trip distribution was assumed to follow these basic patterns from the proposed action (distribution is shown in **Figure 11** for Alternative C only):

- 45 percent West via SR 20 and Summit Park Road;
- 40 percent East via SR 20;
- 7 percent North via Bartholomew Road; and
- 8 percent South via Reservation Road and Thompson Road.

Weaverling Spit Site

Based on review of existing traffic volumes, standard engineering practices and guidelines, project trip distribution was assumed to follow these basic patterns from the proposed action (distribution is shown in **Figure 12** for Alternative D):

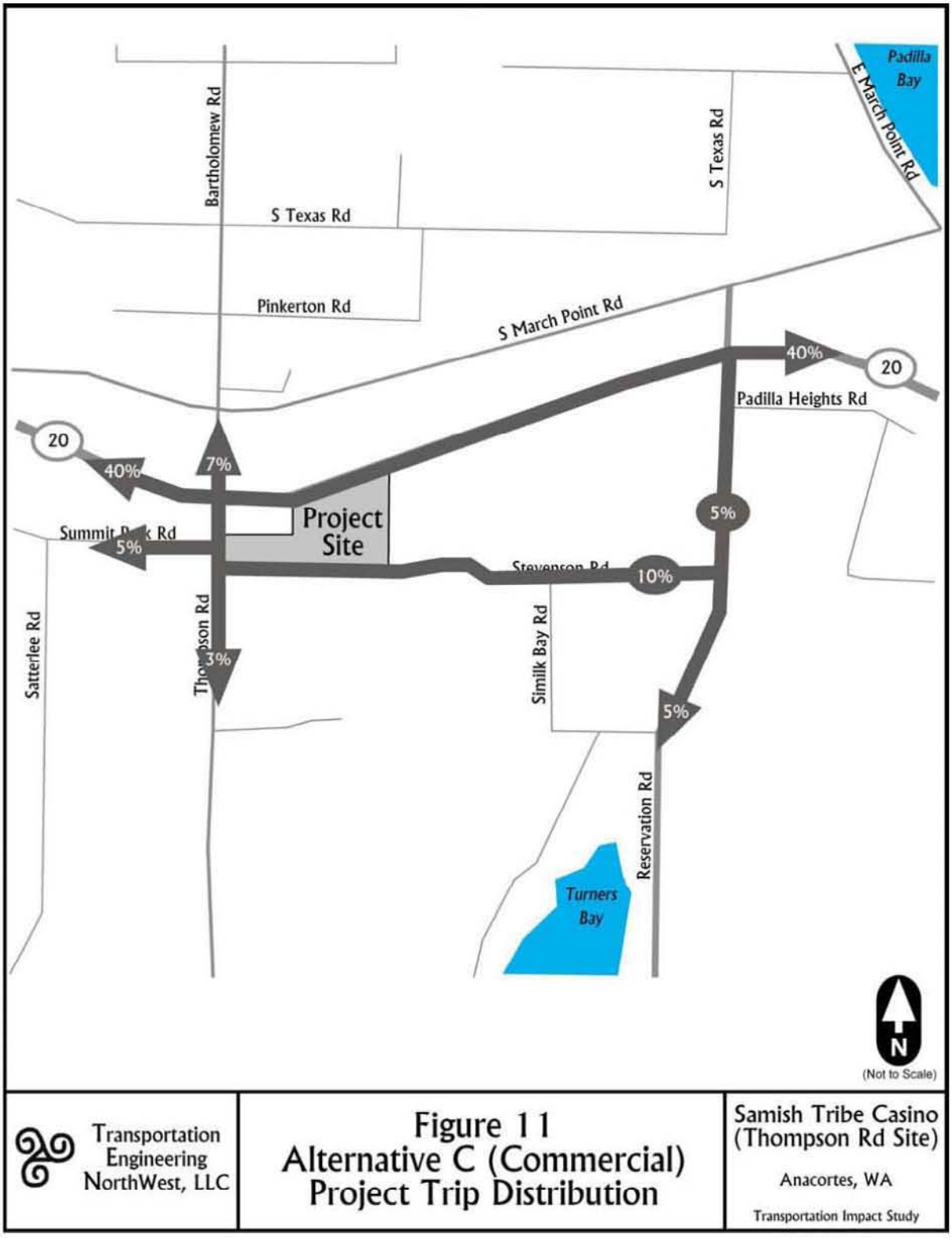
- 10 percent West via 34th Street and Commercial Avenue;
- 50 percent East via SR 20;
- 30 percent North via SR 20 and R Avenue; and
- 10 percent South via SR 20.

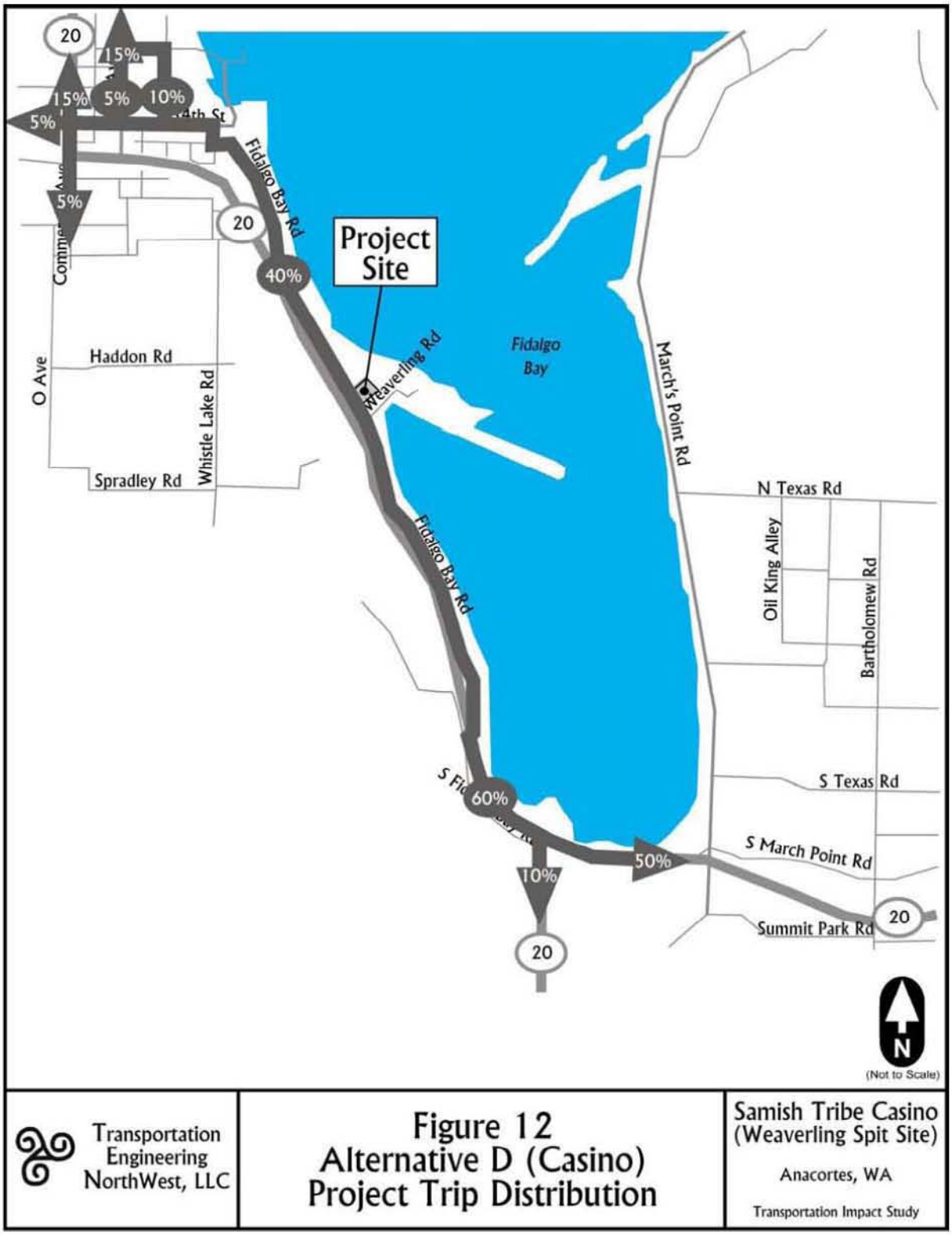
Traffic Volume and Level of Service Impacts

Figures 13 summarizes daily and p.m. peak hour project generated trip assignment for Alternatives A, B, and C at the Thompson Road site and **Figure 14** shows daily and p.m. peak hour project generated trip assignment site under Alternative D at the Weaverling Spit site. **Figure 15** summarizes 2013 baseline daily and p.m. peak hour traffic volumes without the project at the Thompson Road site. **Figure 16** shows daily and p.m. peak hour traffic volumes with the project in 2013 at the Thompson Road site for all alternatives. **Figure 17** illustrates daily and p.m. peak hour traffic volume impacts at the Weaverling Spit site.

Daily traffic volumes on SR 20 west of Thompson Road would increase by approximately 1,600 vehicles under Alternative A, 1,200 vehicles under Alternative B and 2,300 vehicles under Alternative C at the Thompson Road site. SR 20 and SR 20 Spur would increase by 1,600 vehicles and 1,900 vehicles under Alternative 1 at the Weaverling Spit site. Daily traffic volumes would increase by approximately 3 to 7 percent on SR 20 and the SR 20 Spur under each of the alternatives at the Thompson Road and Weaverling Spit sites, respectively.

Intersection LOS impacts during the p.m. peak hour were evaluated at study intersections assuming full completion of the *Samish Tribe Casino* development in 2013. Detailed level of service summary worksheets are provided in **Appendix B**, and 2013 traffic volume calculations worksheets are provided in **Appendix C**.


Padilla Bay
E March Point Rd
Bartholomew Rd
S Texas Rd
S Texas Rd
Pinkerton Rd
S March Point Rd
40%
20
Padilla Heights Rd
20
40%
7%
Project Site
5%
5%
10%
Satterlee Rd
Similk Bay Rd
5%
Reservation Rd
Turners Bay
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 11
Alternative C (Commercial)
Project Trip Distribution
Samish Tribe Casino
(Thompson Rd Site)
Anacortes, WA
Transportation Impact Study


20
15%
15%
5%
10%
5%
5%
20
40%
Project Site
Fidalgo Bay Rd
Weaverling Rd
Fidalgo Bay
March's Point Rd
Haddon Rd
O Ave
Whistle Lake Rd
Spradley Rd
N Texas Rd
Oil King Alley
Bartholomew Rd
Fidalgo Bay Rd
60%
50%
10%
20
S Texas Rd
S March Point Rd
Summit Park Rd
20
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 12
Alternative D (Casino)
Project Trip Distribution
Samish Tribe Casino
(Weaverling Spit Site)
Anacortes, WA
Transportation Impact Study

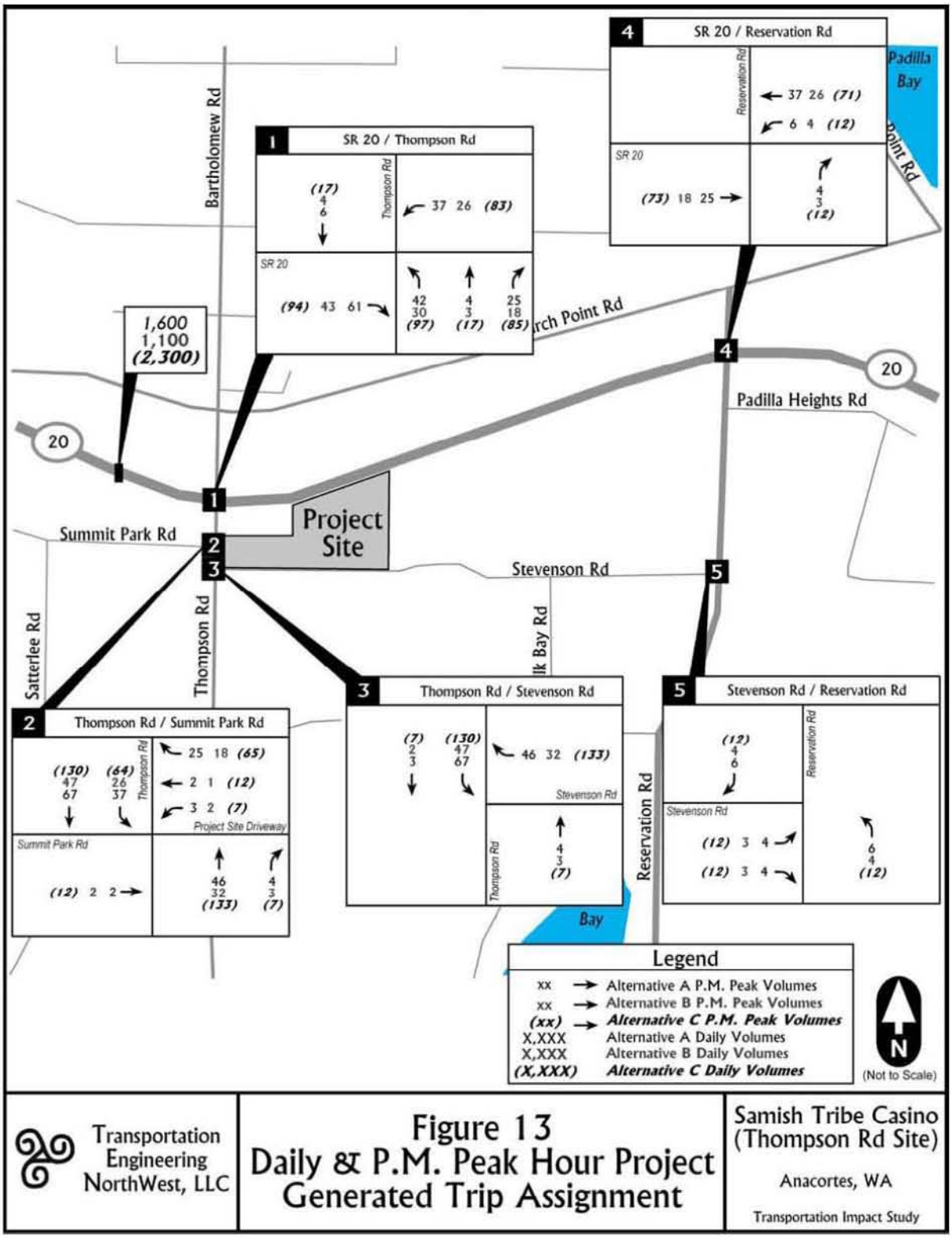


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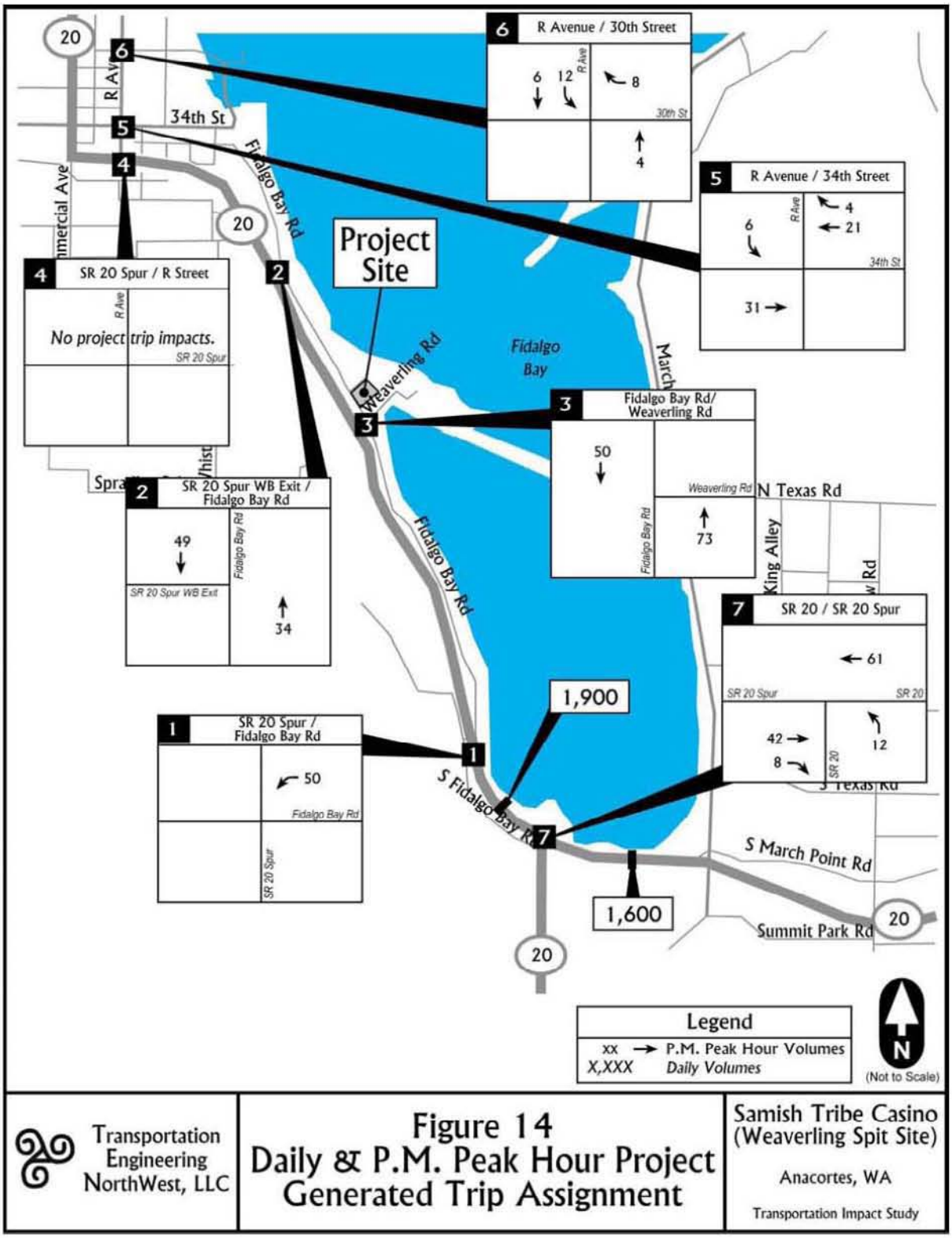
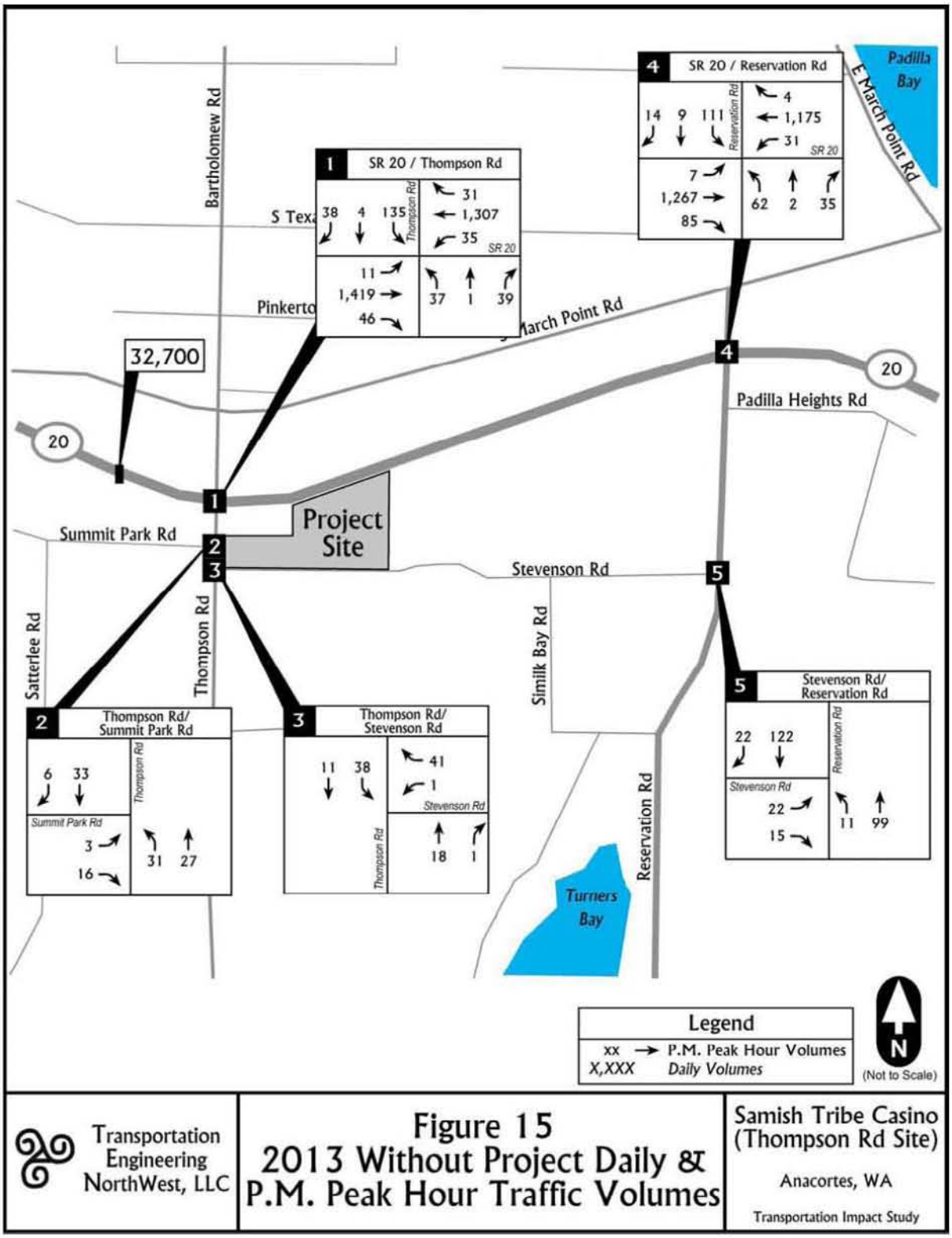
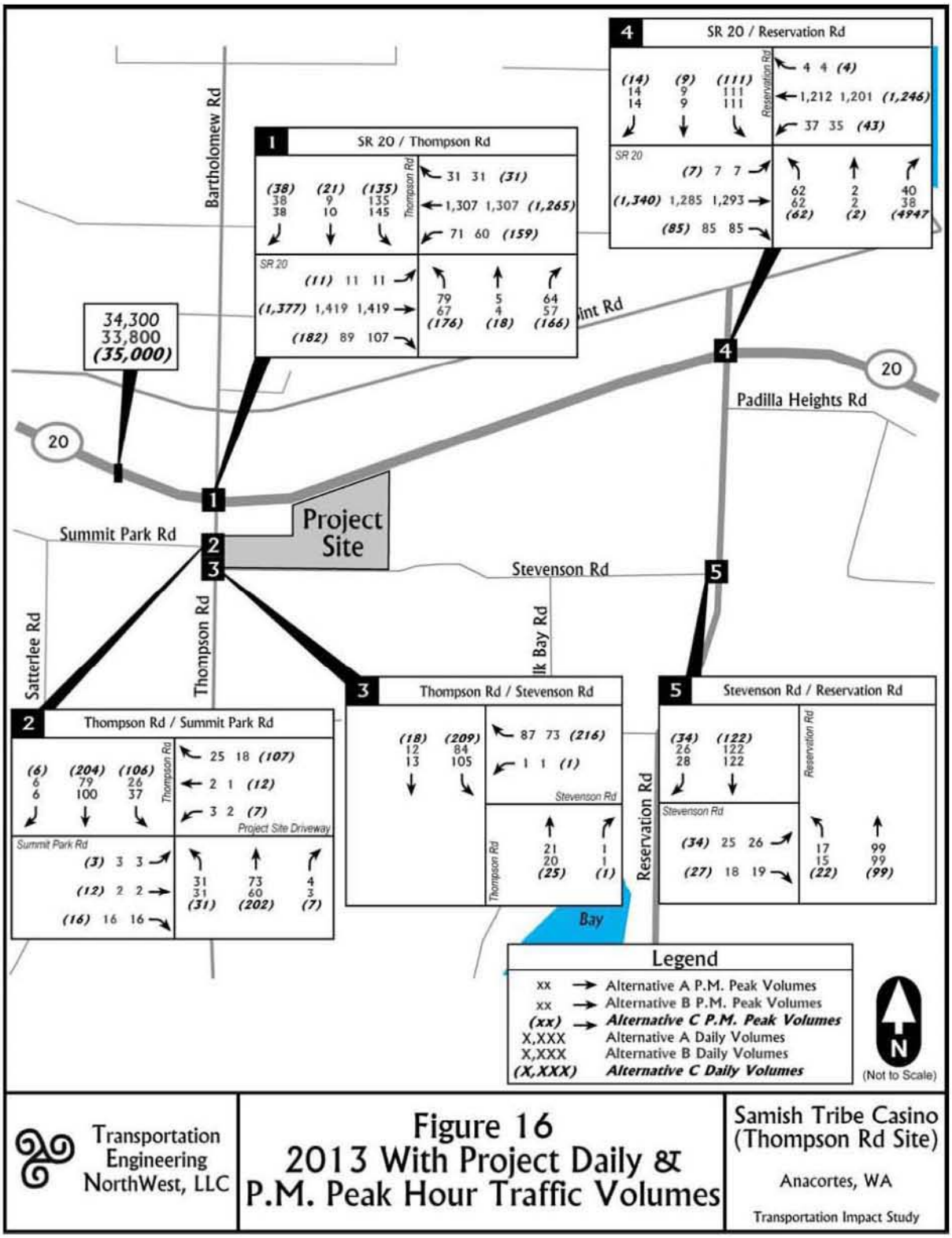
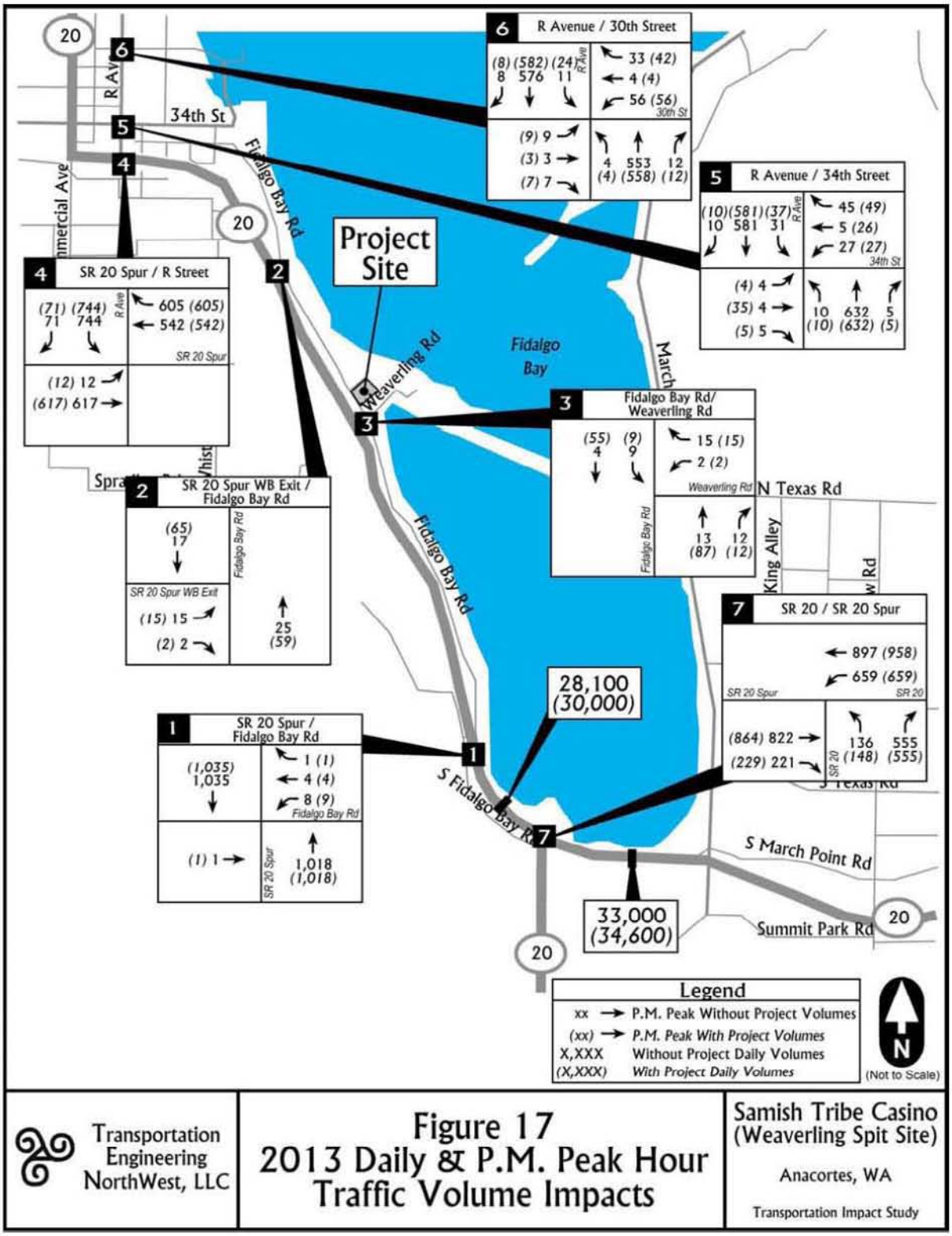
Figure 13
Daily & P.M. Peak Hour Project Generated Trip Assignment

Samish Tribe Casino (Thompson Rd Site)
Anacortes, WA
Transportation Impact Study


6 R Avenue / 30th Street
6 12 R Ave 8
30th St
4
5 R Avenue / 34th Street
6 R Ave 4 21
34th St
31
4 SR 20 Spur / R Street
R Ave
No project trip impacts.
SR 20 Spur
2 SR 20 Spur WB Exit / Fidalgo Bay Rd
49
Fidalgo Bay Rd
SR 20 Spur WB Exit
34
3 Fidalgo Bay Rd/ Weaverling Rd
50
Weaverling Rd
Fidalgo Bay Rd
73
7 SR 20 / SR 20 Spur
61
SR 20 Spur
SR 20
42 8 12
SR 20
1 SR 20 Spur / Fidalgo Bay Rd
50
Fidalgo Bay Rd
SR 20 Spur
Project Site
Weaverling Rd
Fidalgo Bay
Fidalgo Bay Rd
March
N Texas Rd
King Alley
S Fidalgo Bay Rd
S March Point Rd
Summit Park Rd
1,900
1,600
20
34th St
R Ave
Legend
xx → P.M. Peak Hour Volumes
X,XXX Daily Volumes
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 14
Daily & P.M. Peak Hour Project Generated Trip Assignment
Samish Tribe Casino
(Weaverling Spit Site)
Anacortes, WA
Transportation Impact Study


Bartholomew Rd
S Texa
Pinkerto
March Point Rd
E March Point Rd
Padilla Bay
Padilla Heights Rd
20
32,700
Project Site
Summit Park Rd
Stevenson Rd
Satterlee Rd
Thompson Rd
Similk Bay Rd
Reservation Rd
Turners Bay
1 SR 20 / Thompson Rd
38 4 135
31
1,307
35
SR 20
11
1,419
46
37 1 39
4 SR 20 / Reservation Rd
14 9 111
4
1,175
31
7
1,267
85
62 2 35
2 Thompson Rd/ Summit Park Rd
6 33
3
16
31 27
3 Thompson Rd/ Stevenson Rd
11 38
41
1
18 1
5 Stevenson Rd/ Reservation Rd
22 122
22
15
11 99
Legend
xx → P.M. Peak Hour Volumes
X,XXX Daily Volumes
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 15
2013 Without Project Daily & P.M. Peak Hour Traffic Volumes
Samish Tribe Casino (Thompson Rd Site)
Anacortes, WA
Transportation Impact Study


4 SR 20 / Reservation Rd
1 SR 20 / Thompson Rd
2 Thompson Rd / Summit Park Rd
3 Thompson Rd / Stevenson Rd
5 Stevenson Rd / Reservation Rd
Bartholomew Rd
Thompson Rd
Reservation Rd
Padilla Heights Rd
Summit Park Rd
Stevenson Rd
Satterlee Rd
Project Site
Project Site Driveway
Bay
20
34,300
33,800
(35,000)
Legend
xx Alternative A P.M. Peak Volumes
xx Alternative B P.M. Peak Volumes
(xx) Alternative C P.M. Peak Volumes
X,XXX Alternative A Daily Volumes
X,XXX Alternative B Daily Volumes
(X,XXX) Alternative C Daily Volumes
N
(Not to Scale)
Transportation Engineering NorthWest, LLC
Figure 16
2013 With Project Daily & P.M. Peak Hour Traffic Volumes
Samish Tribe Casino (Thompson Rd Site)
Anacortes, WA
Transportation Impact Study



Transportation Engineering NorthWest, LLC

Figure 17
2013 Daily & P.M. Peak Hour Traffic Volume Impacts

Samish Tribe Casino (Weaverling Spit Site)
Anacortes, WA
Transportation Impact Study

Thompson Road Site

Table 8 summarizes intersection levels of service impacts at study intersections during the 2013 p.m. peak hour at the Thompson Road site. With the exception of the SR 20 and Thompson Road intersection, all study intersections would operate at LOS C or better during the p.m. peak hour in 2013 with and without all of the alternatives at the Thompson Road site, meeting the City's adopted level of service standards for minor arterials, collectors, and local roadways. With buildout of Alternative C, the intersection of SR 20 and Thompson Road would operate at LOS D, meeting the City/WSDOT LOS standard for SR 20.

Table 8: 2013 P.M. Peak Intersection Level of Service Impacts (Thompson Road Site)

		No Action		With Alt A		With Alt B		With Alt C	
Signalized Intersections	***Control Type***	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
#1 – SR 20 / Thompson Rd	*Signalized*	B	14	B	17	B	15	D	36
#4 – SR 20 / Reservation Rd	*Signalized*	B	15	B	16	B	15	B	16
Unsignalized Intersections	***Control Type***	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
#2 – Summit Park Rd / Thompson Rd / Project Site Driveway	*EB*	A	9	A	10	A	9	C	20
	WB	--	--	A	9	A	9	C	16
	NB Left	A	7	A	8	A	8	A	8
	SB Left	--	--	A	8	A	7	A	8
#3 – Stevenson Rd / Thompson Rd	*WB*	A	9	A	9	A	9	A	10
	NB Left	A	7	A	7	A	7	A	8
#5 – Stevenson Rd / Reservation Rd	*EB*	B	10	B	11	B	10	B	11
	SB Left	A	8	A	8	A	8	A	8
#6 – West Proposed Site Access / Stevenson Rd	*EB Left*	--	--	A	7	A	7	A	8
	SB	--	--	A	9	A	9	A	10
#7 – Center Proposed Site Access / Stevenson Rd	*EB Left*	--	--	A	7	A	7	A	8
	SB	--	--	A	9	A	9	A	9
#8 – East Proposed Site Access / Stevenson Rd	*EB Left*	--	--	A	7	A	7	A	8
	SB	--	--	A	9	A	9	A	10

Note: Analysis based on *Synchro 6 and HCS 2000*, *Traffic Signal Coordination Software* results using HCM 2000 control delays (seconds) and LOS.

Residential Impacts

This section summarizes estimated delay impacts to residents who live on Thompson Road, south of Stevenson Road. As shown in **Table 9**, traffic delay for **northbound movements** along Thompson Road is estimated under the No Action alternative. Net changes in delay under each Alternative are estimated to increase by approximately 6 seconds per vehicle under Alternative A, 3 seconds under Alternative B, and 38 seconds under Alternative C. Improvements to Intersection #1 – SR 20 / Thompson Road would reduce delay along Thompson Road, with northbound movements under Alternative C increasing by approximately 27 seconds per vehicle.

Table 9: Intersection Delay Impacts for Northbound Travel on Thompson Road

Intersection	***Movement***	**No Action**	**With Alt A**	**With Alt B**	**With Alt C**
#1 – SR 20 / Thompson Rd	*Northbound*	23 sec/veh	29 sec/veh	26 sec/veh	61 sec/veh
Net Change in Delay due to Project			*+9 sec/veh*	*+3 sec/veh*	*+28 sec/veh*

Note: Analysis based on *Synchro 6* results using HCM 2000 control delays (seconds) and LOS on the northbound approach of Thompson Road. These results separate out these movements from the overall intersection delay impacts which are shown in Table 8.

Weaverling Spit Site

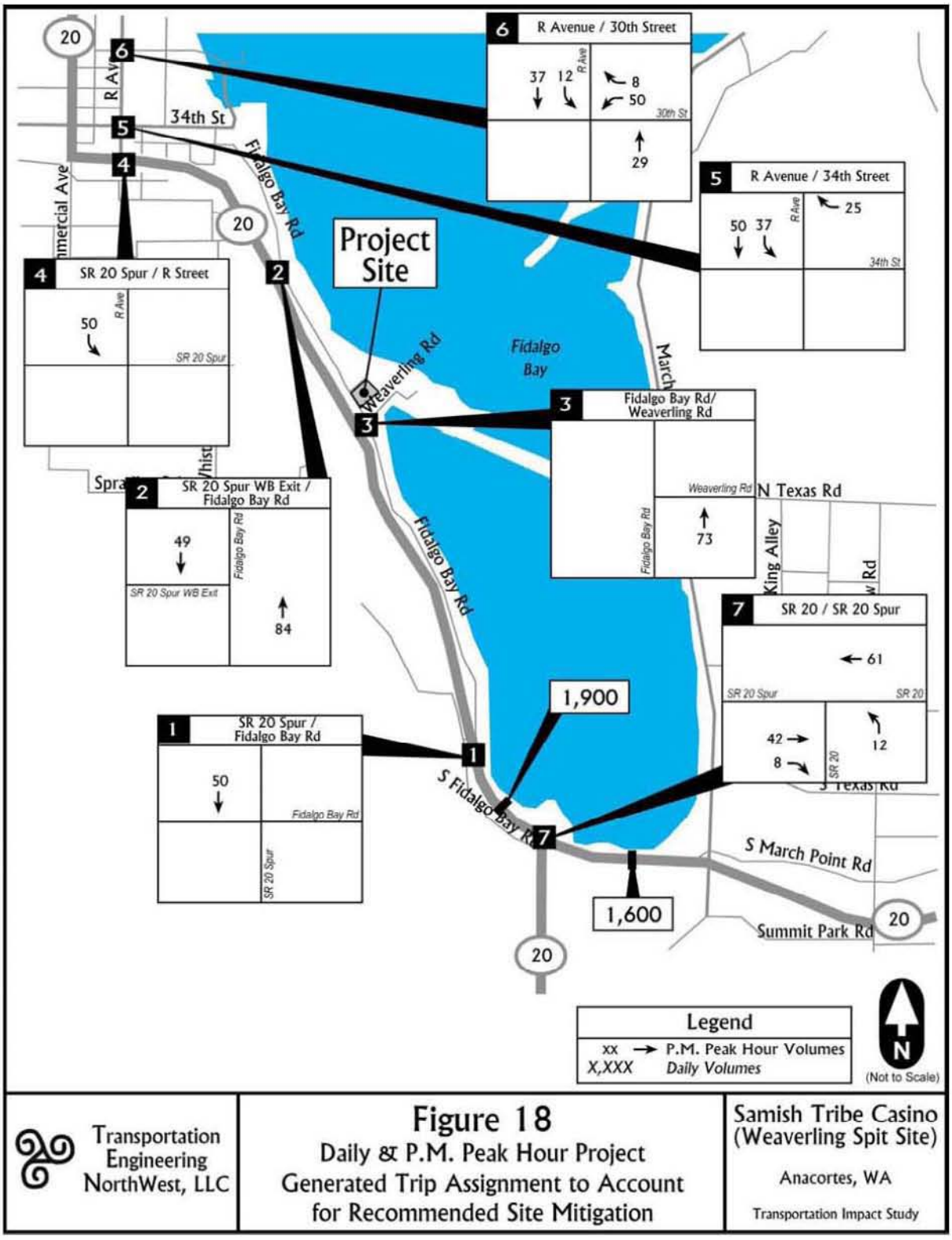
Table 10 summarizes intersection levels of service impacts at study intersections during the 2013 p.m. peak hour at the Weaverling Spit site. During the p.m. peak hour in 2013, eastbound and westbound movements at Intersection #1 - SR 20 Spur / Fidalgo Bay Road would continue to operate at LOS F and at Intersection #5 – 34th Street / R Avenue would operate at LOS E with Alternative D. All other signalized and unsignalized intersections are expected to operate at LOS D or better during the p.m. peak hour with and without Alternative D in 2013.

Table 10: 2013 P.M. Peak Intersection Level of Service Impacts (Weaverling Spit Site)

		No Action		With Alt D	
Signalized Intersections	***Control Type***	**LOS**	**Delay**	**LOS**	**Delay**
#4 – SR 20 Spur / R Ave	*Signalized*	D	37	D	37
#7 – SR 20 / SR 20 Spur	*Signalized*	D	43	D	49
Unsignalized Intersections	***Control Type***	**LOS**	**Delay**	**LOS**	**Delay**
#1 – SR 20 Spur / Fidalgo Bay Rd	*EB*	F	91	F	91
	WB	F	84	F	>100
	NB Left	B	11	B	11
	SB Left	B	11	B	11
#2 – SR 20 Spur WB Exit / Fidalgo Bay Rd	*WB*	A	9	A	9
#3 – Weaverling Rd / Fidalgo Bay Rd	*WB*	A	9	A	9
	SB Left	A	7	A	8
#5 – 34th St / R Ave	*EB*	C	25	E	45
	WB	C	23	E	40
	NB Left	A	9	A	9
	SB Left	A	9	A	9
#6 – 30th St / R Ave	*EB*	C	19	C	20
	WB	C	24	C	25
	NB Left	A	9	A	9
	SB Left	A	9	A	9
#8 – Fidalgo Bay Rd / Project Site Driveway	*WB*	--	--	A	10
	SB Left	--	--	A	8

Note: Analysis based on *Synchro 6 and HCS 2000*, *Traffic Signal Coordination Software* results using HCM 2000 control delays (seconds) and LOS.

Transportation mitigation measures would be required at intersections #1 - SR 20 Spur / Fidalgo Bay Road and # 6 – 30th Street / R Avenue, which would alleviate impacts to intersection # 5 34th Street and R Street. **Figure 18** shows the revised trip distribution required to reduce impacts to intersection # 6 – 34th / R Avenue. These mitigation measures would improve the LOS at Intersection #1 - SR 20 Spur / Fidalgo Bay Road and #6 – 35th Street at R Avenue to LOS D.



Transportation Engineering NorthWest, LLC

Figure 18
Daily & P.M. Peak Hour Project Generated Trip Assignment to Account for Recommended Site Mitigation

Samish Tribe Casino (Weaverling Spit Site)
Anacortes, WA
Transportation Impact Study

Queuing Impacts

Average (50th percentile) and maximum (95th percentile) queue lengths are shown for critical turning movements. As defined in the *2000 Highway Capacity Manual*, the "back of queue" is the number of vehicles that are queued depending on arrival patterns and vehicles that do not clear the intersection during any given green phase (overflow).

Thompson Road Site

This section summarizes northbound queue lengths at the existing signalized Intersection #1 – SR 20 / Thompson Road and unsignalized Intersection #3 – Thompson Road / Stevenson Road, to determine their impacts, if any, to the proposed site access connection at Intersection #2 – Thompson Road / Summit Park Road.

As shown in **Table 11**, average and maximum northbound left-through queues at Intersection #1 – SR 20 / Thompson Road would exceed its storage length under Alternative C only. Mitigation improvements at this intersection would consist of providing a separate northbound left- and right-turn lane (for a northbound left, through and right turn lane) with an optimized signal split, 90-second cycle length, and offset. The northbound left-turn should be a minimum of 200 feet with taper under Alternative C only. In addition, the southbound left-turn at the proposed site access connection at Intersection #2 – Thompson Road / Summit Park Road should be restricted such that only a right-in, right-out and left-out is provided at the intersection along with through in/out movements along Summit Park Road and the proposed site access connection. Therefore, Alternative C project traffic volumes traveling southbound on Thompson Road would only be able to enter the site via the project site access connections onto Stevenson Road.

Table 11: 2013 Intersection #1 – SR 20 / Thompson Road Queue Lengths

Northbound Left-Through	No Action[1]	With Alt A	With Alt B	With Alt C
Average 50th Percentile Queue[1]	20 feet	50 feet	40 feet	205 feet
Maximum 95th Percentile Queue[1]	80 feet	135 feet	110 feet	375 feet
Average Queues Meet Storage Length	Yes	Yes	Yes	No
If "No", Average Queue Length	0	0	0	30 feet
Maximum Queues Meet Storage Length	Yes	Yes	Yes	No
If "No", Queue Beyond Storage	0	0	0	200 feet
Maximum Storage Length[2]	**275 feet**	**175 feet**	**175 feet**	**175 feet**
Northbound Right	**No Action**	**With Alt 1**	**With Alt 1a**	**With Alt 1b**
Average 50th Percentile Queue[1]	--	0 feet	0 feet	20 feet
Maximum 95th Percentile Queue[1]	--	35 feet	30 feet	70 feet
Average Queues Meet Storage Length	--	Yes	Yes	Yes
If "No", Average Queue Length	--	0	0	0
Maximum Queues Meet Storage Length	--	Yes	Yes	Yes
If "No", Queue Beyond Storage	--	0	0	0
Maximum Storage Length[2]	**--**	**275 feet**	**275 feet**	**275 feet**

1 – The No Action alternative summarizes queue lengths for the shared northbound left-through-right lane.
2 – The Maximum Storage Length is based on the distance between stop bars.

It should be noted that under Alternative A, the northbound left-through lane at Intersection #1 – SR 20 / Thompson Road should be a minimum of 135 feet with taper and the southbound

left lane at Intersection #2 – Thompson Road / Summit Park Road / Proposed Site Access should be a minimum of 50 feet with taper. Under Alternative B, the northbound left-through lane at Intersection #1 – SR 20 / Thompson Road should be a minimum of 115 feet with taper and the southbound left lane at Intersection #2 – Thompson Road / Summit Park Road / Proposed Site Access should be a minimum of 50 feet with taper.

As shown in **Table 12**, average and maximum southbound queue lengths at Intersection #3 – Thompson Road / Stevenson Road meet storage lengths, and therefore, no mitigation is required.

Table 12: 2013 Intersection #3 – Thompson Road / Stevenson Road Queue Lengths

Southbound	No Action	With Alt A	With Alt B	With Alt C
Average 50th Percentile Queue[1]	10 feet	10 feet	10 feet	10 feet
Maximum 95th Percentile Queue[1]	25 feet	25 feet	25 feet	25 feet
Average Queues Meet Storage Length	Yes	Yes	Yes	Yes
If "No", Average Queue Length	0	0	0	0
Maximum Queues Meet Storage Length	Yes	Yes	Yes	Yes
If "No", Queue Beyond Storage	0	0	0	0
Maximum Storage Length[1]	100 feet	100 feet	100 feet	100 feet

1 – The Maximum Storage Length is based on the distance between stop bars.

Weaverling Spit Site

There are no anticipated queuing impacts along Fidalgo Bay Road at or in the vicinity of the proposed site access driveway.

Site Access, Safety, and Circulation Issues

Thompson Road Site

Vehicular site access is proposed via three new site driveways onto Stevenson Road and one new site driveway onto Thompson Road, which would align with Summit Park Road to the west. As part of the proposed action, the proponent would need to construct all proposed site driveways and frontage improvements would consist of constructing full curb, gutter and sidewalk on all property frontages of Thompson Road and Stevenson Road.

As summarized in the *Traffic Volume Impacts and Future Levels of Service* section, all entering and exiting movements at the project site driveways onto Thompson Road and Stevenson Road are anticipated to operate at LOS A or better with queues of 2 vehicles or less during the p.m. peak hour with the proposed development under Alternatives A, B and C in 2013.

Sight Distance

The American Association of State and Highway Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* was used to determine sight distance requirements at the project site access connections onto Stevenson Road and Thompson Road. AASHTO requires 305 feet of stopping sight distance and 445 feet of entering sight distance for a 40 mph design speed (5 mph over 35 mph posted speed limit) onto Stevenson Road and Thompson Road. Field-measured sight distances are estimated at greater than 500 feet at all project site driveways

onto Stevenson Road and Thompson Road except for the East site access connection location onto Stevenson Road, which has an estimated 420 feet of sight distance to the east. By removing existing vegetation on the project property and vegetation east of the project site within the right of way, sight distance would be increased to between 450 and 500 feet, which is acceptable.

Weaverling Spit Site

Vehicular site access is proposed via one primary driveway and one secondary driveway onto Fidalgo Bay Road. As part of the proposed action, the proponent would need to construct all proposed site driveways and frontage improvements would consist of constructing full curb, gutter and sidewalk on all property frontages of Fidalgo Bay Road.

As summarized in the *Traffic Volume Impacts and Future Levels of Service* section, all entering and exiting movements at the project site driveways onto Fidalgo Bay Road are anticipated to operate at LOS A or better with queues of 1 vehicle or less during the p.m. peak hour under Alternative D with the proposed development in 2013.

Sight Distance

The American Association of State and Highway Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* was used to determine sight distance requirements at the project site access connection onto Fidalgo Bay Road. AASHTO requires 250 feet of stopping sight distance and 335 feet of entering sight distance for a 30 mph design speed (5 mph over 25 mph posted speed limit) onto Fidalgo Bay Road. Field-measured sight distances are estimated at 430 feet and greater at the Weaverling Spit project site connection location onto Fidalgo Bay Road, therefore, exceeding ASSHTO requirements.

Public Transportation Impacts

The proponent should see if Skagit Transit or private transportation services (e.g., bus charters) would be willing to provide service directly to the project site at either of the alternative sites.

Nonmotorized Transportation Impacts

As previously stated, sidewalks would be provided on all property frontages of Thompson Road and Stevenson Road for the Thompson Road site and on Fidalgo Bay Road for the Weaverling Spit site. No other nonmotorized transportation improvements would be required as part of the proposed project.

CUMULATIVE IMPACTS

With implementation of mitigation, no significant adverse traffic impacts to study intersections were identified in the buildout year 2013 under project conditions. In the Anacortes area, there are no significant new developments planned in the next 22 year horizon. Therefore, in the professional opinion of TENW the Proposed Project would have no traffic or transportation impacts in the horizon year 2035 with the implementation of mitigation identified below.

PROJECT MITIGATION MEASURES

A review of impacts to roadways, intersection levels of service, site access, safety, and circulation issues, public transportation services, and nonmotorized transportation facilities was conducted in association with the proposed development alternatives. The following mitigation measures are recommended to reduce or eliminate project impacts as a result of the proposed *Samish Tribe Casino* development and result in an acceptable LOS at all study intersections:

Thompson Road Site

- The Tribe shall remove existing vegetation on the project property east of the Stevenson Road east access and shall fund 100 percent of the removal of vegetation east of the project site within the public right-of-way on Stevenson Road, which would result in an acceptable sight distance to the east of the project site.
- The Tribe shall fund 100 percent of the cost to construct a 3-lane section on Thompson Road between SR 20 and Summit Park Road. A shared northbound left-through lane and right-turn only lane would be provided at Intersection #1 – SR 20 / Thompson Road and a southbound left-turn only lane and shared southbound through-right lane would be provided at Intersection #2 – Thompson Road / Summit Park Road. Implementation of this mitigation measure would result in an acceptable LOS at the intersections of SR20 / Thompson Road and Thompson Road / Summit Park Road.
- Under Alternative C only, the Tribe shall fund 100 percent of the cost to construct a separate northbound left- and right-turn lane (for a northbound left, through and right turn lane) with an optimized signal split, 90-second cycle length, and a northbound left-turn with a minimum of 200 feet with taper at intersection #1 – SR 20 / Thompson Road. In addition, the Tribe shall fund 100 percent to construct a southbound left-turn at Intersection #2 – Thompson Road / Summit Park Road and only provide a right-in, right-out and left-out along with through in/out movements along Summit Park Road and the proposed site access connection. Implementation of this mitigation measure would result in an acceptable LOS at the intersections of SR20 / Thompson Road and Thompson Road / Summit Park Road under Alternative C.

Weaverling Spit Site

- If the Weaverling Spit Site were selected, the Tribe would fund 100 percent of the cost to close east leg of the intersection at SR 20 Spur / Fidalgo Bay Road and restripe Fidalgo Bay Road to make it a one-way northbound roadway from the SR 20 Spur to Weaverling Road.
- If the Weaverling Spit Site were selected, the Tribe shall fund 100 percent of the cost to construct a median refuge lane on the south leg of R Avenue, which allows westbound left-turns from 30th Avenue at the intersection of 30th Street / R Avenue and provide directional signage to rout traffic to 30th Street then R Avenue to SR 20. As shown in **Table 13**, implementation of this mitigation measure would result in an acceptable LOS at all intersection within the study area of the Weaverling Spit site.

Table 13: Mitigated 2013 P.M. Peak Intersection Level of Service (Weaverling Spit Site) Project Traffic Routed NB to 30th Street

		No Action		With Alt D Routed 30th St	
Signalized Intersections	***Control Type***	**LOS**	**Delay**	**LOS**	**Delay**
#4 – SR 20 Spur / R Ave	*Signalized*	D	37	D	37
#7 – SR 20 / SR 20 Spur	*Signalized*	D	43	D	49
Unsignalized Intersections	***Control Type***	**LOS**	**Delay**	**LOS**	**Delay**
#2 – SR 20 Spur WB Exit / Fidalgo Bay Rd	*WB*	A	9	A	10
#3 – Weaverling Rd / Fidalgo Bay Rd	*WB*	A	9	A	9
	SB Left	A	7	A	8
#5 – 34th St / R Ave	*EB*	C	25	D	31
	WB	C	23	D	26
	NB Left	A	9	A	9
	SB Left	A	9	A	9
#6 – 30th St / R Ave	*EB*	C	19	C	18
	WB	C	24	C	20
	NB Left	A	9	A	9
	SB Left	A	9	A	9
#8 – Fidalgo Bay Rd / Project Site Driveway	*WB*	--	--	A	9
	SB Left	--	--	A	8

Note: Analysis based on *Synchro 6 and HCS 2000, Traffic Signal Coordination Software* results using HCM 2000 control delays (seconds) and LOS.

Appendix A

Traffic Counts

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 02049713 PAGE: 1
LOCATION : SR 20 FILE: 02049713
JCT : RESERVATION RD
MILEPOST : 49.71 Movements by: Primary DATE: 4/06/11

Time	From North			From East			From South			From West			Vehicle
Begin	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	Total
4:00 PM	2	4	10	2	267	8	8	0	13	22	288	2	626
4:15	1	3	19	1	281	6	6	1	11	26	293	4	652
4:30	3	2	52	1	277	11	11	0	25	18	305	1	706
4:45	7	0	26	0	296	5	9	1	11	16	323	0	694
HR TOTAL	13	9	107	4	1121	30	34	2	60	82	1209	7	2678
5:00 PM	1	5	10	0	257	7	6	0	19	17	289	1	612
5:15	1	2	15	2	300	10	9	0	16	22	278	3	658
5:30	4	0	17	1	287	6	8	0	24	20	200	1	568
5:45	2	1	12	0	251	11	8	1	19	21	216	2	544
HR TOTAL	8	8	54	3	1095	34	31	1	78	80	983	7	2382
DAY TOTAL	21	17	161	7	2216	64	65	3	138	162	2192	14	5060

PEAK PERIOD ANALYSIS FOR THE PERIOD: 4:00 PM - 6:00 PM

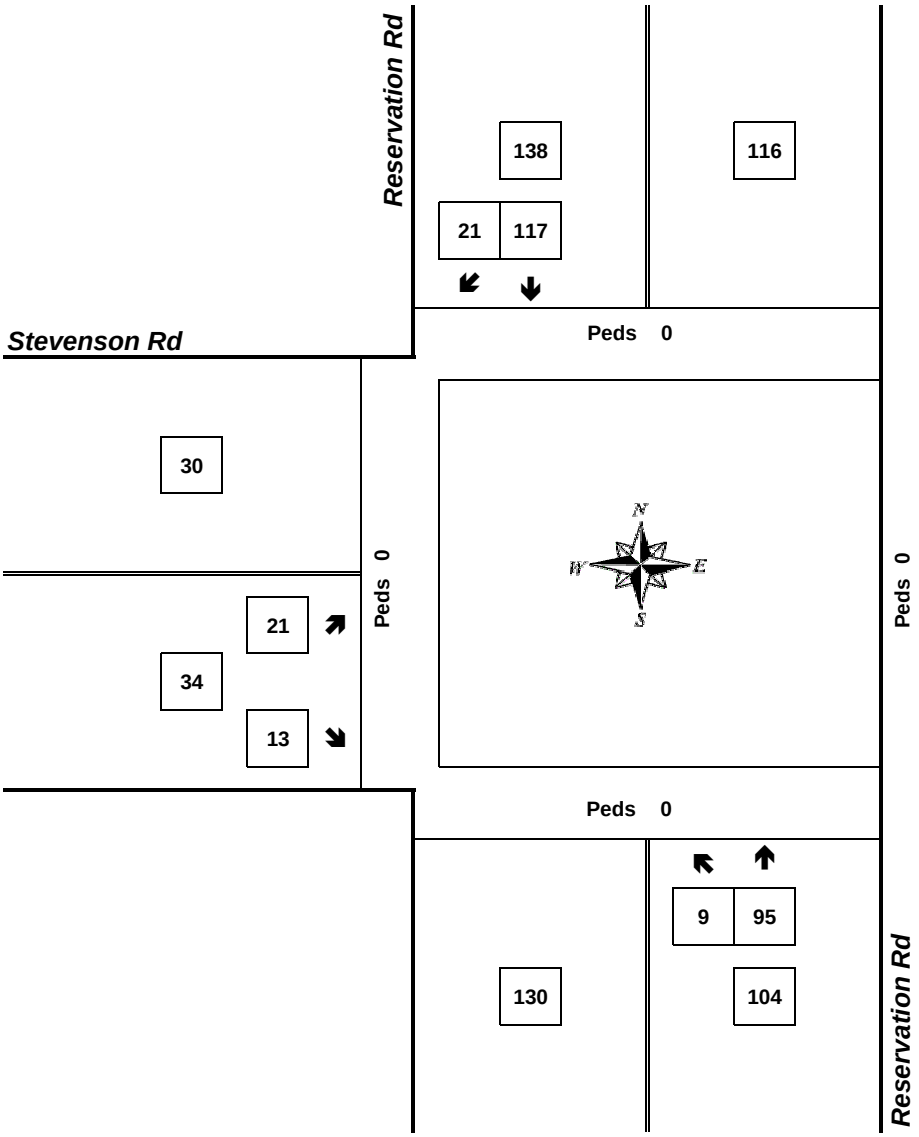
DIRECTION	START	PEAK HR	..... VOLUMES				.... PERCENTS ...		
FROM	PEAK HOUR	FACTOR	Right	Thru	Left	Total	Right	Thru	Left
North	4:00 PM	0.57	13	9	107	129	10	7	83
East	4:45 PM	0.94	3	1140	28	1171	0	97	2
South	5:00 PM	0.86	31	1	78	110	28	1	71
West	4:00 PM	0.96	82	1209	7	1298	6	93	1
Entire Intersection									
North	4:00 PM	0.57	13	9	107	129	10	7	83
East		0.96	4	1121	30	1155	0	97	3
South		0.67	34	2	60	96	35	2	62
West		0.96	82	1209	7	1298	6	93	1

Peak Hour Summary

Mark Skaggs
(206) 251-0300

Reservation Rd & Stevenson Rd

4:00 PM to 5:00 PM
Thursday, August 25, 2011

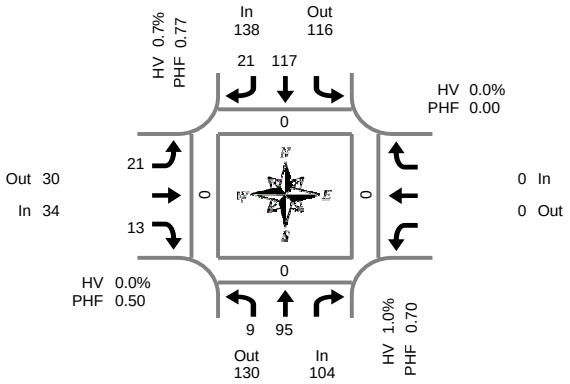


Approach	PHF	HV%	Volume
EB	0.50	0.0%	34
WB	0.00	0.0%	0
NB	0.70	1.0%	104
SB	0.77	0.7%	138
Intersection	0.70	0.7%	276

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Mark Skaggs
(206) 251-0300



Peak Hour Summary
4:00 PM to 5:00 PM

Reservation Rd & Stevenson Rd

Thursday, August 25, 2011
4:00 PM to 6:00 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Reservation Rd				Southbound Reservation Rd				Eastbound Stevenson Rd				Westbound Stevenson Rd				Interval Total	Pedestrians Crosswalk			
	L	T		HV	T	R	HV	L		R	HV						North	South	East	West
4:00 PM	3	34		0	39	6	0	11		6	0					99	0	0	0	0
4:15 PM	3	23		0	28	4	1	6		4	0					68	0	0	0	0
4:30 PM	0	22		1	30	7	0	3		1	0					63	0	0	0	0
4:45 PM	3	16		0	20	4	0	1		2	0					46	0	0	0	0
5:00 PM	3	25		1	30	1	0	2		3	0					64	0	0	0	0
5:15 PM	1	23		0	20	4	0	1		3	0					52	0	0	0	0
5:30 PM	1	22		0	31	4	0	3		1	0					62	0	0	0	0
5:45 PM	2	10		0	16	2	0	0		0	0					30	0	0	0	0
Total Survey	16	175		2	214	32	1	27		20	0					484	0	0	0	0

Peak Hour Summary
4:00 PM to 5:00 PM

By Approach	Northbound Reservation Rd				Southbound Reservation Rd				Eastbound Stevenson Rd				Westbound Stevenson Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total			North	South	East	West
Volume	104	130	234	1	138	116	254	1	34	30	64	0	0	0	0		276	0	0	0	0
%HV	1.0%				0.7%				0.0%				0.0%				0.7%				
PHF	0.70				0.77				0.50				0.00				0.70				

By Movement	Northbound Reservation Rd				Southbound Reservation Rd				Eastbound Stevenson Rd				Westbound Stevenson Rd				Total
	L	T		Total	T	R	Total	L		R	Total				Total		
Volume	9	95		104	117	21	138	21		13	34				0		276
PHF	0.75	0.70		0.70	0.75	0.75	0.77	0.48		0.54	0.50				0.00		0.70

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Reservation Rd				Southbound Reservation Rd				Eastbound Stevenson Rd				Westbound Stevenson Rd				Interval Total	Pedestrians Crosswalk			
	L	T		HV	T	R	HV	L		R	HV						North	South	East	West
4:00 PM	9	95		1	117	21	1	21		13	0					276	0	0	0	0
4:15 PM	9	86		2	108	16	1	12		10	0					241	0	0	0	0
4:30 PM	7	86		2	100	16	0	7		9	0					225	0	0	0	0
4:45 PM	8	86		1	101	13	0	7		9	0					224	0	0	0	0
5:00 PM	7	80		1	97	11	0	6		7	0					208	0	0	0	0

Peak Hour Summary

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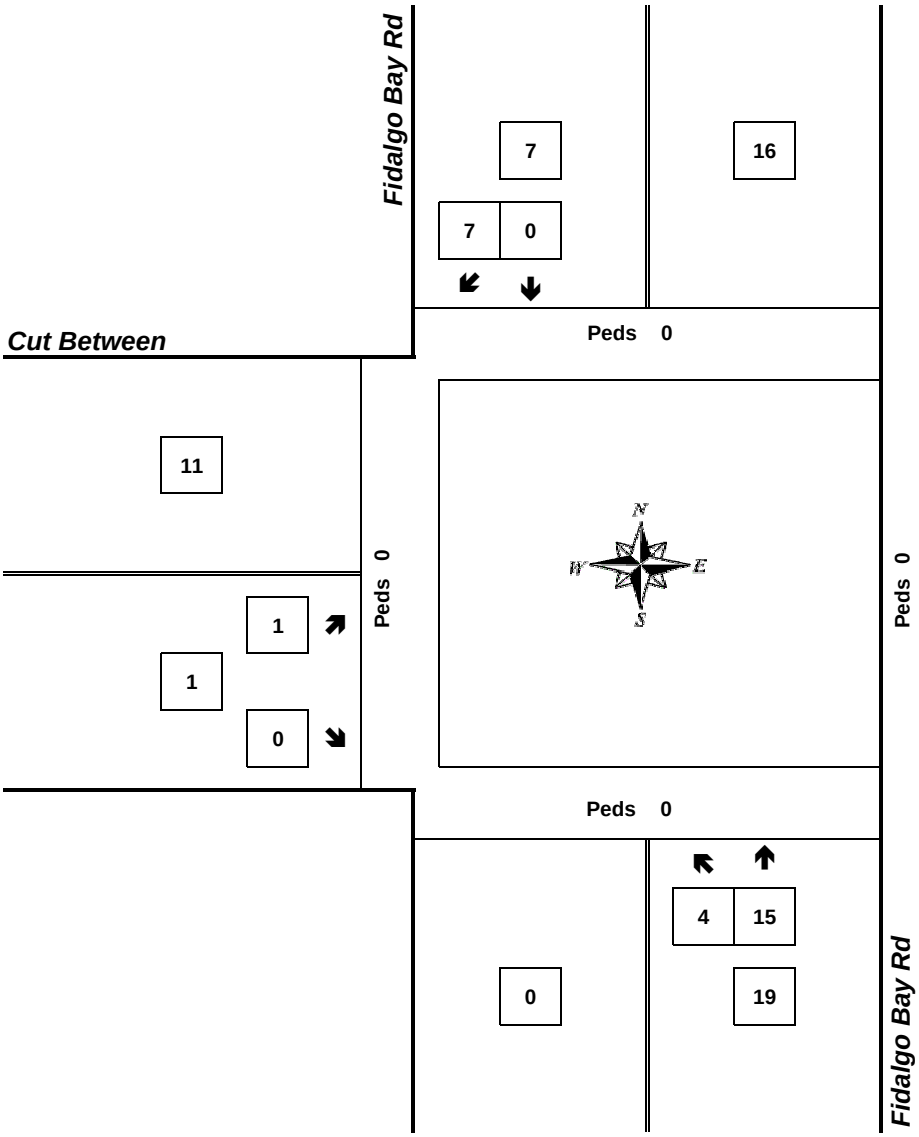
(206) 251-0300

Fidalgo Bay Rd & Cut Between

4:00 PM to 5:00 PM
Tuesday, August 30, 2011

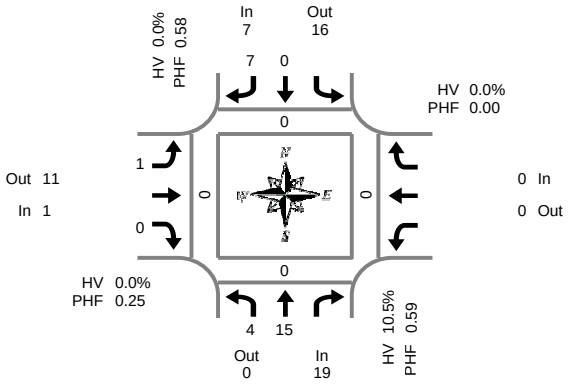


Approach	PHF	HV%	Volume
EB	0.25	0.0%	1
WB	0.00	0.0%	0
NB	0.59	10.5%	19
SB	0.58	0.0%	7
Intersection	0.61	7.4%	27

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Mark Skaggs
(206) 251-0300



Fidalgo Bay Rd & Cut Between

Tuesday, August 30, 2011
4:00 PM to 6:00 PM

Peak Hour Summary
4:00 PM to 5:00 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Fidalgo Bay Rd				Southbound Fidalgo Bay Rd				Eastbound Cut Between				Westbound Cut Between				Interval Total	Pedestrians Crosswalk			
	L	T		HV		T	R	HV	L		R	HV						North	South	East	West
4:00 PM	1	7		1		0	2	0	1		0	0					11	0	0	0	0
4:15 PM	0	2		0		0	2	0	0		0	0					4	0	0	0	0
4:30 PM	2	2		0		0	0	0	0		0	0					4	0	0	0	0
4:45 PM	1	4		1		0	3	0	0		0	0					8	0	0	0	0
5:00 PM	1	5		0		0	3	0	0		0	0					9	0	0	0	0
5:15 PM	2	3		0		0	1	0	0		0	0					6	0	0	0	0
5:30 PM	0	1		0		0	2	0	0		0	0					3	0	0	0	0
5:45 PM	1	2		0		0	2	0	0		0	0					5	0	0	0	0
Total Survey	8	26		2		0	15	0	1		0	0					50	0	0	0	0

Peak Hour Summary
4:00 PM to 5:00 PM

By Approach	Northbound Fidalgo Bay Rd				Southbound Fidalgo Bay Rd				Eastbound Cut Between				Westbound Cut Between				Total	Pedestrians Crosswalk			
	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total			North	South	East	West
Volume	19	0	19	2	7	16	23	0	1	11	12	0	0	0	0		27	0	0	0	0
%HV	10.5%				0.0%				0.0%				0.0%				7.4%				
PHF	0.59				0.58				0.25				0.00				0.61				

By Movement	Northbound Fidalgo Bay Rd				Southbound Fidalgo Bay Rd				Eastbound Cut Between				Westbound Cut Between				Total
	L	T		Total		T	R	Total	L		R	Total				Total	
Volume	4	15		19		0	7	7	1		0	1				0	27
PHF	0.50	0.54		0.59		0.00	0.58	0.58	0.25		0.00	0.25				0.00	0.61

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Fidalgo Bay Rd				Southbound Fidalgo Bay Rd				Eastbound Cut Between				Westbound Cut Between				Interval Total	Pedestrians Crosswalk			
	L	T		HV		T	R	HV	L		R	HV						North	South	East	West
4:00 PM	4	15		2		0	7	0	1		0	0					27	0	0	0	0
4:15 PM	4	13		1		0	8	0	0		0	0					25	0	0	0	0
4:30 PM	6	14		1		0	7	0	0		0	0					27	0	0	0	0
4:45 PM	4	13		1		0	9	0	0		0	0					26	0	0	0	0
5:00 PM	4	11		0		0	8	0	0		0	0					23	0	0	0	0

Peak Hour Summary

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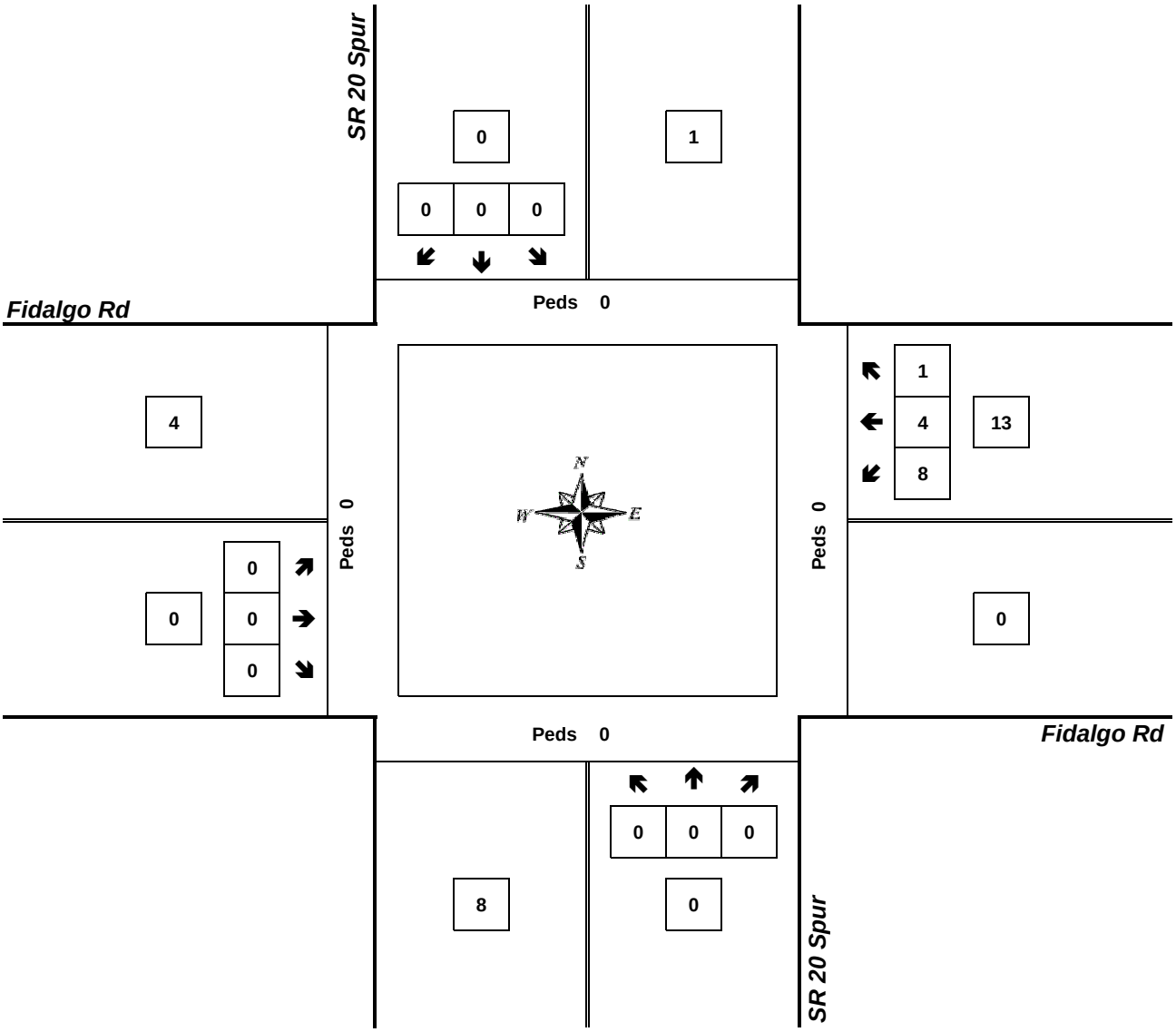
Mark Skaggs
(206) 251-0300

SR 20 Spur & Fidalgo Rd

4:30 PM to 5:30 PM
Tuesday, August 30, 2011

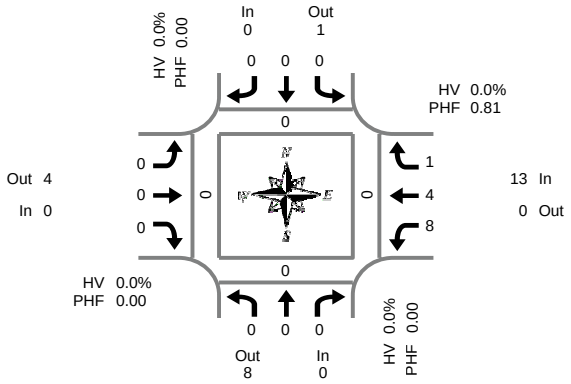


Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.81	0.0%	13
NB	0.00	0.0%	0
SB	0.00	0.0%	0
Intersection	0.81	0.0%	13

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Mark Skaggs
(206) 251-0300



SR 20 Spur & Fidalgo Rd

Tuesday, August 30, 2011
4:00 PM to 6:00 PM

Peak Hour Summary
4:30 PM to 5:30 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SR 20 Spur				Southbound SR 20 Spur				Eastbound Fidalgo Rd				Westbound Fidalgo Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	HV	L	T	R	HV	L	T	R	HV	L	T	R	HV		North	South	East	West
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	0	4	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	4	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0
Total Survey	0	0	1	0	0	0	0	0	0	0	0	0	14	6	3	0	24	0	0	0	0

Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound SR 20 Spur				Southbound SR 20 Spur				Eastbound Fidalgo Rd				Westbound Fidalgo Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV		North	South	East	West
Volume	0	8	8	0	0	1	1	0	0	4	4	0	13	0	13	0	13	0	0	0	0
%HV	0.0%				0.0%				0.0%				0.0%				0.0%				
PHF	0.00				0.00				0.00				0.81				0.81				

By Movement	Northbound SR 20 Spur				Southbound SR 20 Spur				Eastbound Fidalgo Rd				Westbound Fidalgo Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	0	0	0	8	4	1	13	13
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.50	0.25	0.81	0.81

Rolling Hour Summary
4:00 PM to 6:00 PM

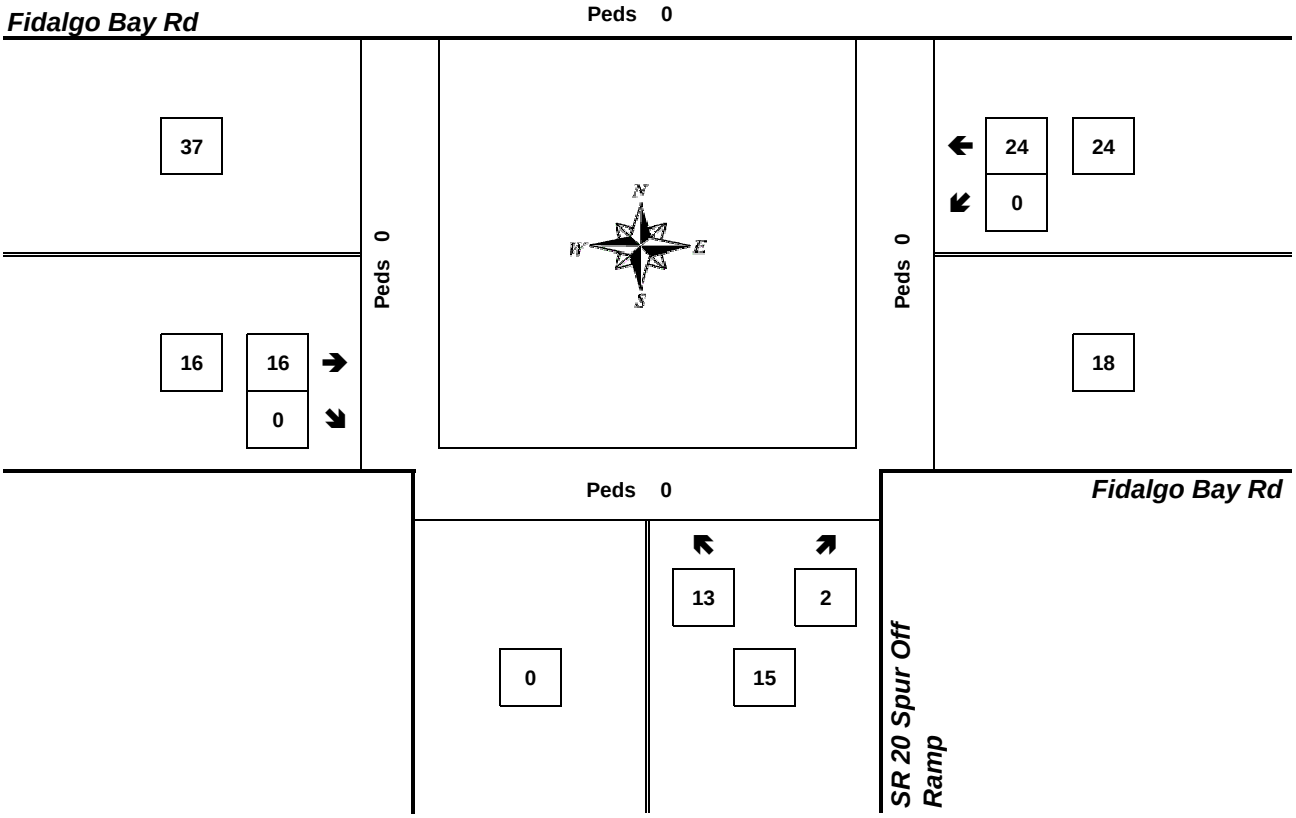
Interval Start Time	Northbound SR 20 Spur				Southbound SR 20 Spur				Eastbound Fidalgo Rd				Westbound Fidalgo Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	HV	L	T	R	HV	L	T	R	HV	L	T	R	HV		North	South	East	West
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	6	4	1	0	12	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	7	4	1	0	12	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	8	4	1	0	13	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	9	2	2	0	13	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	8	2	2	0	12	0	0	0	0

Peak Hour Summary

Mark Skaggs
(206) 251-0300

SR 20 Spur Off Ramp & Fidalgo Bay Rd

4:15 PM to 5:15 PM
Tuesday, August 30, 2011

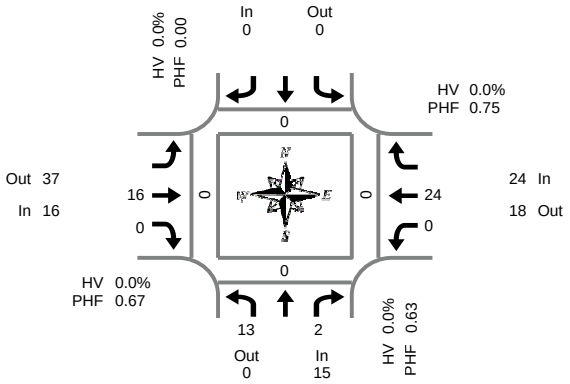


Approach	PHF	HV%	Volume
EB	0.67	0.0%	16
WB	0.75	0.0%	24
NB	0.63	0.0%	15
SB	0.00	0.0%	0
Intersection	0.72	0.0%	55

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Mark Skaggs
(206) 251-0300



Peak Hour Summary
4:15 PM to 5:15 PM

SR 20 Spur Off Ramp & Fidalgo Bay Rd

Tuesday, August 30, 2011
4:00 PM to 6:00 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SR 20 Spur Off Ramp				Southbound SR 20 Spur Off Ramp				Eastbound Fidalgo Bay Rd				Westbound Fidalgo Bay Rd				Interval Total	Pedestrians Crosswalk			
	L		R	HV					T	R	HV	L	T		HV			North	South	East	West
4:00 PM	4		1	0					4	0	0	0	5		0		14	0	0	0	0
4:15 PM	3		0	0					2	0	0	0	4		0		9	0	0	0	0
4:30 PM	3		0	0					6	0	0	0	7		0		16	0	0	0	0
4:45 PM	3		0	0					3	0	0	0	5		0		11	0	0	0	0
5:00 PM	4		2	0					5	0	0	0	8		0		19	0	0	0	0
5:15 PM	1		0	0					1	0	0	0	3		0		5	0	0	0	0
5:30 PM	4		0	0					4	0	0	0	4		0		12	0	0	0	0
5:45 PM	2		0	0					3	0	0	0	8		0		13	0	0	0	0
Total Survey	24		3	0					28	0	0	0	44		0		99	0	0	0	0

Peak Hour Summary
4:15 PM to 5:15 PM

By Approach	Northbound SR 20 Spur Off Ramp				Southbound SR 20 Spur Off Ramp				Eastbound Fidalgo Bay Rd				Westbound Fidalgo Bay Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	HV	In	Out	Total		In	Out	Total	HV	In	Out	Total	HV		North	South	East	West
Volume	15	0	15	0	0	0	0		16	37	53	0	24	18	42	0	55	0	0	0	0
%HV	0.0%				0.0%				0.0%				0.0%				0.0%				
PHF	0.63				0.00				0.67				0.75				0.72				

By Movement	Northbound SR 20 Spur Off Ramp				Southbound SR 20 Spur Off Ramp				Eastbound Fidalgo Bay Rd				Westbound Fidalgo Bay Rd				Total
	L		R	Total				Total	T	R	Total		L	T		Total	
Volume	13		2	15				0	16	0	16		0	24		24	55
PHF	0.81		0.25	0.63				0.00	0.67	0.00	0.67		0.00	0.75		0.75	0.72

Rolling Hour Summary
4:00 PM to 6:00 PM

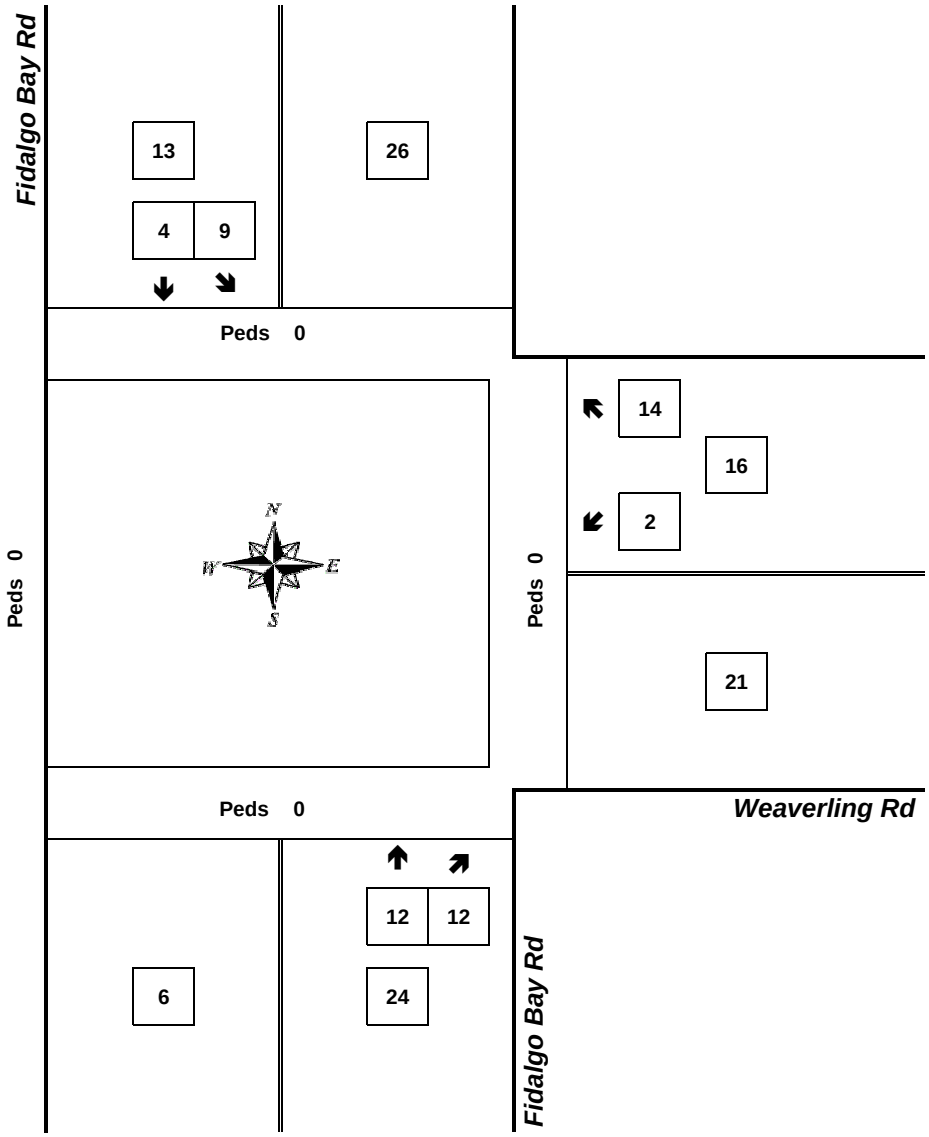
Interval Start Time	Northbound SR 20 Spur Off Ramp				Southbound SR 20 Spur Off Ramp				Eastbound Fidalgo Bay Rd				Westbound Fidalgo Bay Rd				Interval Total	Pedestrians Crosswalk			
	L		R	HV					T	R	HV	L	T		HV			North	South	East	West
4:00 PM	13		1	0					15	0	0	0	21		0		50	0	0	0	0
4:15 PM	13		2	0					16	0	0	0	24		0		55	0	0	0	0
4:30 PM	11		2	0					15	0	0	0	23		0		51	0	0	0	0
4:45 PM	12		2	0					13	0	0	0	20		0		47	0	0	0	0
5:00 PM	11		2	0					13	0	0	0	23		0		49	0	0	0	0

Peak Hour Summary

All Traffic Data Services Inc.
Mark Skaggs
(206) 251-0300

Fidalgo Bay Rd & Weaverling Rd

4:45 PM to 5:45 PM
Thursday, August 25, 2011

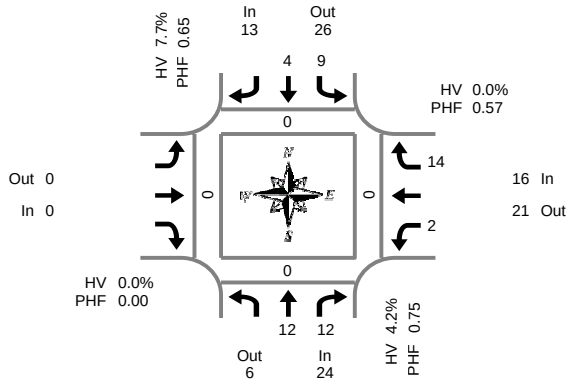


Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.57	0.0%	16
NB	0.75	4.2%	24
SB	0.65	7.7%	13
Intersection	0.78	3.8%	53

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Mark Skaggs
(206) 251-0300



Peak Hour Summary
4:45 PM to 5:45 PM

Fidalgo Bay Rd & Weaverling Rd

Thursday, August 25, 2011
4:00 PM to 6:00 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Fidalgo Bay Rd				Southbound Fidalgo Bay Rd				Eastbound Weaverling Rd				Westbound Weaverling Rd				Interval Total	Pedestrians Crosswalk			
		T	R	HV	L	T		HV					L		R	HV		North	South	East	West
4:00 PM		2	3	0	3	1		0					0		3	0	12	0	0	0	0
4:15 PM		0	5	0	2	0		0					0		1	0	8	0	0	0	0
4:30 PM		2	2	0	2	0		0					0		4	0	10	0	0	0	0
4:45 PM		4	4	0	1	1		0					1		5	0	16	0	0	0	0
5:00 PM		3	2	1	4	1		0					1		6	0	17	0	0	0	0
5:15 PM		3	2	0	3	0		0					0		0	0	8	0	0	0	0
5:30 PM		2	4	0	1	2		1					0		3	0	12	0	0	0	0
5:45 PM		4	1	0	3	2		0					0		0	0	10	0	0	0	0
Total Survey		20	23	1	19	7		1					2		22	0	93	0	0	0	0

Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound Fidalgo Bay Rd				Southbound Fidalgo Bay Rd				Eastbound Weaverling Rd				Westbound Weaverling Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total		In	Out	Total	HV		North	South	East	West
Volume	24	6	30	1	13	26	39	1	0	0	0		16	21	37	0	53	0	0	0	0
%HV	4.2%				7.7%				0.0%				0.0%				3.8%				
PHF	0.75				0.65				0.00				0.57				0.78				

By Movement	Northbound Fidalgo Bay Rd				Southbound Fidalgo Bay Rd				Eastbound Weaverling Rd				Westbound Weaverling Rd				Total
		T	R	Total	L	T		Total				Total	L		R	Total	
Volume		12	12	24	9	4		13				0	2		14	16	53
PHF		0.75	0.75	0.75	0.56	0.50		0.65				0.00	0.50		0.58	0.57	0.78

Rolling Hour Summary
4:00 PM to 6:00 PM

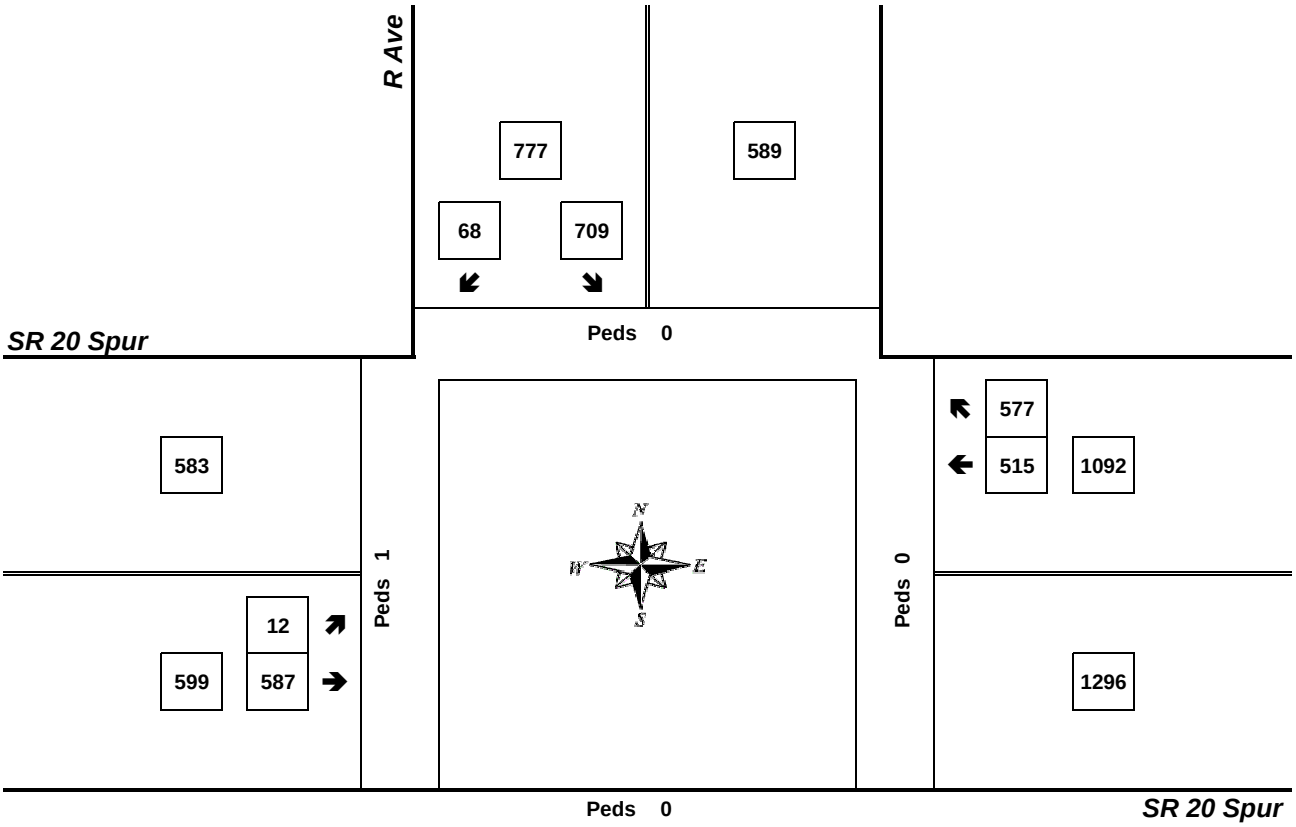
Interval Start Time	Northbound Fidalgo Bay Rd				Southbound Fidalgo Bay Rd				Eastbound Weaverling Rd				Westbound Weaverling Rd				Interval Total	Pedestrians Crosswalk			
		T	R	HV	L	T		HV					L		R	HV		North	South	East	West
4:00 PM		8	14	0	8	2		0					1		13	0	46	0	0	0	0
4:15 PM		9	13	1	9	2		0					2		16	0	51	0	0	0	0
4:30 PM		12	10	1	10	2		0					2		15	0	51	0	0	0	0
4:45 PM		12	12	1	9	4		1					2		14	0	53	0	0	0	0
5:00 PM		12	9	1	11	5		1					1		9	0	47	0	0	0	0

Peak Hour Summary

Mark Skaggs
(206) 251-0300

R Ave & SR 20 Spur

4:30 PM to 5:30 PM
Tuesday, August 30, 2011

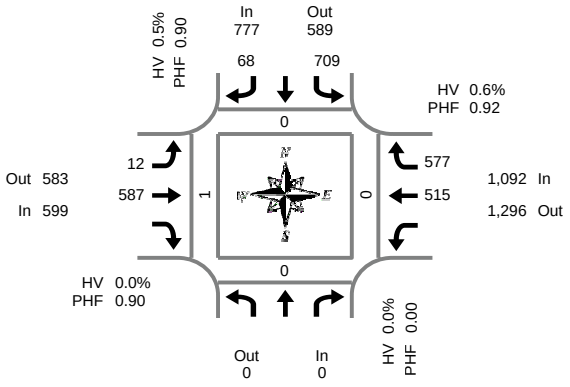


Approach	PHF	HV%	Volume
EB	0.90	0.0%	599
WB	0.92	0.6%	1,092
NB	0.00	0.0%	0
SB	0.90	0.5%	777
Intersection	0.94	0.4%	2,468

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Mark Skaggs
(206) 251-0300



Peak Hour Summary
4:30 PM to 5:30 PM

R Ave & SR 20 Spur

Tuesday, August 30, 2011
4:00 PM to 6:00 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound R Ave				Southbound R Ave				Eastbound SR 20 Spur				Westbound SR 20 Spur				Interval Total	Pedestrians Crosswalk			
					L		R	HV	L	T		HV		T	R	HV		North	South	East	West
4:00 PM					137		8	2	1	132		0		99	129	0	506	0	0	0	2
4:15 PM					145		9	2	6	109		1		116	143	1	528	0	0	0	1
4:30 PM					201		15	0	0	150		0		103	160	2	629	0	0	0	1
4:45 PM					155		17	1	4	126		0		146	152	0	600	0	0	0	0
5:00 PM					197		14	1	4	162		0		137	140	4	654	0	0	0	0
5:15 PM					156		22	2	4	149		0		129	125	1	585	0	0	0	0
5:30 PM					117		11	1	3	107		0		129	139	4	506	0	0	0	0
5:45 PM					117		8	2	3	103		1		116	115	1	462	0	0	0	5
Total Survey					1,225		104	11	25	1,038		2		975	1,103	13	4,470	0	0	0	9

Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound R Ave				Southbound R Ave				Eastbound SR 20 Spur				Westbound SR 20 Spur				Total	Pedestrians Crosswalk			
	In	Out	Total		In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV		North	South	East	West
Volume	0	0	0		777	589	1,366	4	599	583	1,182	0	1,092	1,296	2,388	7	2,468	0	0	0	1
%HV	0.0%				0.5%				0.0%				0.6%				0.4%				
PHF	0.00				0.90				0.90				0.92				0.94				

By Movement	Northbound R Ave				Southbound R Ave				Eastbound SR 20 Spur				Westbound SR 20 Spur				Total
				Total	L		R	Total	L	T		Total		T	R	Total	
Volume				0	709		68	777	12	587		599		515	577	1,092	2,468
PHF				0.00	0.88		0.77	0.90	0.75	0.91		0.90		0.88	0.90	0.92	0.94

Rolling Hour Summary
4:00 PM to 6:00 PM

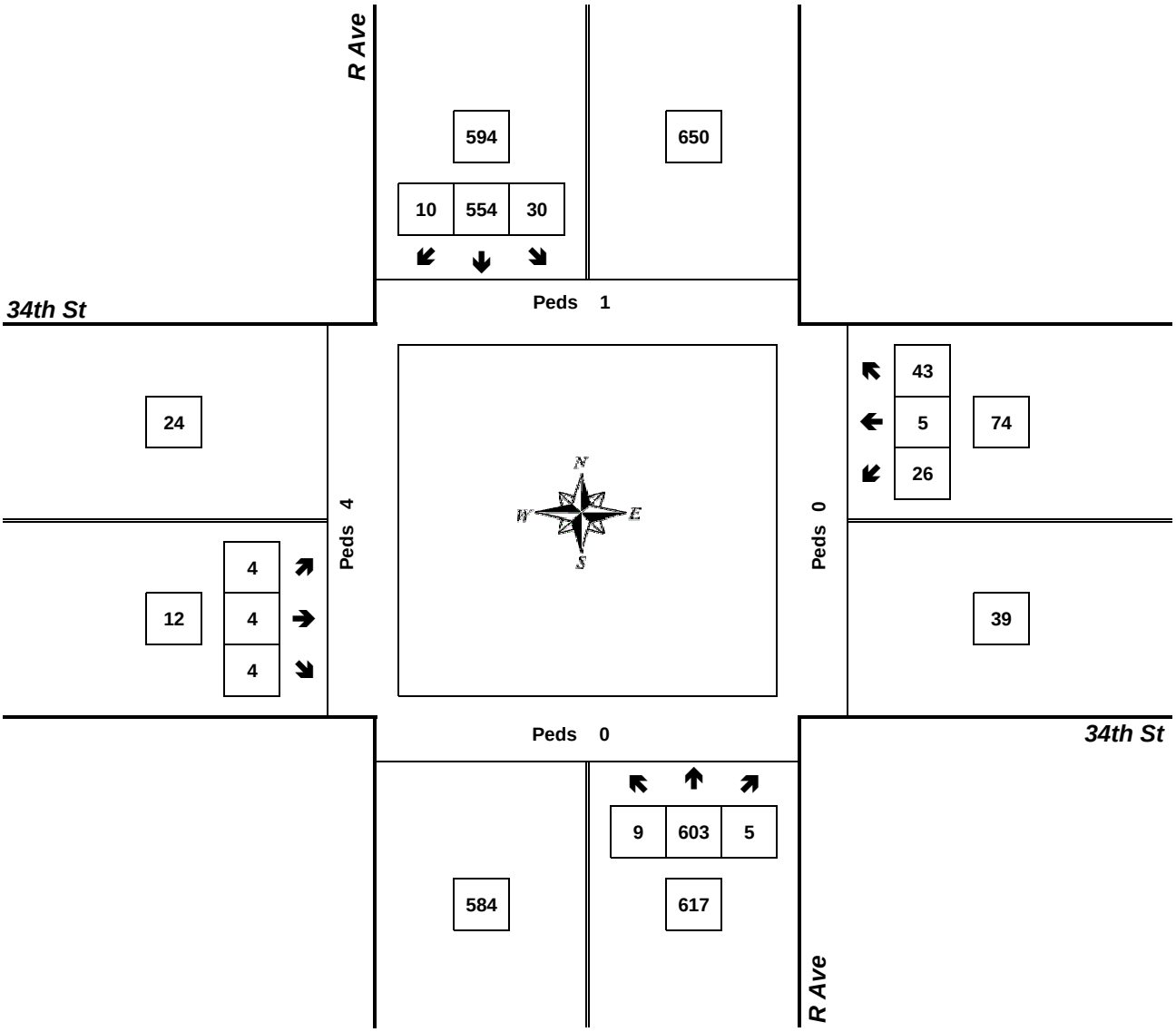
Interval Start Time	Northbound R Ave				Southbound R Ave				Eastbound SR 20 Spur				Westbound SR 20 Spur				Interval Total	Pedestrians Crosswalk			
					L		R	HV	L	T		HV		T	R	HV		North	South	East	West
4:00 PM					638		49	5	11	517		1		464	584	3	2,263	0	0	0	4
4:15 PM					698		55	4	14	547		1		502	595	7	2,411	0	0	0	2
4:30 PM					709		68	4	12	587		0		515	577	7	2,468	0	0	0	1
4:45 PM					625		64	5	15	544		0		541	556	9	2,345	0	0	0	0
5:00 PM					587		55	6	14	521		1		511	519	10	2,207	0	0	0	5

Peak Hour Summary

Mark Skaggs
(206) 251-0300

R Ave & 34th St

4:30 PM to 5:30 PM
Thursday, August 25, 2011

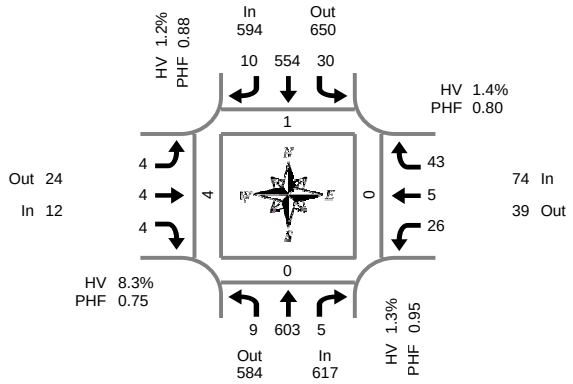


Approach	PHF	HV%	Volume
EB	0.75	8.3%	12
WB	0.80	1.4%	74
NB	0.95	1.3%	617
SB	0.88	1.2%	594
Intersection	0.93	1.3%	1,297

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Mark Skaggs
(206) 251-0300



Peak Hour Summary
4:30 PM to 5:30 PM

R Ave & 34th St

Thursday, August 25, 2011
4:00 PM to 6:00 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound R Ave				Southbound R Ave				Eastbound 34th St				Westbound 34th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	HV	L	T	R	HV	L	T	R	HV	L	T	R	HV		North	South	East	West
4:00 PM	2	147	5	1	11	127	4	5	3	3	0	0	8	1	10	1	321	1	0	0	0
4:15 PM	2	183	1	2	5	121	0	2	0	1	1	0	10	2	6	1	332	0	0	0	0
4:30 PM	4	158	0	2	9	142	3	2	1	0	0	0	10	1	12	0	340	0	0	0	1
4:45 PM	1	133	1	1	6	110	3	0	3	0	1	0	5	1	14	0	278	0	0	0	0
5:00 PM	2	156	3	2	11	141	1	3	0	2	2	0	3	1	7	0	329	1	0	0	3
5:15 PM	2	156	1	3	4	161	3	2	0	2	1	1	8	2	10	1	350	0	0	0	0
5:30 PM	3	154	2	2	11	122	3	1	1	0	1	0	5	2	3	0	307	0	0	0	0
5:45 PM	1	135	2	0	6	112	2	1	2	1	0	0	2	1	6	0	270	1	0	0	0
Total Survey	17	1,222	15	13	63	1,036	19	16	10	9	6	1	51	11	68	3	2,527	3	0	0	4

Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound R Ave				Southbound R Ave				Eastbound 34th St				Westbound 34th St				Total	Pedestrians Crosswalk			
	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV		North	South	East	West
Volume	617	584	1,201	8	594	650	1,244	7	12	24	36	1	74	39	113	1	1,297	1	0	0	4
%HV	1.3%				1.2%				8.3%				1.4%				1.3%				
PHF	0.95				0.88				0.75				0.80				0.93				

By Movement	Northbound R Ave				Southbound R Ave				Eastbound 34th St				Westbound 34th St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	9	603	5	617	30	554	10	594	4	4	4	12	26	5	43	74	1,297
PHF	0.56	0.95	0.42	0.95	0.68	0.86	0.83	0.88	0.33	0.50	0.50	0.75	0.65	0.63	0.77	0.80	0.93

Rolling Hour Summary
4:00 PM to 6:00 PM

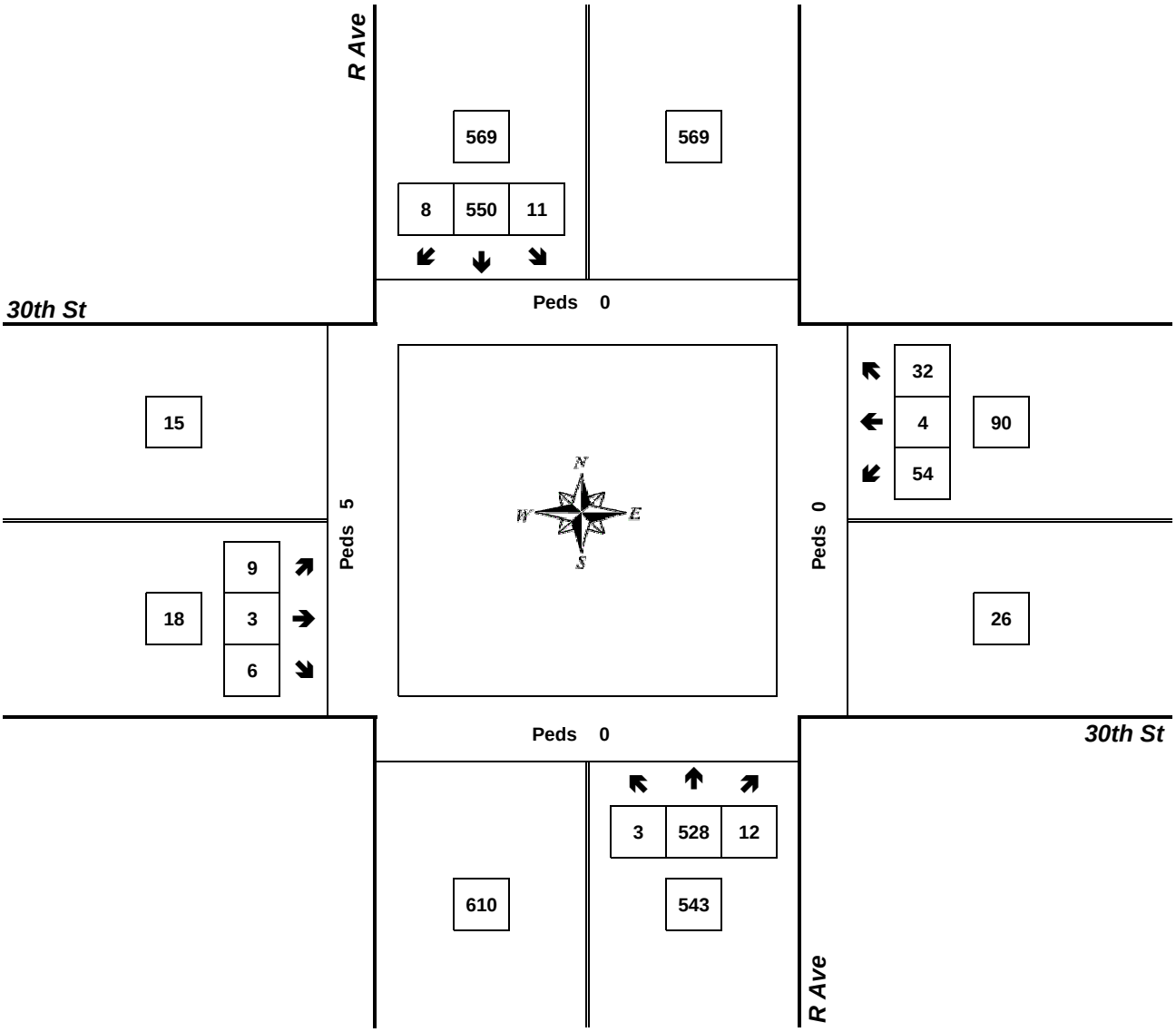
Interval Start Time	Northbound R Ave				Southbound R Ave				Eastbound 34th St				Westbound 34th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	HV	L	T	R	HV	L	T	R	HV	L	T	R	HV		North	South	East	West
4:00 PM	9	621	7	6	31	500	10	9	7	4	2	0	33	5	42	2	1,271	1	0	0	1
4:15 PM	9	630	5	7	31	514	7	7	4	3	4	0	28	5	39	1	1,279	1	0	0	4
4:30 PM	9	603	5	8	30	554	10	7	4	4	4	1	26	5	43	1	1,297	1	0	0	4
4:45 PM	8	599	7	8	32	534	10	6	4	4	5	1	21	6	34	1	1,264	1	0	0	3
5:00 PM	8	601	8	7	32	536	9	7	3	5	4	1	18	6	26	1	1,256	2	0	0	3

Peak Hour Summary

Mark Skaggs
(206) 251-0300

R Ave & 30th St

4:30 PM to 5:30 PM
Thursday, August 25, 2011

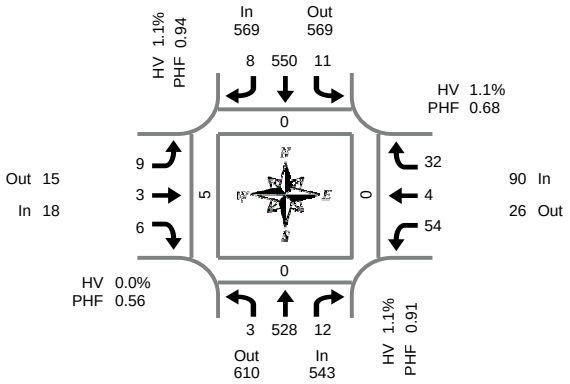


Approach	PHF	HV%	Volume
EB	0.56	0.0%	18
WB	0.68	1.1%	90
NB	0.91	1.1%	543
SB	0.94	1.1%	569
Intersection	0.95	1.1%	1,220

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Mark Skaggs
(206) 251-0300



R Ave & 30th St

Thursday, August 25, 2011
4:00 PM to 6:00 PM

Peak Hour Summary
4:30 PM to 5:30 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound R Ave				Southbound R Ave				Eastbound 30th St				Westbound 30th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	HV	L	T	R	HV	L	T	R	HV	L	T	R	HV		North	South	East	West
4:00 PM	0	139	3	2	4	135	1	5	0	0	4	0	6	1	3	1	296	0	0	0	0
4:15 PM	0	149	3	1	4	126	0	2	1	0	2	0	11	2	7	0	305	0	0	0	1
4:30 PM	3	134	3	1	5	135	1	1	2	0	0	0	19	1	13	0	316	0	0	0	1
4:45 PM	0	115	2	1	5	122	2	0	4	1	3	0	5	0	6	1	265	0	0	0	2
5:00 PM	0	132	5	1	1	147	3	3	2	0	0	0	20	2	8	0	320	0	0	0	2
5:15 PM	0	147	2	3	0	146	2	2	1	2	3	0	10	1	5	0	319	0	0	0	0
5:30 PM	1	133	1	1	3	133	1	0	0	1	2	0	3	0	3	0	281	0	0	0	1
5:45 PM	0	119	3	0	0	119	2	1	1	1	1	0	4	1	1	0	252	0	1	0	1
Total Survey	4	1,068	22	10	22	1,063	12	14	11	5	15	0	78	8	46	2	2,354	0	1	0	8

Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound R Ave				Southbound R Ave				Eastbound 30th St				Westbound 30th St				Total	Pedestrians Crosswalk			
	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV		North	South	East	West
Volume	543	610	1,153	6	569	569	1,138	6	18	15	33	0	90	26	116	1	1,220	0	0	0	5
%HV	1.1%				1.1%				0.0%				1.1%				1.1%				
PHF	0.91				0.94				0.56				0.68				0.95				

By Movement	Northbound R Ave				Southbound R Ave				Eastbound 30th St				Westbound 30th St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	3	528	12	543	11	550	8	569	9	3	6	18	54	4	32	90	1,220
PHF	0.25	0.90	0.60	0.91	0.55	0.94	0.67	0.94	0.56	0.38	0.50	0.56	0.68	0.50	0.62	0.68	0.95

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound R Ave				Southbound R Ave				Eastbound 30th St				Westbound 30th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	HV	L	T	R	HV	L	T	R	HV	L	T	R	HV		North	South	East	West
4:00 PM	3	537	11	5	18	518	4	8	7	1	9	0	41	4	29	2	1,182	0	0	0	4
4:15 PM	3	530	13	4	15	530	6	6	9	1	5	0	55	5	34	1	1,206	0	0	0	6
4:30 PM	3	528	12	6	11	550	8	6	9	3	6	0	54	4	32	1	1,220	0	0	0	5
4:45 PM	1	527	10	6	9	548	8	5	7	4	8	0	38	3	22	1	1,185	0	0	0	5
5:00 PM	1	531	11	5	4	545	8	6	4	4	6	0	37	4	17	0	1,172	0	1	0	4

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 02047893 PAGE: 1

LOCATION : SR 20 (SHARPES CORNER) FILE: 02047893

JCT : SR 20 SPUR

MILEPOST : 47.89 Movements by: Primary DATE: 4/20/11

Time	From North			From East			From South			From West			Vehicle
Begin	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	Total
4:00 PM	0	0	0	0	206	162	108	0	44	58	189	0	767
4:15	0	0	0	0	194	126	141	0	30	57	181	0	729
4:30	0	0	0	0	227	146	138	0	33	48	178	0	770
4:45	0	0	0	0	195	159	141	0	36	54	196	0	781
HR TOTAL	0	0	0	0	822	593	528	0	143	217	744	0	3047
5:00 PM	0	0	0	0	195	173	121	0	32	59	206	0	786
5:15	0	0	0	0	234	143	122	0	30	51	199	0	779
5:30	0	0	0	0	197	156	122	0	23	34	163	0	695
5:45	0	0	0	0	168	117	115	0	20	28	128	0	576
HR TOTAL	0	0	0	0	794	589	480	0	105	172	696	0	2836
DAY TOTAL	0	0	0	0	1616	1182	1008	0	248	389	1440	0	5883

PEAK PERIOD ANALYSIS FOR THE PERIOD: 4:00 PM - 6:00 PM

DIRECTION	START	PEAK HR	..... VOLUMES				.... PERCENTS ...		
FROM	PEAK HOUR	FACTOR	Right	Thru	Left	Total	Right	Thru	Left
North	12:00 AM	0.00	0	0	0	0	0	0	0
East	4:30 PM	0.98	0	851	621	1472	0	58	42
South	4:15 PM	0.95	541	0	131	672	81	0	19
West	4:30 PM	0.93	212	779	0	991	21	79	0

Entire Intersection

North	4:30 PM	0.00	0	0	0	0	0	0	0
East		0.98	0	851	621	1472	0	58	42
South		0.92	522	0	131	653	80	0	20
West		0.93	212	779	0	991	21	79	0

Appendix B

Level of Service Calculations at Study Intersections

Thompson Road Site – Level of Service Impacts

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	12	1659	164	1336	217	22	205	179	44
v/c Ratio	0.15	0.95	0.81	0.59	0.88	0.05	0.38	0.54	0.11
Control Delay	47.8	33.3	68.7	10.7	67.2	25.7	6.4	35.6	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	33.3	68.7	10.7	67.2	25.7	6.4	35.6	9.0
Queue Length 50th (ft)	7	445	93	196	117	9	0	87	0
Queue Length 95th (ft)	24	#627	#202	330	#202	25	37	147	24
Internal Link Dist (ft)		883		2846		282		433	
Turn Bay Length (ft)									
Base Capacity (vph)	78	1807	211	2295	271	493	570	365	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.92	0.78	0.58	0.80	0.04	0.36	0.49	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3477		1770	3526		1770	1863	1583		1785	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.54	1.00	1.00		0.74	1.00
Satd. Flow (perm)	1770	3477		1770	3526		997	1863	1583		1376	1583
Volume (vph)	11	1377	182	159	1265	31	176	18	166	135	21	38
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.81	0.81	0.81	0.87	0.87	0.87
Adj. Flow (vph)	12	1465	194	164	1304	32	217	22	205	155	24	44
RTOR Reduction (vph)	0	12	0	0	2	0	0	0	157	0	0	34
Lane Group Flow (vph)	12	1647	0	164	1334	0	217	22	48	0	179	10
Turn Type	Prot			Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2		2	6		6
Actuated Green, G (s)	0.8	42.5		13.1	54.8		20.5	20.5	20.5		20.5	20.5
Effective Green, g (s)	0.8	42.5		13.1	54.8		20.5	20.5	20.5		20.5	20.5
Actuated g/C Ratio	0.01	0.48		0.15	0.62		0.23	0.23	0.23		0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	16	1677		263	2193		232	434	368		320	368
v/s Ratio Prot	0.01	c0.47		0.09	c0.38			0.01				
v/s Ratio Perm							c0.22		0.03		0.13	0.01
v/c Ratio	0.75	0.98		0.62	0.61		0.94	0.05	0.13		0.56	0.03
Uniform Delay, d1	43.6	22.4		35.2	10.1		33.2	26.2	26.7		29.8	26.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	106.0	17.8		4.5	0.5		41.2	0.0	0.2		2.1	0.0
Delay (s)	149.6	40.2		39.7	10.6		74.4	26.3	26.9		31.9	26.1
Level of Service	F	D		D	B		E	C	C		C	C
Approach Delay (s)		41.0			13.8			50.1			30.8	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	7	1396	89	45	1298	4	96	70	234
v/c Ratio	0.04	0.79	0.11	0.23	0.65	0.00	0.29	0.15	0.70
Control Delay	54.4	20.8	6.2	48.3	13.4	7.8	31.0	8.8	42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	20.8	6.2	48.3	13.4	7.8	31.0	8.8	42.3
Queue Length 50th (ft)	3	273	6	20	158	0	36	0	98
Queue Length 95th (ft)	23	599	39	80	490	6	83	15	152
Internal Link Dist (ft)		2846			1155		1292		264
Turn Bay Length (ft)									
Base Capacity (vph)	312	2442	1112	364	2576	1153	628	838	627
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.57	0.08	0.12	0.50	0.00	0.15	0.08	0.37

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.96	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1777	1583		1762	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.69	1.00		0.70	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1289	1583		1278	
Volume (vph)	7	1340	85	43	1246	4	62	2	47	111	8	14
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.67	0.67	0.67	0.57	0.57	0.57
Adj. Flow (vph)	7	1396	89	45	1298	4	93	3	70	195	14	25
RTOR Reduction (vph)	0	0	31	0	0	1	0	0	51	0	3	0
Lane Group Flow (vph)	7	1396	58	45	1298	3	0	96	19	0	231	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	0.8	38.8	38.8	4.2	42.2	42.2		20.0	20.0		20.0	
Effective Green, g (s)	0.8	38.8	38.8	4.2	42.2	42.2		20.0	20.0		20.0	
Actuated g/C Ratio	0.01	0.52	0.52	0.06	0.56	0.56		0.27	0.27		0.27	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	19	1831	819	99	1991	891		344	422		341	
v/s Ratio Prot	0.00	c0.39		c0.03	c0.37							
v/s Ratio Perm			0.04			0.00		0.07	0.01		c0.18	
v/c Ratio	0.37	0.76	0.07	0.45	0.65	0.00		0.28	0.04		0.68	
Uniform Delay, d1	36.8	14.4	9.1	34.3	11.3	7.2		21.8	20.4		24.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	11.7	1.9	0.0	3.3	0.8	0.0		0.4	0.0		5.3	
Delay (s)	48.5	16.4	9.1	37.6	12.1	7.2		22.2	20.5		29.9	
Level of Service	D	B	A	D	B	A		C	C		C	
Approach Delay (s)		16.1			12.9			21.5			29.9	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #2-Summit Park Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Summit Park Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	30	24			29	5
Peak-Hour Factor, PHF	0.74	0.74			0.74	0.74
Hourly Flow Rate, HFR	40	32			39	6
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				2		15
Peak Hour Factor, PHF				0.74		0.74
Hourly Flow Rate, HFR				2		20
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	40						22	
C(m) (vph)	1522						1000	
v/c	0.03						0.02	
95% queue length	0.08						0.07	
Control Delay	7.4						8.7	
LOS	A						A	
Approach Delay							8.7	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #3-Stevenson Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		16	1	35	9	
Peak-Hour Factor, PHF		0.74	0.74	0.74	0.74	
Hourly Flow Rate, HFR		21	1	47	12	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1 0		0 1		
Configuration		TR		LT		
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1		38			
Peak Hour Factor, PHF	0.74		0.74			
Hourly Flow Rate, HFR	1		51			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		47		52				
C(m) (vph)		1607		1057				
v/c		0.03		0.05				
95% queue length		0.09		0.16				
Control Delay		7.3		8.6				
LOS		A		A				
Approach Delay				8.6				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #5-Stevenson Rd/Reservation Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Reservation Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	9	95			117	21
Peak-Hour Factor, PHF	0.70	0.70			0.70	0.70
Hourly Flow Rate, HFR	12	135			167	30
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				21		13
Peak Hour Factor, PHF				0.70		0.70
Hourly Flow Rate, HFR				30		18
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	12						48	
C(m) (vph)	1393						749	
v/c	0.01						0.06	
95% queue length	0.03						0.20	
Control Delay	7.6						10.1	
LOS	A						B	
Approach Delay							10.1	
Approach LOS							B	

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	12	1559	36	1379	95	160	44
v/c Ratio	0.07	0.78	0.19	0.65	0.28	0.59	0.11
Control Delay	49.7	16.0	46.0	11.0	23.8	40.8	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	16.0	46.0	11.0	23.8	40.8	11.6
Queue Length 50th (ft)	4	172	13	139	19	53	0
Queue Length 95th (ft)	31	583	63	445	78	184	29
Internal Link Dist (ft)		883		2846	282	433	
Turn Bay Length (ft)							
Base Capacity (vph)	360	2675	348	2733	630	539	734
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.58	0.10	0.50	0.15	0.30	0.06

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.95	1.00
Satd. Flow (prot)	1770	3523		1770	3527			1695			1777	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.81			0.71	1.00
Satd. Flow (perm)	1770	3523		1770	3527			1409			1315	1583
Volume (vph)	11	1419	46	35	1307	31	37	1	39	135	4	38
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.81	0.81	0.81	0.87	0.87	0.87
Adj. Flow (vph)	12	1510	49	36	1347	32	46	1	48	155	5	44
RTOR Reduction (vph)	0	2	0	0	1	0	0	26	0	0	0	34
Lane Group Flow (vph)	12	1557	0	36	1378	0	0	69	0	0	160	10
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	0.9	40.1		2.4	41.6			15.7			15.7	15.7
Effective Green, g (s)	0.9	40.1		2.4	41.6			15.7			15.7	15.7
Actuated g/C Ratio	0.01	0.57		0.03	0.59			0.22			0.22	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	23	2012		61	2090			315			294	354
v/s Ratio Prot	0.01	c0.44		c0.02	0.39							
v/s Ratio Perm								0.05			c0.12	0.01
v/c Ratio	0.52	0.77		0.59	0.66			0.22			0.54	0.03
Uniform Delay, d1	34.4	11.6		33.4	9.6			22.3			24.1	21.3
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	19.7	1.9		14.4	0.8			0.4			2.1	0.0
Delay (s)	54.1	13.5		47.8	10.3			22.6			26.1	21.3
Level of Service	D	B		D	B			C			C	C
Approach Delay (s)		13.8			11.3			22.6			25.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	7	1320	89	32	1224	4	96	52	236
v/c Ratio	0.04	0.75	0.11	0.16	0.65	0.00	0.28	0.11	0.67
Control Delay	47.4	17.6	5.5	43.2	13.3	8.0	26.0	8.8	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	17.6	5.5	43.2	13.3	8.0	26.0	8.8	35.4
Queue Length 50th (ft)	2	125	2	8	111	0	20	0	55
Queue Length 95th (ft)	22	510	36	57	429	6	75	15	137
Internal Link Dist (ft)		2846			1155		1292		264
Turn Bay Length (ft)									
Base Capacity (vph)	343	2544	1157	390	2619	1173	674	889	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.52	0.08	0.08	0.47	0.00	0.14	0.06	0.35

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.96	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1777	1583		1763	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.68	1.00		0.70	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1275	1583		1282	
Volume (vph)	7	1267	85	31	1175	4	62	2	35	111	9	14
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.67	0.67	0.67	0.57	0.57	0.57
Adj. Flow (vph)	7	1320	89	32	1224	4	93	3	52	195	16	25
RTOR Reduction (vph)	0	0	34	0	0	1	0	0	38	0	3	0
Lane Group Flow (vph)	7	1320	55	32	1224	3	0	96	14	0	233	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	0.8	32.8	32.8	2.2	34.2	34.2		18.1	18.1		18.1	
Effective Green, g (s)	0.8	32.8	32.8	2.2	34.2	34.2		18.1	18.1		18.1	
Actuated g/C Ratio	0.01	0.50	0.50	0.03	0.53	0.53		0.28	0.28		0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	22	1783	798	60	1859	832		354	440		356	
v/s Ratio Prot	0.00	c0.37		c0.02	0.35							
v/s Ratio Perm			0.03			0.00		0.08	0.01		c0.18	
v/c Ratio	0.32	0.74	0.07	0.53	0.66	0.00		0.27	0.03		0.65	
Uniform Delay, d1	31.9	12.8	8.3	30.9	11.2	7.3		18.3	17.1		20.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	8.2	1.7	0.0	8.8	0.9	0.0		0.4	0.0		4.3	
Delay (s)	40.1	14.5	8.3	39.8	12.1	7.3		18.8	17.2		25.0	
Level of Service	D	B	A	D	B	A		B	B		C	
Approach Delay (s)		14.2			12.8			18.2			25.0	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #2-Summit Park Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 Without Project
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Summit Park Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	27			33	6
Peak-Hour Factor, PHF	0.74	0.74			0.74	0.74
Hourly Flow Rate, HFR	41	36			44	8
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				3		16
Peak Hour Factor, PHF				0.74		0.74
Hourly Flow Rate, HFR				4		21
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	41						25	
C(m) (vph)	1522						985	
v/c	0.03						0.03	
95% queue length	0.08						0.08	
Control Delay	7.4						8.7	
LOS	A						A	
Approach Delay							8.7	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #3-Stevenson Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 Without Project
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		18	1	38	11	
Peak-Hour Factor, PHF		0.74	0.74	0.74	0.74	
Hourly Flow Rate, HFR		24	1	51	14	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1		41			
Peak Hour Factor, PHF	0.74		0.74			
Hourly Flow Rate, HFR	1		55			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration	LR					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		51		56				
C(m) (vph)		1603		1054				
v/c		0.03		0.05				
95% queue length		0.10		0.17				
Control Delay		7.3		8.6				
LOS		A		A				
Approach Delay				8.6				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #5-Stevenson Rd/Reservation Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 Without Project
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Reservation Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	11	99			122	22
Peak-Hour Factor, PHF	0.70	0.70			0.70	0.70
Hourly Flow Rate, HFR	15	141			174	31
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				22		15
Peak Hour Factor, PHF				0.70		0.70
Hourly Flow Rate, HFR				31		21
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	15						52	
C(m) (vph)	1383						738	
v/c	0.01						0.07	
95% queue length	0.03						0.23	
Control Delay	7.6						10.2	
LOS	A						B	
Approach Delay							10.2	
Approach LOS							B	

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	12	1624	73	1379	104	79	166	44
v/c Ratio	0.08	0.81	0.37	0.61	0.50	0.19	0.66	0.12
Control Delay	60.4	20.4	54.7	10.9	46.8	10.4	52.2	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	20.4	54.7	10.9	46.8	10.4	52.2	12.6
Queue Length 50th (ft)	6	355	37	160	49	0	82	0
Queue Length 95th (ft)	35	728	125	492	133	33	220	31
Internal Link Dist (ft)		883		2846	282		433	
Turn Bay Length (ft)								
Base Capacity (vph)	310	2520	307	2676	381	677	455	656
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.64	0.24	0.52	0.27	0.12	0.36	0.07

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	3502		1770	3527			1779	1583		1780	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.55	1.00		0.66	1.00
Satd. Flow (perm)	1770	3502		1770	3527			1018	1583		1233	1583
Volume (vph)	11	1419	107	71	1307	31	79	5	64	135	10	38
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.81	0.81	0.81	0.87	0.87	0.87
Adj. Flow (vph)	12	1510	114	73	1347	32	98	6	79	155	11	44
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	62	0	0	34
Lane Group Flow (vph)	12	1620	0	73	1378	0	0	104	17	0	166	10
Turn Type	Prot			Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2		2	6		6
Actuated Green, G (s)	0.9	50.0		5.2	54.3			18.7	18.7		18.7	18.7
Effective Green, g (s)	0.9	50.0		5.2	54.3			18.7	18.7		18.7	18.7
Actuated g/C Ratio	0.01	0.58		0.06	0.63			0.22	0.22		0.22	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	19	2038		107	2230			222	345		268	345
v/s Ratio Prot	0.01	c0.46		c0.04	0.39							
v/s Ratio Perm								0.10	0.01		c0.13	0.01
v/c Ratio	0.63	0.80		0.68	0.62			0.47	0.05		0.62	0.03
Uniform Delay, d1	42.3	14.0		39.5	9.5			29.3	26.6		30.4	26.4
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	52.7	2.2		16.5	0.5			1.6	0.1		4.2	0.0
Delay (s)	95.1	16.2		56.0	10.1			30.8	26.6		34.6	26.5
Level of Service	F	B		E	B			C	C		C	C
Approach Delay (s)		16.8			12.4			29.0			32.9	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	7	1347	89	39	1262	4	96	60	236
v/c Ratio	0.04	0.77	0.11	0.20	0.64	0.00	0.29	0.13	0.70
Control Delay	51.3	20.1	6.0	45.8	13.2	8.0	29.1	8.8	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	20.1	6.0	45.8	13.2	8.0	29.1	8.8	39.9
Queue Length 50th (ft)	3	252	5	16	148	0	34	0	95
Queue Length 95th (ft)	22	542	37	68	456	6	77	15	144
Internal Link Dist (ft)		2846			1155		1292		264
Turn Bay Length (ft)									
Base Capacity (vph)	320	2459	1120	372	2589	1159	639	849	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.55	0.08	0.10	0.49	0.00	0.15	0.07	0.37

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.96	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1777	1583		1763	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.69	1.00		0.70	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1283	1583		1282	
Volume (vph)	7	1293	85	37	1212	4	62	2	40	111	9	14
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.67	0.67	0.67	0.57	0.57	0.57
Adj. Flow (vph)	7	1347	89	39	1262	4	93	3	60	195	16	25
RTOR Reduction (vph)	0	0	32	0	0	1	0	0	44	0	3	0
Lane Group Flow (vph)	7	1347	57	39	1262	3	0	96	16	0	233	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	0.8	36.5	36.5	3.9	39.6	39.6		19.3	19.3		19.3	
Effective Green, g (s)	0.8	36.5	36.5	3.9	39.6	39.6		19.3	19.3		19.3	
Actuated g/C Ratio	0.01	0.51	0.51	0.05	0.55	0.55		0.27	0.27		0.27	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	20	1802	806	96	1955	874		345	426		345	
v/s Ratio Prot	0.00	c0.38		c0.02	c0.36							
v/s Ratio Perm			0.04			0.00		0.07	0.01		c0.18	
v/c Ratio	0.35	0.75	0.07	0.41	0.65	0.00		0.28	0.04		0.68	
Uniform Delay, d1	35.2	13.9	9.0	32.8	11.2	7.2		20.7	19.3		23.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	10.3	1.7	0.0	2.8	0.7	0.0		0.4	0.0		5.2	
Delay (s)	45.5	15.7	9.0	35.6	11.9	7.2		21.1	19.4		28.6	
Level of Service	D	B	A	D	B	A		C	B		C	
Approach Delay (s)		15.4			12.6			20.5			28.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #2-Summit Park Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Summit Park Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	73	4	37	100	6
Peak-Hour Factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74
Hourly Flow Rate, HFR	41	98	5	49	135	8
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	3	2	25	3	2	16
Peak Hour Factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74
Hourly Flow Rate, HFR	4	2	33	4	2	21
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	41	49		39			27	
C(m) (vph)	1471	1502		850			808	
v/c	0.03	0.03		0.05			0.03	
95% queue length	0.09	0.10		0.14			0.10	
Control Delay	7.5	7.5		9.4			9.6	
LOS	A	A		A			A	
Approach Delay				9.4			9.6	
Approach LOS				A			A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #3-Stevenson Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		21	1	105	13	
Peak-Hour Factor, PHF		0.74	0.74	0.74	0.74	
Hourly Flow Rate, HFR		28	1	141	17	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1		87			
Peak Hour Factor, PHF	0.74		0.74			
Hourly Flow Rate, HFR	1		117			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		141		118				
C(m) (vph)		1597		1047				
v/c		0.09		0.11				
95% queue length		0.29		0.38				
Control Delay		7.5		8.9				
LOS		A		A				
Approach Delay				8.9				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #5-Stevenson Rd/Reservation Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Reservation Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	17	99			122	28
Peak-Hour Factor, PHF	0.70	0.70			0.70	0.70
Hourly Flow Rate, HFR	24	141			174	40
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				26		19
Peak Hour Factor, PHF				0.70		0.70
Hourly Flow Rate, HFR				37		27
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	24						64	
C(m) (vph)	1372						722	
v/c	0.02						0.09	
95% queue length	0.05						0.29	
Control Delay	7.7						10.5	
LOS	A						B	
Approach Delay							10.5	
Approach LOS							B	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #6-Stevenson Rd/W Site Access
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: West Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	12	91			70	0
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	13	101			77	0
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		8
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				0		8
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	13						8	
C(m) (vph)	1528						987	
v/c	0.01						0.01	
95% queue length	0.03						0.02	
Control Delay	7.4						8.7	
LOS	A						A	
Approach Delay							8.7	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #7-Stevenson Rd/C Site Access
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Center Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	12	79			62	0
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	13	87			68	0
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		8
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				0		8
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	13						8	
C(m) (vph)	1540						998	
v/c	0.01						0.01	
95% queue length	0.03						0.02	
Control Delay	7.4						8.6	
LOS	A						A	
Approach Delay							8.6	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #8-Stevenson Rd/E Site Access
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: East Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	43	37			32	12
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	47	41			35	13
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				8		29
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				8		32
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	47						40	
C(m) (vph)	1566						973	
v/c	0.03						0.04	
95% queue length	0.09						0.13	
Control Delay	7.4						8.9	
LOS	A						A	
Approach Delay							8.9	
Approach LOS							A	

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	12	1605	62	1379	88	70	165	44
v/c Ratio	0.08	0.82	0.31	0.62	0.40	0.18	0.64	0.12
Control Delay	57.3	19.7	50.8	10.6	41.9	10.9	48.6	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	19.7	50.8	10.6	41.9	10.9	48.6	12.6
Queue Length 50th (ft)	6	327	29	150	39	0	77	0
Queue Length 95th (ft)	33	687	106	474	112	32	211	30
Internal Link Dist (ft)		883		2848	280		433	
Turn Bay Length (ft)								
Base Capacity (vph)	333	2566	330	2709	424	703	502	688
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.63	0.19	0.51	0.21	0.10	0.33	0.06

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.96	1.00
Satd. Flow (prot)	1770	3508		1770	3527			1779	1583		1779	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.59	1.00		0.68	1.00
Satd. Flow (perm)	1770	3508		1770	3527			1099	1583		1259	1583
Volume (vph)	11	1419	89	60	1307	31	67	4	57	135	9	38
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.81	0.81	0.81	0.87	0.87	0.87
Adj. Flow (vph)	12	1510	95	62	1347	32	83	5	70	155	10	44
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	55	0	0	35
Lane Group Flow (vph)	12	1602	0	62	1378	0	0	88	15	0	165	9
Turn Type	Prot			Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2		2	6		6
Actuated Green, G (s)	0.9	45.7		4.8	49.6			17.1	17.1		17.1	17.1
Effective Green, g (s)	0.9	45.7		4.8	49.6			17.1	17.1		17.1	17.1
Actuated g/C Ratio	0.01	0.57		0.06	0.62			0.21	0.21		0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	20	2014		107	2198			236	340		270	340
v/s Ratio Prot	0.01	c0.46		c0.04	c0.39							
v/s Ratio Perm								0.08	0.01		c0.13	0.01
v/c Ratio	0.60	0.80		0.58	0.63			0.37	0.04		0.61	0.03
Uniform Delay, d1	39.2	13.3		36.4	9.3			26.7	24.8		28.2	24.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	40.2	2.3		7.4	0.6			1.0	0.1		4.1	0.0
Delay (s)	79.3	15.5		43.8	9.8			27.7	24.8		32.3	24.7
Level of Service	E	B		D	A			C	C		C	C
Approach Delay (s)		16.0			11.3			26.4			30.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	79.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	7	1339	89	36	1251	4	96	57	236
v/c Ratio	0.04	0.75	0.11	0.19	0.65	0.00	0.28	0.12	0.67
Control Delay	49.7	18.0	5.6	45.4	13.6	8.0	27.3	8.8	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	18.0	5.6	45.4	13.6	8.0	27.3	8.8	36.8
Queue Length 50th (ft)	2	161	3	12	145	0	26	0	72
Queue Length 95th (ft)	22	532	37	64	448	6	77	14	141
Internal Link Dist (ft)		2848			1155		1288		264
Turn Bay Length (ft)									
Base Capacity (vph)	329	2514	1144	374	2592	1160	655	868	659
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.53	0.08	0.10	0.48	0.00	0.15	0.07	0.36

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.96	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1777	1583		1763	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.68	1.00		0.70	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1275	1583		1282	
Volume (vph)	7	1285	85	35	1201	4	62	2	38	111	9	14
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.67	0.67	0.67	0.57	0.57	0.57
Adj. Flow (vph)	7	1339	89	36	1251	4	93	3	57	195	16	25
RTOR Reduction (vph)	0	0	33	0	0	1	0	0	41	0	3	0
Lane Group Flow (vph)	7	1339	56	36	1251	3	0	96	16	0	233	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	0.8	35.3	35.3	2.4	36.9	36.9		19.2	19.2		19.2	
Effective Green, g (s)	0.8	35.3	35.3	2.4	36.9	36.9		19.2	19.2		19.2	
Actuated g/C Ratio	0.01	0.51	0.51	0.03	0.54	0.54		0.28	0.28		0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	21	1813	811	62	1895	848		355	441		357	
v/s Ratio Prot	0.00	c0.38		c0.02	0.35							
v/s Ratio Perm			0.04			0.00		0.08	0.01		c0.18	
v/c Ratio	0.33	0.74	0.07	0.58	0.66	0.00		0.27	0.04		0.65	
Uniform Delay, d1	33.8	13.2	8.5	32.8	11.5	7.4		19.4	18.1		21.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	9.1	1.6	0.0	13.1	0.9	0.0		0.4	0.0		4.2	
Delay (s)	42.9	14.8	8.5	45.8	12.4	7.4		19.8	18.1		26.2	
Level of Service	D	B	A	D	B	A		B	B		C	
Approach Delay (s)		14.5			13.3			19.2			26.2	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	68.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst:	JGT
Agency/Co.:	TENW
Date Performed:	9/1/2011
Analysis Time Period:	PM Peak
Intersection:	#2-Summit Park Rd/Thompson Rd
Jurisdiction:	City of Anacortes/Skagit Co
Units: U. S. Customary	
Analysis Year:	2013 With Alternative 1a
Project ID:	Samish Tribe Casino (Thompson Rd Site)
East/West Street:	Summit Park Rd
North/South Street:	Thompson Rd
Intersection Orientation: NS	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	60	3	26	79	6
Peak-Hour Factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74
Hourly Flow Rate, HFR	41	81	4	35	106	8
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	2	1	18	3	2	16
Peak Hour Factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74
Hourly Flow Rate, HFR	2	1	24	4	2	21
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	41	35		27			27	
C(m) (vph)	1510	1524		914			869	
v/c	0.03	0.02		0.03			0.03	
95% queue length	0.08	0.07		0.09			0.10	
Control Delay	7.5	7.4		9.1			9.3	
LOS	A	A		A			A	
Approach Delay				9.1			9.3	
Approach LOS				A			A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #3-Stevenson Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1a
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		20	1	84	12	
Peak-Hour Factor, PHF		0.74	0.74	0.74	0.74	
Hourly Flow Rate, HFR		27	1	113	16	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1		73			
Peak Hour Factor, PHF	0.74		0.74			
Hourly Flow Rate, HFR	1		98			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration	LR					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		113		99				
C(m) (vph)		1599		1048				
v/c		0.07		0.09				
95% queue length		0.23		0.31				
Control Delay		7.4		8.8				
LOS		A		A				
Approach Delay				8.8				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #5-Stevenson Rd/Reservation Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1a
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Reservation Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	15	99			122	26
Peak-Hour Factor, PHF	0.70	0.70			0.70	0.70
Hourly Flow Rate, HFR	21	141			174	37
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				25		18
Peak Hour Factor, PHF				0.70		0.70
Hourly Flow Rate, HFR				35		25
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	21						60	
C(m) (vph)	1376						728	
v/c	0.02						0.08	
95% queue length	0.05						0.27	
Control Delay	7.7						10.4	
LOS	A						B	
Approach Delay							10.4	
Approach LOS							B	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #6-Stevenson Rd/W Site Access
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1a
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: West Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	9	75			59	0
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	10	83			65	0
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		6
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				0		6
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	10						6	
C(m) (vph)	1544						1002	
v/c	0.01						0.01	
95% queue length	0.02						0.02	
Control Delay	7.3						8.6	
LOS	A						A	
Approach Delay							8.6	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst:	JGT
Agency/Co.:	TENW
Date Performed:	9/1/2011
Analysis Time Period:	PM Peak
Intersection:	#7-Stevenson Rd/C Site Access
Jurisdiction:	City of Anacortes
Units: U. S. Customary	
Analysis Year:	2013 With Alternative 1a
Project ID:	Samish Tribe Casino (Thompson Rd Site)
East/West Street:	Stevenson Rd
North/South Street:	Center Site Access
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	9	66			53	0
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	10	73			58	0
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		6
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				0		6
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	10						6	
C(m) (vph)	1553						1011	
v/c	0.01						0.01	
95% queue length	0.02						0.02	
Control Delay	7.3						8.6	
LOS	A						A	
Approach Delay							8.6	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #8-Stevenson Rd/E Site Access
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1a
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: East Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	30	37			32	9
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	33	41			35	10
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				6		21
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				6		23
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	33						29	
C(m) (vph)	1570						984	
v/c	0.02						0.03	
95% queue length	0.06						0.09	
Control Delay	7.3						8.8	
LOS	A						A	
Approach Delay							8.8	
Approach LOS							A	

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	12	1659	164	1336	239	205	179	44
v/c Ratio	0.14	0.91	0.87	0.60	0.95	0.36	0.89	0.09
Control Delay	70.2	36.8	98.4	16.7	93.1	9.9	88.1	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	36.8	98.4	16.7	93.1	9.9	88.1	12.1
Queue Length 50th (ft)	10	654	142	306	203	13	149	0
Queue Length 95th (ft)	35	760	#319	468	#374	59	#328	31
Internal Link Dist (ft)		883		2846	282		433	
Turn Bay Length (ft)								
Base Capacity (vph)	181	2023	188	2256	252	577	202	477
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.82	0.87	0.59	0.95	0.36	0.89	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	3477		1770	3526			1782	1583		1785	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.51	1.00		0.42	1.00
Satd. Flow (perm)	1770	3477		1770	3526			951	1583		789	1583
Volume (vph)	11	1377	182	159	1265	31	176	18	166	135	21	38
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.81	0.81	0.81	0.87	0.87	0.87
Adj. Flow (vph)	12	1465	194	164	1304	32	217	22	205	155	24	44
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	133	0	0	32
Lane Group Flow (vph)	12	1652	0	164	1335	0	0	239	72	0	179	12
Turn Type	Prot			Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2		2	6		6
Actuated Green, G (s)	2.8	71.9		14.1	83.2			37.3	37.3		37.3	37.3
Effective Green, g (s)	2.8	71.9		14.1	83.2			37.3	37.3		37.3	37.3
Actuated g/C Ratio	0.02	0.53		0.10	0.61			0.28	0.28		0.28	0.28
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	37	1848		184	2168			262	436		218	436
v/s Ratio Prot	0.01	c0.47		c0.09	0.38							
v/s Ratio Perm								c0.25	0.05		0.23	0.01
v/c Ratio	0.32	0.89		0.89	0.62			0.91	0.16		0.82	0.03
Uniform Delay, d1	65.3	28.3		59.8	16.1			47.4	37.2		45.9	35.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	5.1	6.0		37.4	0.5			33.2	0.2		21.3	0.0
Delay (s)	70.4	34.3		97.3	16.7			80.6	37.4		67.2	35.8
Level of Service	E	C		F	B			F	D		E	D
Approach Delay (s)		34.5			25.5			60.6			61.0	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	135.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	12	1659	164	1336	217	22	205	179	44
v/c Ratio	0.15	0.95	0.81	0.59	0.88	0.05	0.38	0.54	0.11
Control Delay	47.8	33.3	68.7	10.7	67.2	25.7	6.4	35.6	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	33.3	68.7	10.7	67.2	25.7	6.4	35.6	9.0
Queue Length 50th (ft)	7	445	93	196	117	9	0	87	0
Queue Length 95th (ft)	24	#627	#202	330	#202	25	37	147	24
Internal Link Dist (ft)		883		2846		282		433	
Turn Bay Length (ft)									
Base Capacity (vph)	78	1807	211	2295	271	493	570	365	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.92	0.78	0.58	0.80	0.04	0.36	0.49	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3477		1770	3526		1770	1863	1583		1785	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.54	1.00	1.00		0.74	1.00
Satd. Flow (perm)	1770	3477		1770	3526		997	1863	1583		1376	1583
Volume (vph)	11	1377	182	159	1265	31	176	18	166	135	21	38
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.81	0.81	0.81	0.87	0.87	0.87
Adj. Flow (vph)	12	1465	194	164	1304	32	217	22	205	155	24	44
RTOR Reduction (vph)	0	12	0	0	2	0	0	0	157	0	0	34
Lane Group Flow (vph)	12	1647	0	164	1334	0	217	22	48	0	179	10
Turn Type	Prot			Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2		2	6		6
Actuated Green, G (s)	0.8	42.5		13.1	54.8		20.5	20.5	20.5		20.5	20.5
Effective Green, g (s)	0.8	42.5		13.1	54.8		20.5	20.5	20.5		20.5	20.5
Actuated g/C Ratio	0.01	0.48		0.15	0.62		0.23	0.23	0.23		0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	16	1677		263	2193		232	434	368		320	368
v/s Ratio Prot	0.01	c0.47		0.09	c0.38			0.01				
v/s Ratio Perm							c0.22		0.03		0.13	0.01
v/c Ratio	0.75	0.98		0.62	0.61		0.94	0.05	0.13		0.56	0.03
Uniform Delay, d1	43.6	22.4		35.2	10.1		33.2	26.2	26.7		29.8	26.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	106.0	17.8		4.5	0.5		41.2	0.0	0.2		2.1	0.0
Delay (s)	149.6	40.2		39.7	10.6		74.4	26.3	26.9		31.9	26.1
Level of Service	F	D		D	B		E	C	C		C	C
Approach Delay (s)		41.0			13.8			50.1			30.8	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	7	1396	89	47	1298	4	96	70	236
v/c Ratio	0.04	0.79	0.11	0.24	0.65	0.00	0.29	0.15	0.71
Control Delay	55.1	21.0	6.3	48.7	13.4	7.8	31.3	8.8	42.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	21.0	6.3	48.7	13.4	7.8	31.3	8.8	42.7
Queue Length 50th (ft)	3	275	6	21	160	0	36	0	100
Queue Length 95th (ft)	23	605	39	84	494	6	84	15	155
Internal Link Dist (ft)		2846			1155		1292		264
Turn Bay Length (ft)									
Base Capacity (vph)	311	2437	1110	362	2575	1152	624	836	628
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.57	0.08	0.13	0.50	0.00	0.15	0.08	0.38

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.96	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1777	1583		1763	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.69	1.00		0.70	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1285	1583		1282	
Volume (vph)	7	1340	85	45	1246	4	62	2	47	111	9	14
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.67	0.67	0.67	0.57	0.57	0.57
Adj. Flow (vph)	7	1396	89	47	1298	4	93	3	70	195	16	25
RTOR Reduction (vph)	0	0	31	0	0	1	0	0	51	0	3	0
Lane Group Flow (vph)	7	1396	58	47	1298	3	0	96	19	0	233	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	0.8	39.1	39.1	4.3	42.6	42.6		20.2	20.2		20.2	
Effective Green, g (s)	0.8	39.1	39.1	4.3	42.6	42.6		20.2	20.2		20.2	
Actuated g/C Ratio	0.01	0.52	0.52	0.06	0.56	0.56		0.27	0.27		0.27	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	19	1830	819	101	1994	892		343	423		343	
v/s Ratio Prot	0.00	c0.39		c0.03	c0.37							
v/s Ratio Perm			0.04			0.00		0.07	0.01		c0.18	
v/c Ratio	0.37	0.76	0.07	0.47	0.65	0.00		0.28	0.04		0.68	
Uniform Delay, d1	37.1	14.6	9.1	34.5	11.4	7.2		21.9	20.5		24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	11.7	1.9	0.0	3.4	0.8	0.0		0.4	0.0		5.3	
Delay (s)	48.8	16.5	9.2	37.9	12.1	7.2		22.4	20.6		30.1	
Level of Service	D	B	A	D	B	A		C	C		C	
Approach Delay (s)		16.2			13.0			21.6			30.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	75.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #2-Summit Park Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1b
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Summit Park Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	202	7	106	204	6
Peak-Hour Factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74
Hourly Flow Rate, HFR	41	272	9	143	275	8
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8	12	115	3	12	16
Peak Hour Factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74
Hourly Flow Rate, HFR	10	16	155	4	16	21
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	41	143		181			41	
C(m) (vph)	1297	1293		557			325	
v/c	0.03	0.11		0.32			0.13	
95% queue length	0.10	0.37		1.40			0.43	
Control Delay	7.9	8.1		14.5			17.7	
LOS	A	A		B			C	
Approach Delay				14.5			17.7	
Approach LOS				B			C	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #3-Stevenson Rd/Thompson Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1b
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Thompson Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		25	1	209	18	
Peak-Hour Factor, PHF		0.74	0.74	0.74	0.74	
Hourly Flow Rate, HFR		33	1	282	24	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1		216			
Peak Hour Factor, PHF	0.74		0.74			
Hourly Flow Rate, HFR	1		291			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		282		292				
C(m) (vph)		1591		1039				
v/c		0.18		0.28				
95% queue length		0.64		1.16				
Control Delay		7.7		9.8				
LOS		A		A				
Approach Delay				9.8				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #5-Stevenson Rd/Reservation Rd
Jurisdiction: City of Anacortes/Skagit Co
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1b
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Reservation Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	22	99			122	34
Peak-Hour Factor, PHF	0.70	0.70			0.70	0.70
Hourly Flow Rate, HFR	31	141			174	48
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			Yes	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				34		27
Peak Hour Factor, PHF				0.70		0.70
Hourly Flow Rate, HFR				48		38
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	31						86	
C(m) (vph)	1363						712	
v/c	0.02						0.12	
95% queue length	0.07						0.41	
Control Delay	7.7						10.7	
LOS	A						B	
Approach Delay							10.7	
Approach LOS							B	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #7-Stevenson Rd/W Site Access
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1b
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: West Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	34	175			173	0
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	37	194			192	0
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		34
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				0		37
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	37						37	
C(m) (vph)	1388						852	
v/c	0.03						0.04	
95% queue length	0.08						0.14	
Control Delay	7.7						9.4	
LOS	A						A	
Approach Delay							9.4	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #6-Stevenson Rd/C Site Access
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1b
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: Center Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	34	141			139	0
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	37	156			154	0
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		34
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				0		37
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	37						37	
C(m) (vph)	1433						895	
v/c	0.03						0.04	
95% queue length	0.08						0.13	
Control Delay	7.6						9.2	
LOS	A						A	
Approach Delay							9.2	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #8-Stevenson Rd/E Site Access
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1b
Project ID: Samish Tribe Casino (Thompson Rd Site)
East/West Street: Stevenson Rd
North/South Street: East Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	105	37			32	24
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	116	41			35	26
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				24		107
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				26		118
Percent Heavy Vehicles				1		1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	116						144	
C(m) (vph)	1549						918	
v/c	0.07						0.16	
95% queue length	0.24						0.55	
Control Delay	7.5						9.6	
LOS	A						A	
Approach Delay							9.6	
Approach LOS							A	

Weaverline Road Site – Level of Service Impacts

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	13	652	560	627	788	76
v/c Ratio	0.16	0.72	0.70	0.74	0.64	0.07
Control Delay	68.5	47.4	50.6	9.2	16.6	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.5	47.4	50.6	9.2	16.6	3.6
Queue Length 50th (ft)	10	256	213	0	291	3
Queue Length 95th (ft)	36	318	301	110	657	27
Internal Link Dist (ft)		694	1417		444	
Turn Bay Length (ft)						
Base Capacity (vph)	82	1348	1143	938	1224	1115
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.48	0.49	0.67	0.64	0.07

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	3610	3574	1599	1787	1599
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1805	3610	3574	1599	1787	1599
Volume (vph)	12	587	515	577	709	68
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.90	0.90
Adj. Flow (vph)	13	652	560	627	788	76
RTOR Reduction (vph)	0	0	0	490	0	20
Lane Group Flow (vph)	13	652	560	137	788	56
Heavy Vehicles (%)	0%	0%	1%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	2.2	34.3	28.1	28.1	86.6	86.6
Effective Green, g (s)	2.2	34.3	28.1	28.1	86.6	86.6
Actuated g/C Ratio	0.02	0.27	0.22	0.22	0.67	0.67
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	31	961	779	349	1201	1074
v/s Ratio Prot	0.01	c0.18	0.16		c0.44	
v/s Ratio Perm				0.09		0.04
v/c Ratio	0.42	0.68	0.72	0.39	0.66	0.05
Uniform Delay, d1	62.7	42.4	46.7	43.1	12.4	7.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.9	1.9	3.2	0.7	2.8	0.1
Delay (s)	71.6	44.3	49.9	43.8	15.2	7.3
Level of Service	E	D	D	D	B	A
Approach Delay (s)		44.8	46.7		14.5	
Approach LOS		D	D		B	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	128.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	838	228	634	868	142	522
v/c Ratio	0.28	0.17	1.23	0.29	0.80	0.33
Control Delay	2.6	0.5	138.2	2.7	96.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.6	0.5	138.2	2.7	96.0	0.6
Queue Length 50th (ft)	72	0	~258	75	137	0
Queue Length 95th (ft)	87	12	#503	91	#243	0
Internal Link Dist (ft)	1507			2429	1488	
Turn Bay Length (ft)						
Base Capacity (vph)	2995	1374	514	2995	189	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.17	1.23	0.29	0.75	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.33	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	610	3539	1770	1583
Volume (vph)	779	212	621	851	131	522
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	1.00
Adj. Flow (vph)	838	228	634	868	142	522
RTOR Reduction (vph)	0	35	0	0	0	0
Lane Group Flow (vph)	838	193	634	868	142	522
Turn Type		Perm	Perm			Free
Protected Phases	4			8	2	
Permitted Phases		4	8			Free
Actuated Green, G (s)	126.0	126.0	126.0	126.0	14.9	148.9
Effective Green, g (s)	126.0	126.0	126.0	126.0	14.9	148.9
Actuated g/C Ratio	0.85	0.85	0.85	0.85	0.10	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2995	1340	516	2995	177	1583
v/s Ratio Prot	0.24			0.25	c0.08	
v/s Ratio Perm		0.12	c1.04			0.33
v/c Ratio	0.28	0.14	1.23	0.29	0.80	0.33
Uniform Delay, d1	2.3	2.0	11.5	2.3	65.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	119.1	0.1	22.4	0.6
Delay (s)	2.4	2.1	130.6	2.4	88.0	0.6
Level of Service	A	A	F	A	F	A
Approach Delay (s)	2.3			56.5	19.3	
Approach LOS	A			E	B	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	148.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #1-Fidalgo Bay Rd/SR 20 Spur
Jurisdiction: WSDOT
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Fidalgo Bay Rd
North/South Street: SR 20 Spur
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	967	0	0	983	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	1051	0	0	1068	0
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	0	2	0
Configuration		LT	TR		LT	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8	4	1	0	1	0
Peak Hour Factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Hourly Flow Rate, HFR	9	4	1	0	1	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	LT		LTR			LTR	
v (vph)	0	0		14			1	
C(m) (vph)	648	658		69			51	
v/c	0.00	0.00		0.20			0.02	
95% queue length	0.00	0.00		0.69			0.06	
Control Delay	10.6	10.5		70.0			77.0	
LOS	B	B		F			F	
Approach Delay				70.0			77.0	
Approach LOS				F			F	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #2-SR20 Spur WB Off/Fidalgo Ba
Jurisdiction: WSDOT
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: SR 20 Spur WB Exit (Off-Ramp)
North/South Street: Fidalgo Bay Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		24			16	
Peak-Hour Factor, PHF		0.72			0.72	
Hourly Flow Rate, HFR		33			22	
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1			1	
Configuration		T			T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				13		2
Peak Hour Factor, PHF				0.72		0.72
Hourly Flow Rate, HFR				18		2
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config							LR	
v (vph)							20	
C(m) (vph)							967	
v/c							0.02	
95% queue length							0.06	
Control Delay							8.8	
LOS							A	
Approach Delay							8.8	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #3-Weaverling Rd/Fidalgo Bay
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Weaverling Rd
North/South Street: Fidalgo Bay Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		12	12	9	4	
Peak-Hour Factor, PHF		0.78	0.78	0.78	0.78	
Hourly Flow Rate, HFR		15	15	11	5	
Percent Heavy Vehicles		--	--	8	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	2		14			
Peak Hour Factor, PHF	0.78		0.78			
Hourly Flow Rate, HFR	2		17			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		11		19				
C(m) (vph)		1545		1049				
v/c		0.01		0.02				
95% queue length		0.02		0.06				
Control Delay		7.3		8.5				
LOS		A		A				
Approach Delay				8.5				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #5 - 34th St & R Ave
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: 34th St
North/South Street: R Ave
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	9	603	5	30	554	10
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate, HFR	9	648	5	32	595	10
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR		T	TR
Upstream Signal?		Yes			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	26	5	43	4	4	4
Peak Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate, HFR	27	5	46	4	4	4
Percent Heavy Vehicles	1	1	1	8	8	8
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	9	32		78			12	
C(m) (vph)	976	936		307			203	
v/c	0.01	0.03		0.25			0.06	
95% queue length	0.03	0.11		0.99			0.19	
Control Delay	8.7	9.0		20.7			23.8	
LOS	A	A		C			C	
Approach Delay				20.7			23.8	
Approach LOS				C			C	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #6 - 30th St & R Ave
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: 30th St
North/South Street: R Ave
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	528	12	11	550	8
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	3	555	12	11	578	8
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	54	4	32	9	3	6
Peak Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	56	4	33	9	3	6
Percent Heavy Vehicles	1	1	1	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L		LTR			LTR	
v (vph)	3	11		93			18	
C(m) (vph)	992	1008		305			279	
v/c	0.00	0.01		0.30			0.06	
95% queue length	0.01	0.03		1.26			0.21	
Control Delay	8.6	8.6		21.9			18.8	
LOS	A	A		C			C	
Approach Delay				21.9			18.8	
Approach LOS				C			C	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	13	686	589	658	827	79
v/c Ratio	0.17	0.73	0.71	0.75	0.68	0.07
Control Delay	69.6	47.3	50.3	9.0	18.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	47.3	50.3	9.0	18.7	4.1
Queue Length 50th (ft)	10	272	226	0	333	4
Queue Length 95th (ft)	37	336	316	112	750	30
Internal Link Dist (ft)		694	1417		444	
Turn Bay Length (ft)						
Base Capacity (vph)	81	1348	1143	959	1208	1100
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.51	0.52	0.69	0.68	0.07

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	3610	3574	1599	1787	1599
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1805	3610	3574	1599	1787	1599
Volume (vph)	12	617	542	605	744	71
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.90	0.90
Adj. Flow (vph)	13	686	589	658	827	79
RTOR Reduction (vph)	0	0	0	508	0	20
Lane Group Flow (vph)	13	686	589	150	827	59
Heavy Vehicles (%)	0%	0%	1%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	2.2	36.0	29.8	29.8	86.7	86.7
Effective Green, g (s)	2.2	36.0	29.8	29.8	86.7	86.7
Actuated g/C Ratio	0.02	0.28	0.23	0.23	0.66	0.66
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	30	994	815	365	1185	1061
v/s Ratio Prot	0.01	c0.19	0.16		c0.46	
v/s Ratio Perm				0.09		0.04
v/c Ratio	0.43	0.69	0.72	0.41	0.70	0.06
Uniform Delay, d1	63.6	42.4	46.6	43.0	13.8	7.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.7	2.1	3.2	0.8	3.4	0.1
Delay (s)	73.4	44.4	49.8	43.7	17.2	7.8
Level of Service	E	D	D	D	B	A
Approach Delay (s)		45.0	46.6		16.4	
Approach LOS		D	D		B	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	130.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	884	238	672	915	148	555
v/c Ratio	0.30	0.17	1.38	0.31	0.82	0.35
Control Delay	2.7	0.5	200.7	2.8	98.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	0.5	200.7	2.8	98.4	0.6
Queue Length 50th (ft)	77	0	~388	81	144	0
Queue Length 95th (ft)	93	12	#636	97	#257	0
Internal Link Dist (ft)	1507			2429	1488	
Turn Bay Length (ft)						
Base Capacity (vph)	2990	1375	488	2990	189	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.17	1.38	0.31	0.78	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.31	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	580	3539	1770	1583
Volume (vph)	822	221	659	897	136	555
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	1.00
Adj. Flow (vph)	884	238	672	915	148	555
RTOR Reduction (vph)	0	37	0	0	0	0
Lane Group Flow (vph)	884	201	672	915	148	555
Turn Type		Perm	Perm			Free
Protected Phases	4			8	2	
Permitted Phases		4	8			Free
Actuated Green, G (s)	126.0	126.0	126.0	126.0	15.1	149.1
Effective Green, g (s)	126.0	126.0	126.0	126.0	15.1	149.1
Actuated g/C Ratio	0.85	0.85	0.85	0.85	0.10	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2991	1338	490	2991	179	1583
v/s Ratio Prot	0.25			0.26	c0.08	
v/s Ratio Perm		0.13	c1.16			0.35
v/c Ratio	0.30	0.15	1.37	0.31	0.83	0.35
Uniform Delay, d1	2.4	2.0	11.5	2.4	65.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	179.8	0.1	25.7	0.6
Delay (s)	2.4	2.1	191.3	2.5	91.4	0.6
Level of Service	A	A	F	A	F	A
Approach Delay (s)	2.4			82.4	19.7	
Approach LOS	A			F	B	

Intersection Summary			
HCM Average Control Delay	43.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	149.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #1-Fidalgo Bay Rd/SR 20 Spur
Jurisdiction: WSDOT
Units: U. S. Customary
Analysis Year: 2013 Without Project
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Fidalgo Bay Rd
North/South Street: SR 20 Spur
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1018	0	0	1035	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	1106	0	0	1124	0
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	0	2	0
Configuration		LT	TR		LT	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8	4	1	0	1	0
Peak Hour Factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Hourly Flow Rate, HFR	9	4	1	0	1	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	LT		LTR			LTR	
v (vph)	0	0		14			1	
C(m) (vph)	617	627		59			43	
v/c	0.00	0.00		0.24			0.02	
95% queue length	0.00	0.00		0.82			0.07	
Control Delay	10.8	10.7		84.1			90.7	
LOS	B	B		F			F	
Approach Delay				84.1			90.7	
Approach LOS				F			F	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #2-SR20 Spur WB Off/Fidalgo Ba
Jurisdiction: WSDOT
Units: U. S. Customary
Analysis Year: 2013 Without Project
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: SR 20 Spur WB Exit (Off-Ramp)
North/South Street: Fidalgo Bay Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		25			17	
Peak-Hour Factor, PHF		0.72			0.72	
Hourly Flow Rate, HFR		34			23	
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1			1	
Configuration		T			T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				15		2
Peak Hour Factor, PHF				0.72		0.72
Hourly Flow Rate, HFR				20		2
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config							LR	
v (vph)							22	
C(m) (vph)							964	
v/c							0.02	
95% queue length							0.07	
Control Delay							8.8	
LOS							A	
Approach Delay							8.8	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #3-Weaverling Rd/Fidalgo Bay
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 Without Project
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Weaverling Rd
North/South Street: Fidalgo Bay Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		13	12	9	4	
Peak-Hour Factor, PHF		0.78	0.78	0.78	0.78	
Hourly Flow Rate, HFR		16	15	11	5	
Percent Heavy Vehicles		--	--	8	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	2		15			
Peak Hour Factor, PHF	0.78		0.78			
Hourly Flow Rate, HFR	2		19			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		11		21				
C(m) (vph)		1543		1047				
v/c		0.01		0.02				
95% queue length		0.02		0.06				
Control Delay		7.3		8.5				
LOS		A		A				
Approach Delay				8.5				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #5 - 34th St & R Ave
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 Without Project
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: 34th St
North/South Street: R Ave
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	10	632	5	31	581	10
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate, HFR	10	679	5	33	624	10
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR		L T	TR
Upstream Signal?		Yes			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27	5	45	4	4	5
Peak Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate, HFR	29	5	48	4	4	5
Percent Heavy Vehicles	1	1	1	8	8	8
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	10	33		82			13	
C(m) (vph)	952	912		283			197	
v/c	0.01	0.04		0.29			0.07	
95% queue length	0.03	0.11		1.17			0.21	
Control Delay	8.8	9.1		22.8			24.6	
LOS	A	A		C			C	
Approach Delay				22.8			24.6	
Approach LOS				C			C	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #6 - 30th St & R Ave
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 Without Project
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: 30th St
North/South Street: R Ave
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	553	12	11	576	8
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	4	582	12	11	606	8
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	56	4	33	9	3	7
Peak Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	58	4	34	9	3	7
Percent Heavy Vehicles	1	1	1	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L		LTR			LTR	
v (vph)	4	11		96			19	
C(m) (vph)	968	985		285			269	
v/c	0.00	0.01		0.34			0.07	
95% queue length	0.01	0.03		1.44			0.23	
Control Delay	8.7	8.7		23.9			19.4	
LOS	A	A		C			C	
Approach Delay				23.9			19.4	
Approach LOS				C			C	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	13	686	589	658	827	79
v/c Ratio	0.17	0.73	0.71	0.75	0.68	0.07
Control Delay	69.6	47.3	50.3	9.0	18.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	47.3	50.3	9.0	18.7	4.1
Queue Length 50th (ft)	10	272	226	0	333	4
Queue Length 95th (ft)	37	336	316	112	750	30
Internal Link Dist (ft)		694	1417		444	
Turn Bay Length (ft)						
Base Capacity (vph)	81	1348	1143	959	1208	1100
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.51	0.52	0.69	0.68	0.07

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	3610	3574	1599	1787	1599
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1805	3610	3574	1599	1787	1599
Volume (vph)	12	617	542	605	744	71
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.90	0.90
Adj. Flow (vph)	13	686	589	658	827	79
RTOR Reduction (vph)	0	0	0	508	0	20
Lane Group Flow (vph)	13	686	589	150	827	59
Heavy Vehicles (%)	0%	0%	1%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	2.2	36.0	29.8	29.8	86.7	86.7
Effective Green, g (s)	2.2	36.0	29.8	29.8	86.7	86.7
Actuated g/C Ratio	0.02	0.28	0.23	0.23	0.66	0.66
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	30	994	815	365	1185	1061
v/s Ratio Prot	0.01	c0.19	0.16		c0.46	
v/s Ratio Perm				0.09		0.04
v/c Ratio	0.43	0.69	0.72	0.41	0.70	0.06
Uniform Delay, d1	63.6	42.4	46.6	43.0	13.8	7.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.7	2.1	3.2	0.8	3.4	0.1
Delay (s)	73.4	44.4	49.8	43.7	17.2	7.8
Level of Service	E	D	D	D	B	A
Approach Delay (s)		45.0	46.6		16.4	
Approach LOS		D	D		B	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	130.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	929	246	672	978	161	555
v/c Ratio	0.31	0.18	1.45	0.33	0.88	0.35
Control Delay	2.8	0.5	232.8	2.9	105.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	0.5	232.8	2.9	105.6	0.6
Queue Length 50th (ft)	83	0	~434	88	158	0
Queue Length 95th (ft)	99	12	#683	106	#289	0
Internal Link Dist (ft)	1507			2429	1488	
Turn Bay Length (ft)						
Base Capacity (vph)	2982	1373	463	2982	189	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.18	1.45	0.33	0.85	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.30	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	551	3539	1770	1583
Volume (vph)	864	229	659	958	148	555
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	1.00
Adj. Flow (vph)	929	246	672	978	161	555
RTOR Reduction (vph)	0	39	0	0	0	0
Lane Group Flow (vph)	929	207	672	978	161	555
Turn Type		Perm	Perm			Free
Protected Phases	4			8	2	
Permitted Phases		4	8			Free
Actuated Green, G (s)	126.0	126.0	126.0	126.0	15.5	149.5
Effective Green, g (s)	126.0	126.0	126.0	126.0	15.5	149.5
Actuated g/C Ratio	0.84	0.84	0.84	0.84	0.10	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2983	1334	464	2983	184	1583
v/s Ratio Prot	0.26			0.28	c0.09	
v/s Ratio Perm		0.13	c1.22			0.35
v/c Ratio	0.31	0.16	1.45	0.33	0.88	0.35
Uniform Delay, d1	2.5	2.1	11.8	2.6	66.0	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	213.6	0.1	33.9	0.6
Delay (s)	2.6	2.2	225.3	2.6	99.9	0.6
Level of Service	A	A	F	A	F	A
Approach Delay (s)	2.5			93.3	22.9	
Approach LOS	A			F	C	

Intersection Summary			
HCM Average Control Delay	48.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #1-Fidalgo Bay Rd/SR 20 Spur
Jurisdiction: WSDOT
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Fidalgo Bay Rd
North/South Street: SR 20 Spur
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1018	0	0	1035	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	1106	0	0	1124	0
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	0	2	0
Configuration		LT	TR		LT	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	59	4	1	0	1	0
Peak Hour Factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Hourly Flow Rate, HFR	72	4	1	0	1	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	LT		LTR			LTR	
v (vph)	0	0		77			1	
C(m) (vph)	617	627		62			43	
v/c	0.00	0.00		1.24			0.02	
95% queue length	0.00	0.00		6.39			0.07	
Control Delay	10.8	10.7		305.7			90.7	
LOS	B	B		F			F	
Approach Delay				305.7			90.7	
Approach LOS				F			F	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #2-SR20 Spur WB Off/Fidalgo Ba
Jurisdiction: WSDOT
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: SR 20 Spur WB Exit (Off-Ramp)
North/South Street: Fidalgo Bay Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		59			65	
Peak-Hour Factor, PHF		0.72			0.72	
Hourly Flow Rate, HFR		81			90	
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1			1	
Configuration		T			T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				15		2
Peak Hour Factor, PHF				0.72		0.72
Hourly Flow Rate, HFR				20		2
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config							LR	
v (vph)							22	
C(m) (vph)							836	
v/c							0.03	
95% queue length							0.08	
Control Delay							9.4	
LOS							A	
Approach Delay							9.4	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #3-Weaverling Rd/Fidalgo Bay
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Weaverling Rd
North/South Street: Fidalgo Bay Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		87	12	9	55	
Peak-Hour Factor, PHF		0.78	0.78	0.78	0.78	
Hourly Flow Rate, HFR		111	15	11	70	
Percent Heavy Vehicles		--	--	8	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	2		15			
Peak Hour Factor, PHF	0.78		0.78			
Hourly Flow Rate, HFR	2		19			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		11		21				
C(m) (vph)		1424		921				
v/c		0.01		0.02				
95% queue length		0.02		0.07				
Control Delay		7.5		9.0				
LOS		A		A				
Approach Delay				9.0				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #5 - 34th St & R Ave
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: 34th St
North/South Street: R Ave
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	10	632	5	37	581	10
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate, HFR	10	679	5	39	624	10
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR		T	TR
Upstream Signal?		Yes			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27	26	49	4	35	5
Peak Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate, HFR	29	27	52	4	37	5
Percent Heavy Vehicles	1	1	1	8	8	8
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	10	39		108			46	
C(m) (vph)	952	912		206			135	
v/c	0.01	0.04		0.52			0.34	
95% queue length	0.03	0.13		2.71			1.38	
Control Delay	8.8	9.1		40.3			44.9	
LOS	A	A		E			E	
Approach Delay				40.3			44.9	
Approach LOS				E			E	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #6 - 30th St & R Ave
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: 30th St
North/South Street: R Ave
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	558	12	24	582	8
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	4	587	12	25	612	8
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	56	4	42	9	3	7
Peak Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	58	4	44	9	3	7
Percent Heavy Vehicles	1	1	1	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L		LTR			LTR	
v (vph)	4	25		106			19	
C(m) (vph)	963	981		284			251	
v/c	0.00	0.03		0.37			0.08	
95% queue length	0.01	0.08		1.66			0.24	
Control Delay	8.8	8.8		25.0+			20.5	
LOS	A	A		D			C	
Approach Delay				25.0+			20.5	
Approach LOS				D			C	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 9/1/2011
Analysis Time Period: PM Peak
Intersection: #8-Fidalgo Bay/Project Site Dr
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Project Site Dr
North/South Street: Fidalgo Bay Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		27	73	49	14	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		30	81	54	15	
Percent Heavy Vehicles		--	--	1	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	50		34			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	55		37			
Percent Heavy Vehicles	1		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		54		92				
C(m) (vph)		1485		847				
v/c		0.04		0.11				
95% queue length		0.11		0.36				
Control Delay		7.5		9.8				
LOS		A		A				
Approach Delay				9.8				
Approach LOS				A				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	13	686	589	658	897	79
v/c Ratio	0.17	0.73	0.71	0.75	0.74	0.07
Control Delay	69.6	47.3	50.3	9.0	21.0	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	47.3	50.3	9.0	21.0	4.4
Queue Length 50th (ft)	10	272	226	0	389	6
Queue Length 95th (ft)	37	336	316	112	883	32
Internal Link Dist (ft)		694	1417		444	
Turn Bay Length (ft)						
Base Capacity (vph)	81	1348	1143	959	1208	1098
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.51	0.52	0.69	0.74	0.07

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	3610	3574	1599	1787	1599
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1805	3610	3574	1599	1787	1599
Volume (vph)	12	617	542	605	807	71
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.90	0.90
Adj. Flow (vph)	13	686	589	658	897	79
RTOR Reduction (vph)	0	0	0	508	0	18
Lane Group Flow (vph)	13	686	589	150	897	61
Heavy Vehicles (%)	0%	0%	1%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	2.2	36.0	29.8	29.8	86.7	86.7
Effective Green, g (s)	2.2	36.0	29.8	29.8	86.7	86.7
Actuated g/C Ratio	0.02	0.28	0.23	0.23	0.66	0.66
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	30	994	815	365	1185	1061
v/s Ratio Prot	0.01	c0.19	0.16		c0.50	
v/s Ratio Perm				0.09		0.04
v/c Ratio	0.43	0.69	0.72	0.41	0.76	0.06
Uniform Delay, d1	63.6	42.4	46.6	43.0	14.9	7.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.7	2.1	3.2	0.8	4.5	0.1
Delay (s)	73.4	44.4	49.8	43.7	19.4	7.8
Level of Service	E	D	D	D	B	A
Approach Delay (s)		45.0	46.6		18.5	
Approach LOS		D	D		B	

Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	130.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	929	246	672	978	161	555
v/c Ratio	0.31	0.18	1.45	0.33	0.88	0.35
Control Delay	2.8	0.5	232.8	2.9	105.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	0.5	232.8	2.9	105.6	0.6
Queue Length 50th (ft)	83	0	~434	88	158	0
Queue Length 95th (ft)	99	12	#683	106	#289	0
Internal Link Dist (ft)	1507			2429	1488	
Turn Bay Length (ft)						
Base Capacity (vph)	2982	1373	463	2982	189	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.18	1.45	0.33	0.85	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.30	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	551	3539	1770	1583
Volume (vph)	864	229	659	958	148	555
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	1.00
Adj. Flow (vph)	929	246	672	978	161	555
RTOR Reduction (vph)	0	39	0	0	0	0
Lane Group Flow (vph)	929	207	672	978	161	555
Turn Type		Perm	Perm			Free
Protected Phases	4			8	2	
Permitted Phases		4	8			Free
Actuated Green, G (s)	126.0	126.0	126.0	126.0	15.5	149.5
Effective Green, g (s)	126.0	126.0	126.0	126.0	15.5	149.5
Actuated g/C Ratio	0.84	0.84	0.84	0.84	0.10	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2983	1334	464	2983	184	1583
v/s Ratio Prot	0.26			0.28	c0.09	
v/s Ratio Perm		0.13	c1.22			0.35
v/c Ratio	0.31	0.16	1.45	0.33	0.88	0.35
Uniform Delay, d1	2.5	2.1	11.8	2.6	66.0	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	213.6	0.1	33.9	0.6
Delay (s)	2.6	2.2	225.3	2.6	99.9	0.6
Level of Service	A	A	F	A	F	A
Approach Delay (s)	2.5			93.3	22.9	
Approach LOS	A			F	C	

Intersection Summary			
HCM Average Control Delay	48.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #1-Fidalgo Bay Rd/SR 20 Spur
Jurisdiction: WSDOT
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1 with 30th Route
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Fidalgo Bay Rd
North/South Street: SR 20 Spur
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1018	0	0	1035	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	1106	0	0	1124	0
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	0	2	0
Configuration		LT	TR		LT	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8	4	1	0	1	0
Peak Hour Factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Hourly Flow Rate, HFR	9	4	1	0	1	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	LT		LTR			LTR	
v (vph)	0	0		14			1	
C(m) (vph)	617	627		59			43	
v/c	0.00	0.00		0.24			0.02	
95% queue length	0.00	0.00		0.82			0.07	
Control Delay	10.8	10.7		84.1			90.7	
LOS	B	B		F			F	
Approach Delay				84.1			90.7	
Approach LOS				F			F	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst:	JGT
Agency/Co.:	TENW
Date Performed:	09/01/2011
Analysis Time Period:	PM Peak
Intersection:	#2-SR20 Spur WB Off/Fidalgo Ba
Jurisdiction:	WSDOT
Units: U. S. Customary	
Analysis Year:	2013 With Alternative 1-30/34
Project ID:	Samish Tribe Casino (Weaverling Spit Site)
East/West Street:	SR 20 Spur WB Exit (Off-Ramp)
North/South Street:	Fidalgo Bay Rd
Intersection Orientation: NS	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		109			65	
Peak-Hour Factor, PHF		0.72			0.72	
Hourly Flow Rate, HFR		151			90	
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1			1	
Configuration		T			T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				15		2
Peak Hour Factor, PHF				0.72		0.72
Hourly Flow Rate, HFR				20		2
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config							LR	
v (vph)							22	
C(m) (vph)							768	
v/c							0.03	
95% queue length							0.09	
Control Delay							9.8	
LOS							A	
Approach Delay							9.8	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #3-Weaverling Rd/Fidalgo Bay
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1-30/34
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: Weaverling Rd
North/South Street: Fidalgo Bay Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		87	12	9	4	
Peak-Hour Factor, PHF		0.78	0.78	0.78	0.78	
Hourly Flow Rate, HFR		111	15	11	5	
Percent Heavy Vehicles		--	--	8	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	2		15			
Peak Hour Factor, PHF	0.78		0.78			
Hourly Flow Rate, HFR	2		19			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		11		21				
C(m) (vph)		1424		929				
v/c		0.01		0.02				
95% queue length		0.02		0.07				
Control Delay		7.5		9.0				
LOS		A		A				
Approach Delay				9.0				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #5 - 34th St & R Ave
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alternative 1 - 30th
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: 34th St
North/South Street: R Ave
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	10	632	5	68	645	10
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate, HFR	10	679	5	73	693	10
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR		T	TR
Upstream Signal?		Yes			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27	5	70	4	4	5
Peak Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate, HFR	29	5	75	4	4	5
Percent Heavy Vehicles	1	1	1	8	8	8
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	10	73		109			13	
C(m) (vph)	897	912		280			150	
v/c	0.01	0.08		0.39			0.09	
95% queue length	0.03	0.26		1.77			0.28	
Control Delay	9.1	9.3		25.8			31.3	
LOS	A	A		D			D	
Approach Delay				25.8			31.3	
Approach LOS				D			D	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: JGT
Agency/Co.: TENW
Date Performed: 09/01/2011
Analysis Time Period: PM Peak
Intersection: #6 - 30th St & R Ave
Jurisdiction: City of Anacortes
Units: U. S. Customary
Analysis Year: 2013 With Alt 1-30th Improve
Project ID: Samish Tribe Casino (Weaverling Spit Site)
East/West Street: 30th St
North/South Street: R Ave
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	587	12	24	619	8
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	4	617	12	25	651	8
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type/Storage	Raised curb / 2					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR		L T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	120	4	42	59	3	7
Peak Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	126	4	44	62	3	7
Percent Heavy Vehicles	1	1	1	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	4	25		174			72	
C(m) (vph)	932	956		416			355	
v/c	0.00	0.03		0.42			0.20	
95% queue length	0.01	0.08		2.02			0.75	
Control Delay	8.9	8.9		19.7			17.7	
LOS	A	A		C			C	
Approach Delay				19.7			17.7	
Approach LOS				C			C	

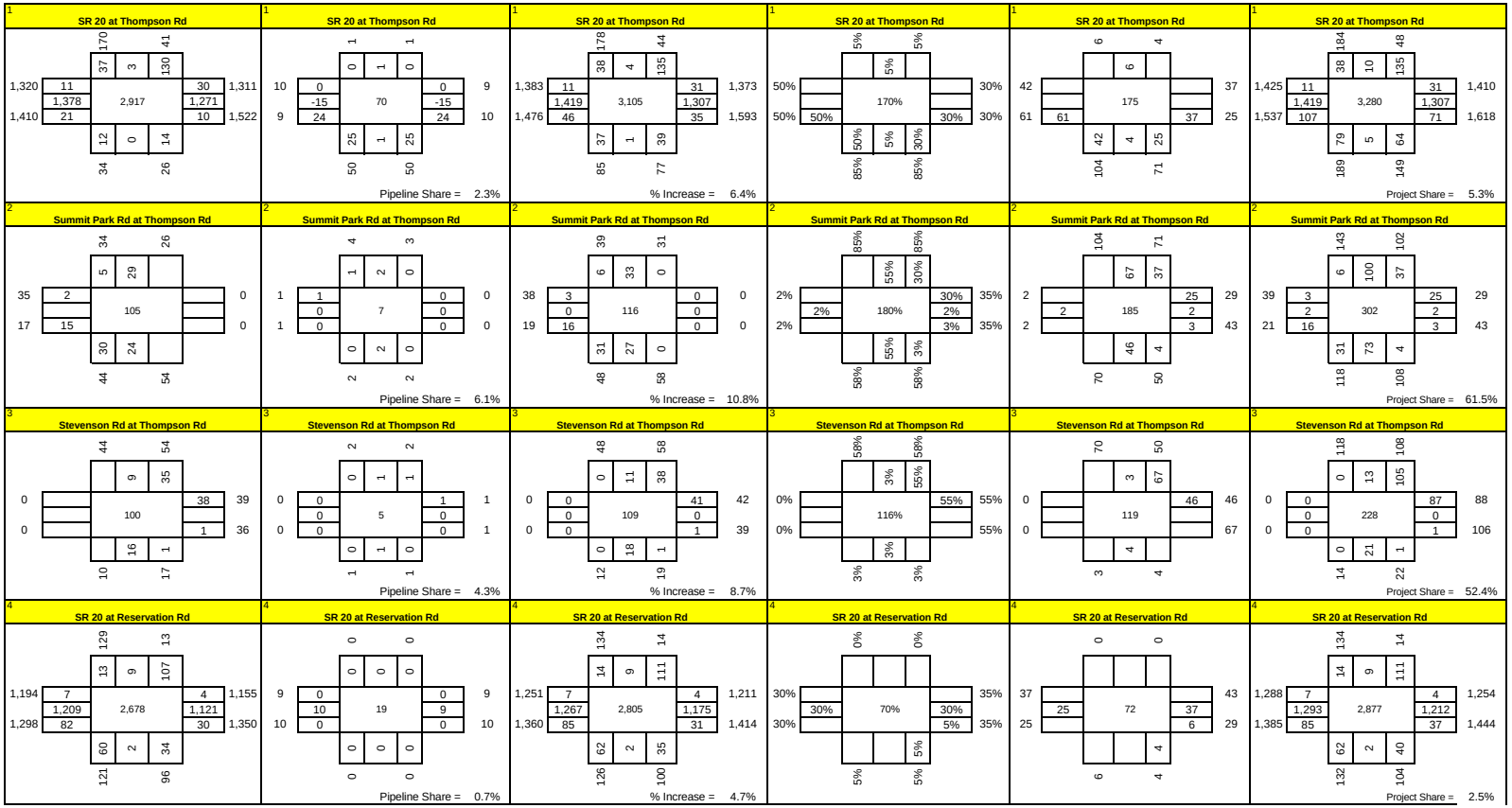
Appendix C

2013 Future Traffic Volume Estimates

Samish Tribe Casino (Thompson Road Site)
Alternative 1 - 50k Casino
2013 PM Peak Hour Turning Movement Volume Forecasts

Growth Rate =	2.0%
Existing Year =	2011
Future Year =	2013

2011 Existing	TOTAL PIPELINE	2013 Baseline	Project Distribution	Casino Project Trips (Enter 122, Exit 84)	2013 With Project

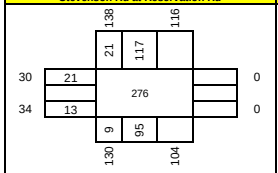


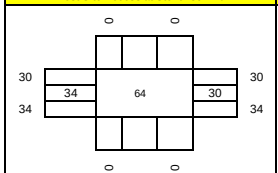
Alternative 1 - 50k Casino
2013 PM Peak Hour Turning Movement Volume Forecasts

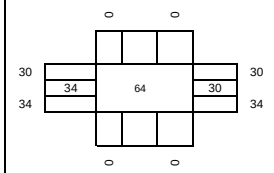
Growth Rate =	2.0%
Existing Year =	2011
Future Year =	2013

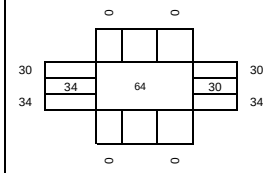
Enter 122 Exit 84

2011 Existing

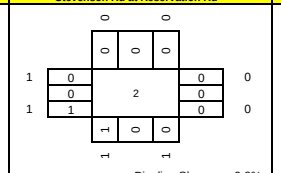


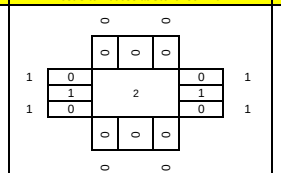


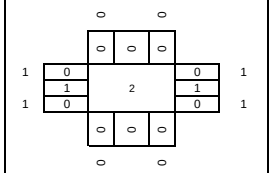


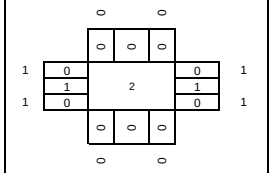


TOTAL PIPELINE

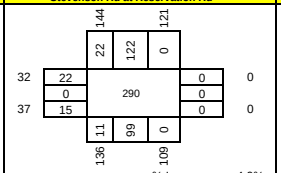


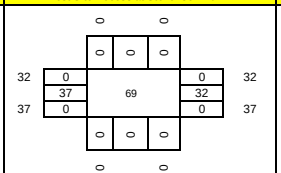


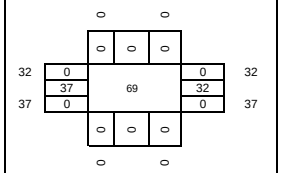


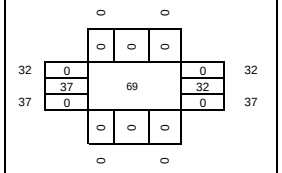


2013 Baseline

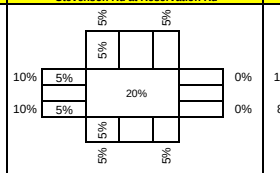


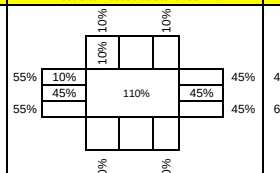


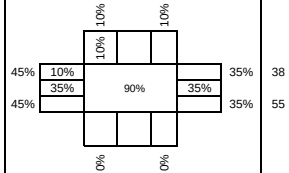


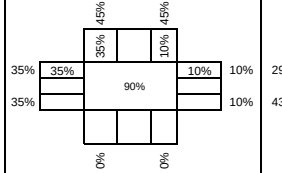


Project Distribution

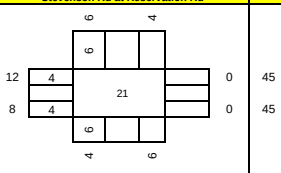


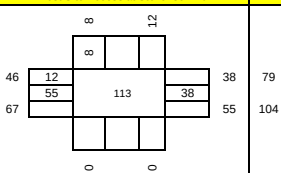


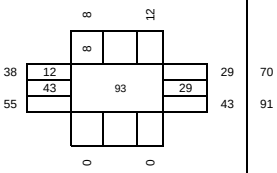


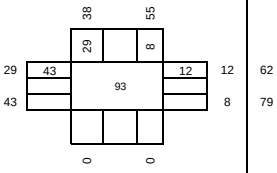


Casino Project Trips

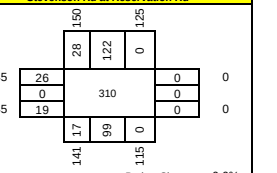


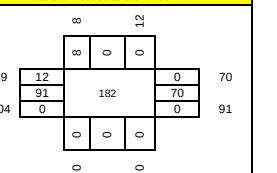


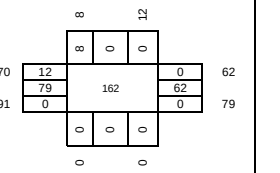


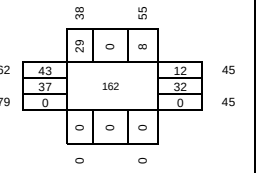


2013 With Project







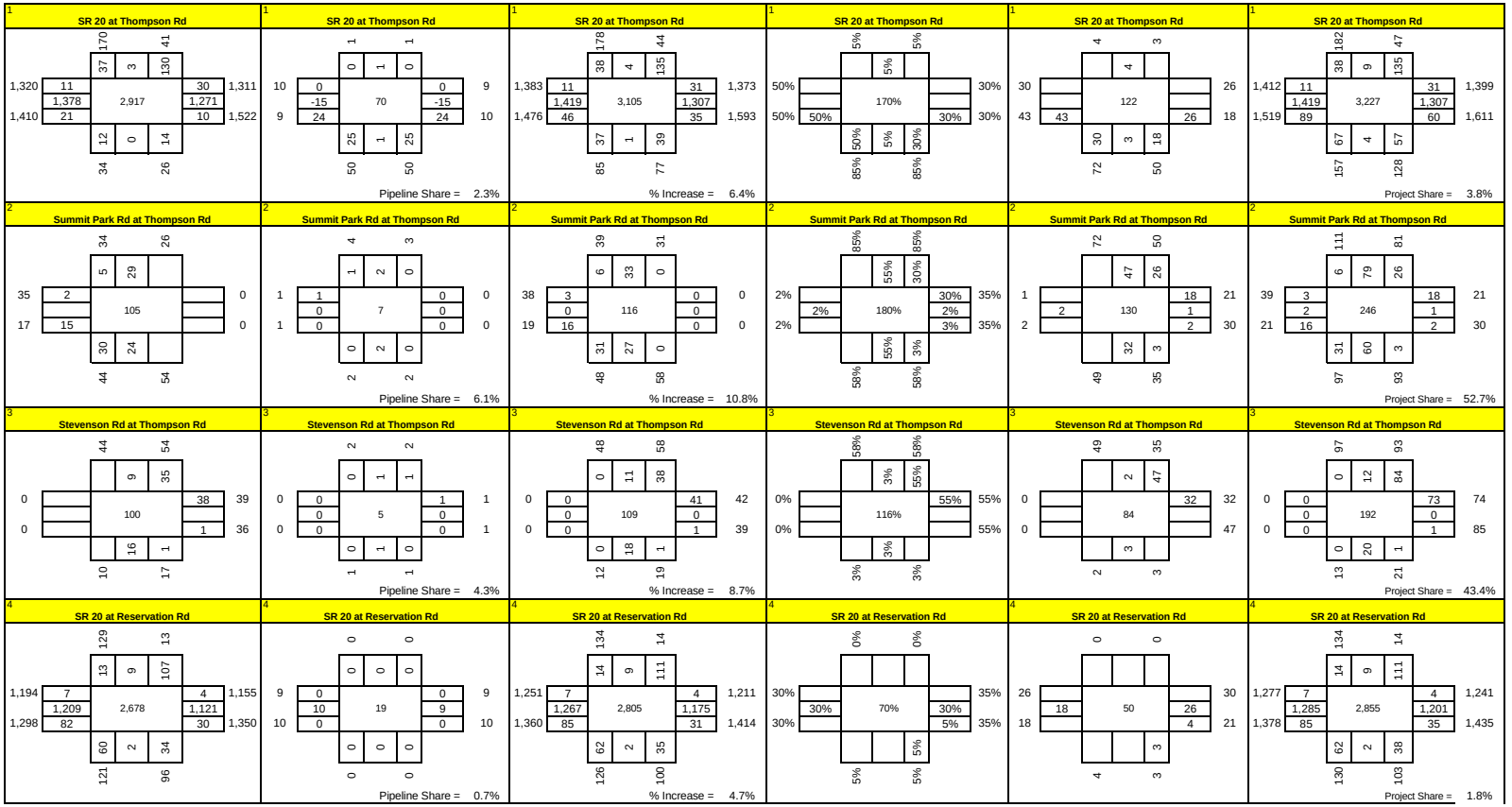


Samish Tribe Casino (Thompson Road Site)
Alternative 1a - 35k Casino
2013 PM Peak Hour Turning Movement Volume Forecasts

Growth Rate =	2.0%
Existing Year =	2011
Future Year =	2013

Enter 85 Exit 59

2011 Existing	TOTAL PIPELINE	2013 Baseline	Project Distribution	Casino Project Trips	2013 With Project



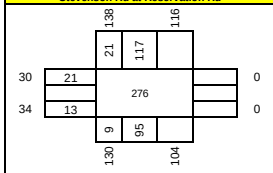
Alternative 1a - 35k Casino
2013 PM Peak Hour Turning Movement Volume Forecasts

Growth Rate =	2.0%
Existing Year =	2011
Future Year =	2013

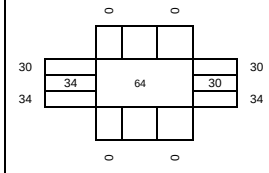
Enter 85 Exit 59

2011 Existing

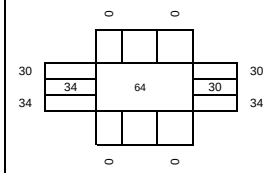
5 **Stevenson Rd at Reservation Rd**



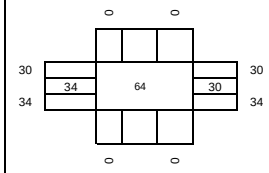
6 **West Site Access at Stevenson Rd**



7 **Center Site Access at Stevenson Rd**

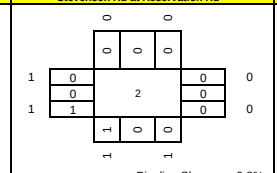


8 **East Site Access at Stevenson Rd**



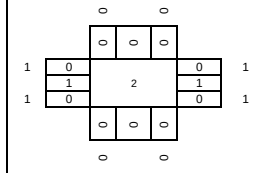
TOTAL PIPELINE

5 **Stevenson Rd at Reservation Rd**



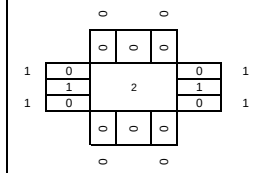
Pipeline Share = 0.8%

6 **West Site Access at Stevenson Rd**



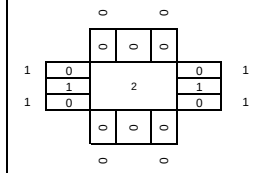
Pipeline Share = 3.4%

7 **Center Site Access at Stevenson Rd**



Pipeline Share = 3.4%

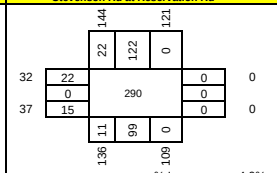
8 **East Site Access at Stevenson Rd**



Pipeline Share = 3.4%

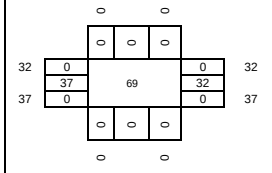
2013 Baseline

5 **Stevenson Rd at Reservation Rd**



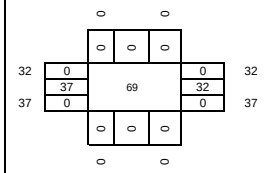
% Increase = 4.9%

6 **West Site Access at Stevenson Rd**



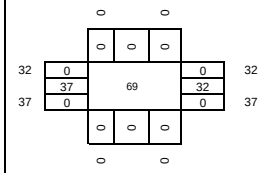
% Increase = 7.7%

7 **Center Site Access at Stevenson Rd**



% Increase = 7.7%

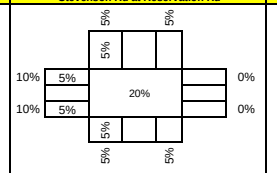
8 **East Site Access at Stevenson Rd**



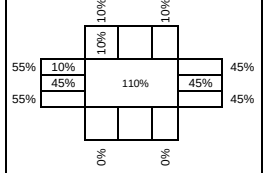
% Increase = 7.7%

Project Distribution

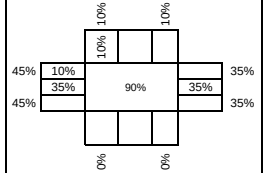
5 **Stevenson Rd at Reservation Rd**



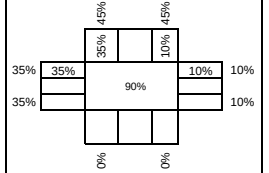
6 **West Site Access at Stevenson Rd**



7 **Center Site Access at Stevenson Rd**

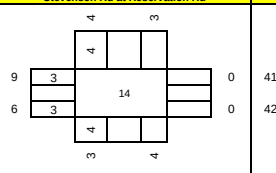


8 **East Site Access at Stevenson Rd**

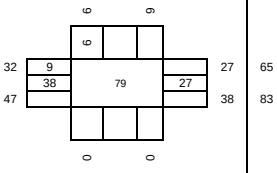


Casino Project Trips

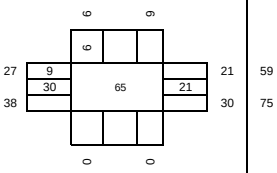
5 **Stevenson Rd at Reservation Rd**



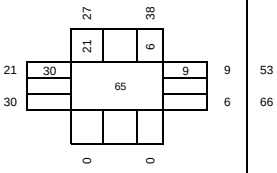
6 **West Site Access at Stevenson Rd**



7 **Center Site Access at Stevenson Rd**

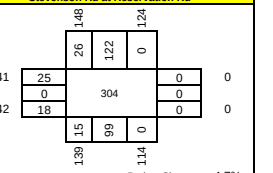


8 **East Site Access at Stevenson Rd**



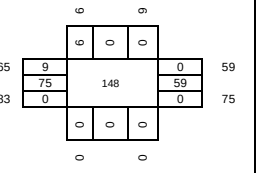
2013 With Project

5 **Stevenson Rd at Reservation Rd**



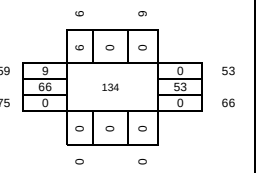
Project Share = 4.7%

6 **West Site Access at Stevenson Rd**



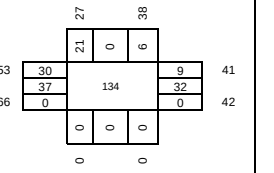
Project Share = 53.5%

7 **Center Site Access at Stevenson Rd**



Project Share = 48.5%

8 **East Site Access at Stevenson Rd**



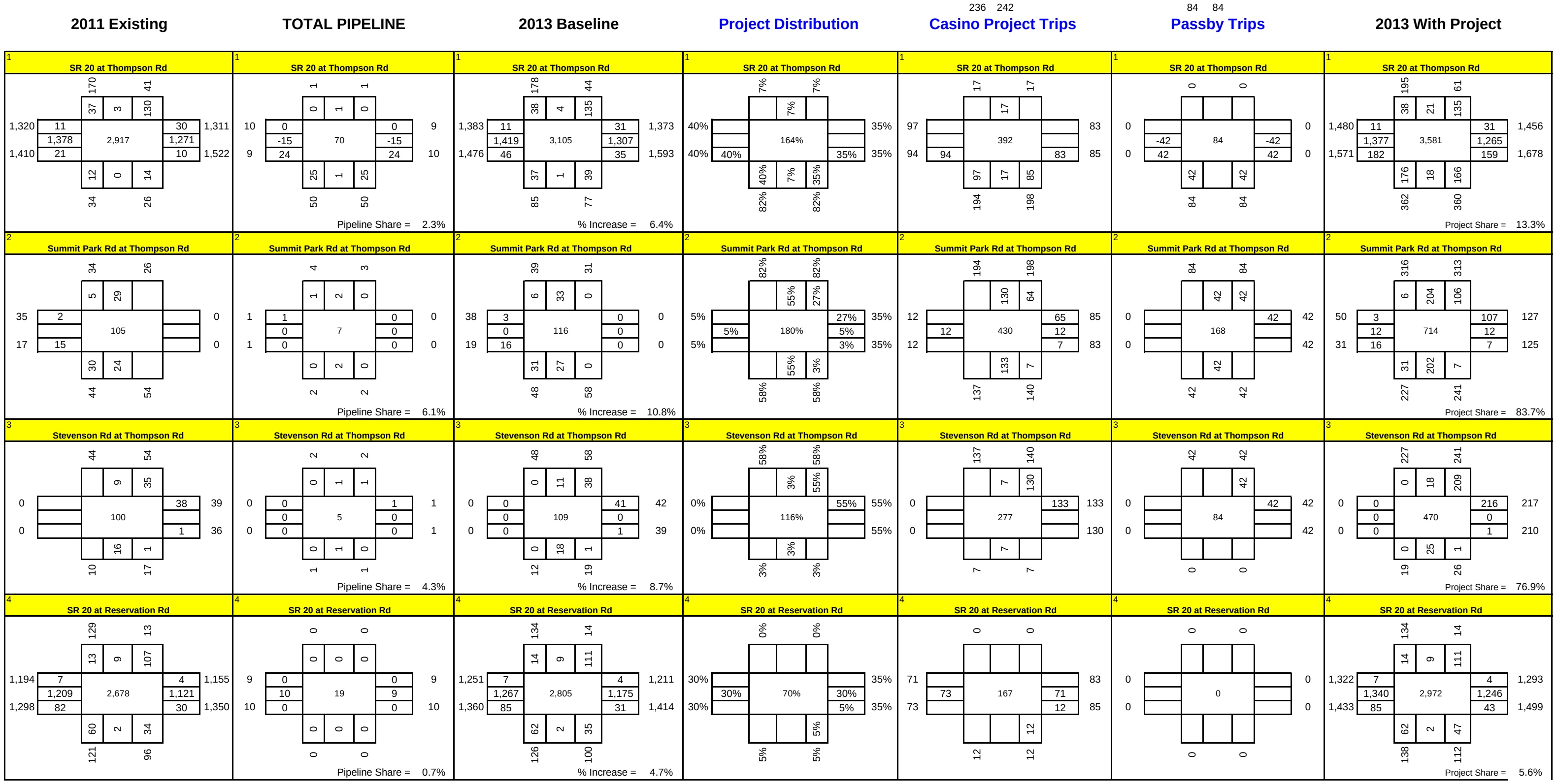
Project Share = 48.5%

Samish Tribe Casino (Thompson Road Site)
Alternative 1b - Commercial
2013 PM Peak Hour Turning Movement Volume Forecasts

Growth Rate =	2.0%
Existing Year =	2011
Future Year =	2013

Casino Project Trips: Enter 236, Exit 242

Passby Trips: Enter 84, Exit 84

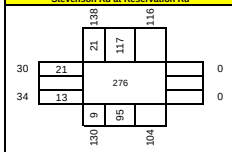


Alternative 1b - Commercial
2013 PM Peak Hour Turning Movement Volume Forecasts

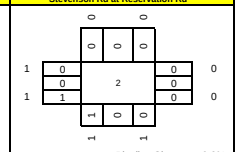
Growth Rate =	2.0%
Existing Year =	2011
Future Year =	2013

2011 Existing	TOTAL PIPELINE	2013 Baseline	Project Distribution	Casino Project Trips (Enter 236, Exit 242)	Passby Trips (Enter 84, Exit 84)	2013 With Project

5 **Stevenson Rd at Reservation Rd**

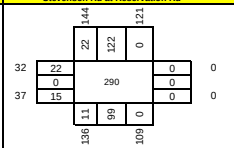


5 **Stevenson Rd at Reservation Rd**



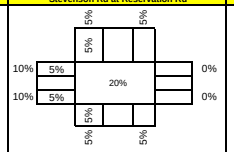
Pipeline Share = 0.8%

5 **Stevenson Rd at Reservation Rd**

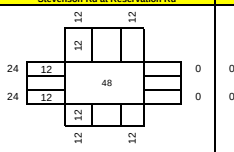


% Increase = 4.9%

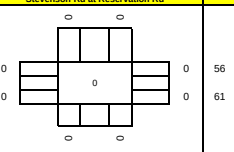
5 **Stevenson Rd at Reservation Rd**



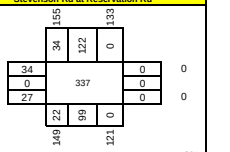
5 **Stevenson Rd at Reservation Rd**



5 **Stevenson Rd at Reservation Rd**

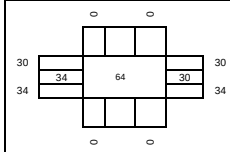


5 **Stevenson Rd at Reservation Rd**

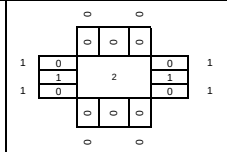


Project Share = 14.2%

6 **West Site Access at Stevenson Rd**

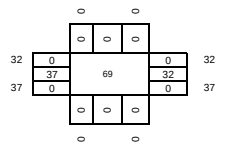


6 **West Site Access at Stevenson Rd**



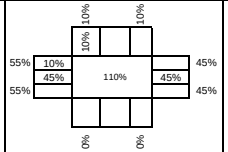
Pipeline Share = 3.4%

6 **West Site Access at Stevenson Rd**

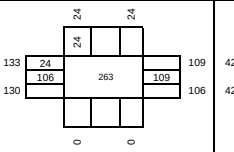


% Increase = 7.7%

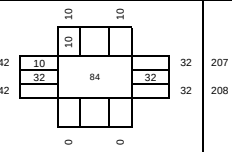
6 **West Site Access at Stevenson Rd**



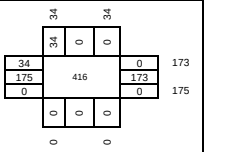
6 **West Site Access at Stevenson Rd**



6 **West Site Access at Stevenson Rd**

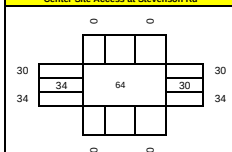


6 **West Site Access at Stevenson Rd**

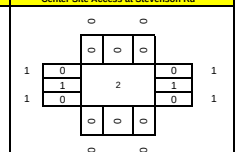


Project Share = 83.4%

7 **Center Site Access at Stevenson Rd**

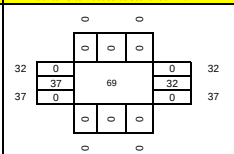


7 **Center Site Access at Stevenson Rd**



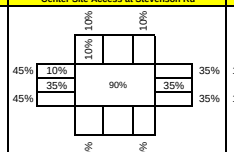
Pipeline Share = 3.4%

7 **Center Site Access at Stevenson Rd**

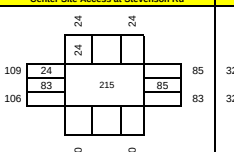


% Increase = 7.7%

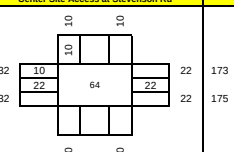
7 **Center Site Access at Stevenson Rd**



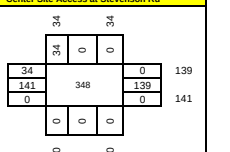
7 **Center Site Access at Stevenson Rd**



7 **Center Site Access at Stevenson Rd**

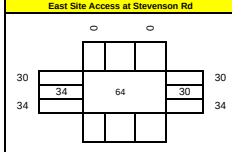


7 **Center Site Access at Stevenson Rd**

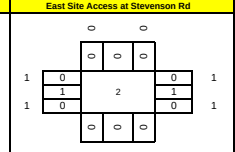


Project Share = 80.2%

8 **East Site Access at Stevenson Rd**

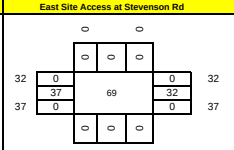


8 **East Site Access at Stevenson Rd**



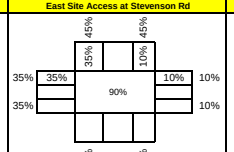
Pipeline Share = 3.4%

8 **East Site Access at Stevenson Rd**

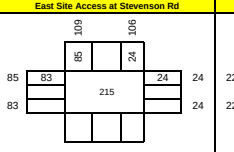


% Increase = 7.7%

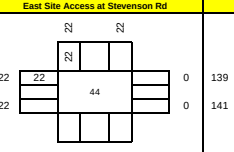
8 **East Site Access at Stevenson Rd**



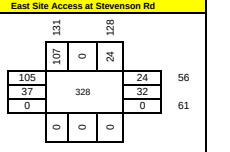
8 **East Site Access at Stevenson Rd**



8 **East Site Access at Stevenson Rd**



8 **East Site Access at Stevenson Rd**



Project Share = 79.0%

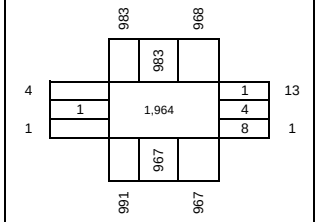
Samish Tribe Casino (Weaverling Spit Site)
Alternative 1 - 50k Casino
2013 PM Peak Hour Turning Movement Volume Forecasts

Growth Rate =	2.0%
Existing Year =	2011
Future Year =	2013

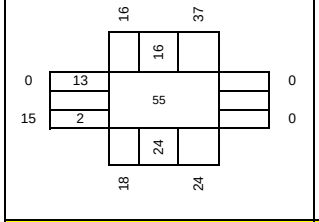
Enter 122 Exit 84

2011 Existing

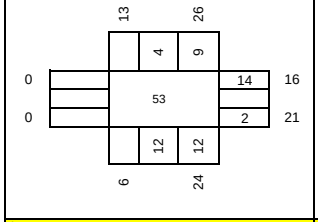
1 SR 20 Spur at Fidalgo Bay Rd



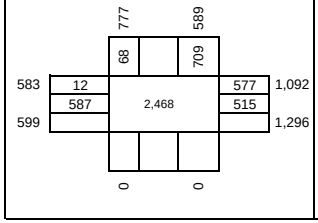
2 SR 20 WB Exit at Fidalgo Bay Rd



3 Weaverling Rd at Fidalgo Bay Rd

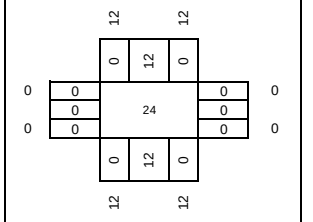


4 SR 20 Spur at R Ave



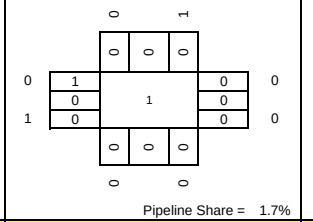
TOTAL PIPELINE

1 SR 20 Spur at Fidalgo Bay Rd



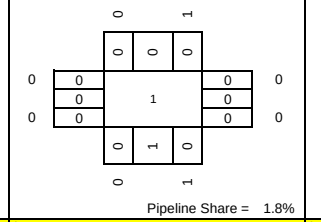
Pipeline Share = 1.2%

2 SR 20 WB Exit at Fidalgo Bay Rd



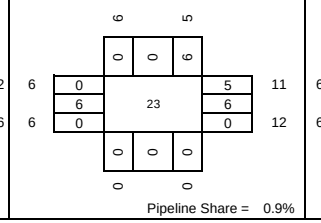
Pipeline Share = 1.7%

3 Weaverling Rd at Fidalgo Bay Rd



Pipeline Share = 1.8%

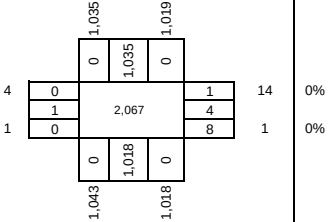
4 SR 20 Spur at R Ave



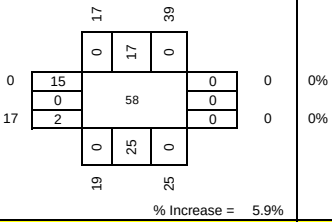
Pipeline Share = 0.9%

2013 Baseline

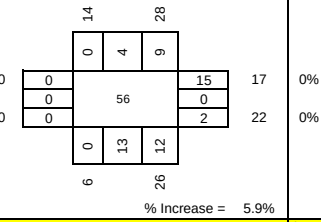
1 SR 20 Spur at Fidalgo Bay Rd



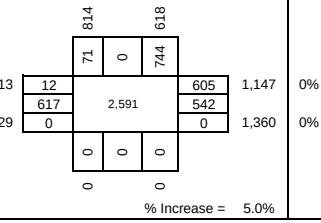
2 SR 20 WB Exit at Fidalgo Bay Rd



3 Weaverling Rd at Fidalgo Bay Rd



4 SR 20 Spur at R Ave



% Increase = 5.3%

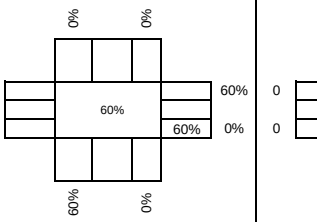
% Increase = 5.9%

% Increase = 5.9%

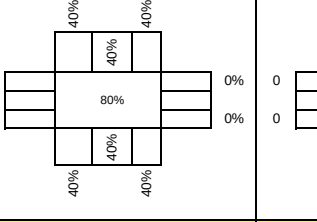
% Increase = 5.0%

Project Distribution

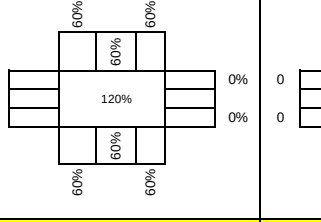
1 SR 20 Spur at Fidalgo Bay Rd



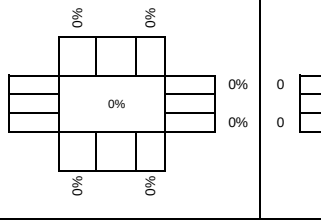
2 SR 20 WB Exit at Fidalgo Bay Rd



3 Weaverling Rd at Fidalgo Bay Rd

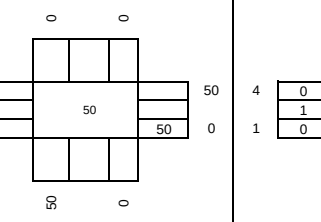


4 SR 20 Spur at R Ave

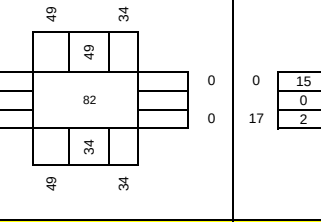


Project Trips

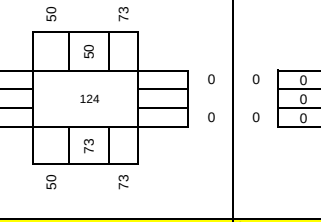
1 SR 20 Spur at Fidalgo Bay Rd



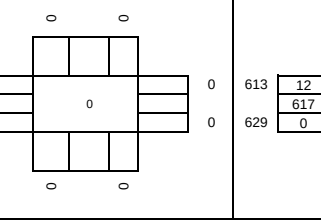
2 SR 20 WB Exit at Fidalgo Bay Rd



3 Weaverling Rd at Fidalgo Bay Rd

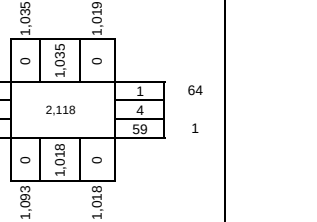


4 SR 20 Spur at R Ave

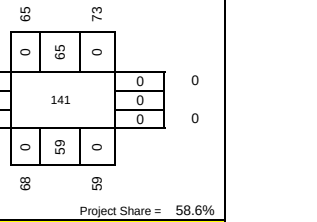


2013 With Project

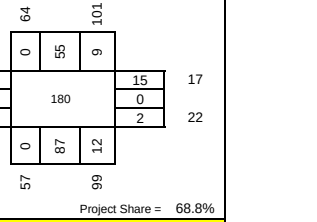
1 SR 20 Spur at Fidalgo Bay Rd



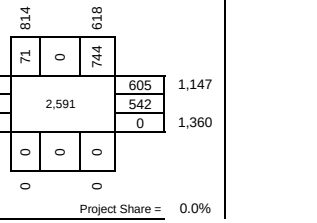
2 SR 20 WB Exit at Fidalgo Bay Rd



3 Weaverling Rd at Fidalgo Bay Rd



4 SR 20 Spur at R Ave



Project Share = 2.4%

Project Share = 58.6%

Project Share = 68.8%

Project Share = 0.0%

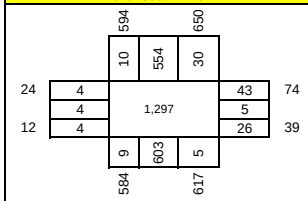
Alternative 1 - 50k Casino
2013 PM Peak Hour Turning Movement Volume Forecasts

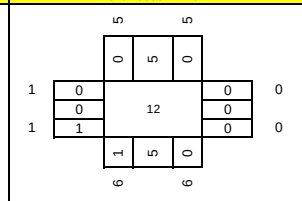
Growth Rate =	2.0%
Existing Year =	2011
Future Year =	2013

Enter 122 Exit 84

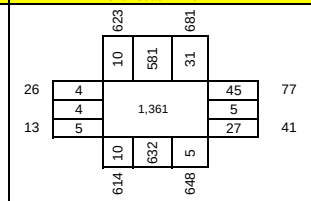
2011 Existing	TOTAL PIPELINE	2013 Baseline	Project Distribution	Project Trips	2013 With Project

5 34th St at R Ave

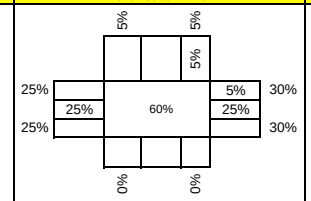


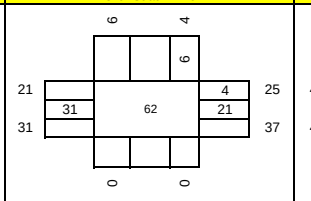


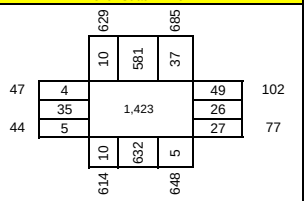
Pipeline Share = 0.9%



% Increase = 5.0%

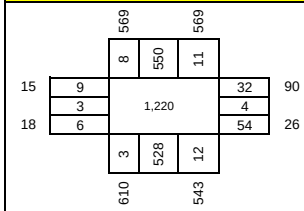


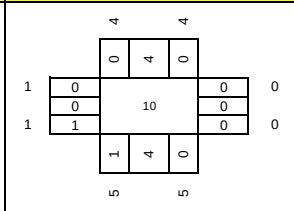




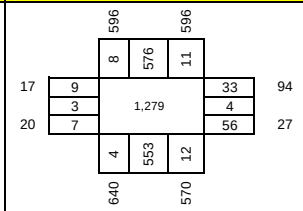
Project Share = 4.3%

6 30th St at R Ave

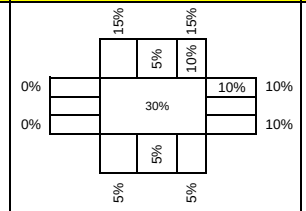


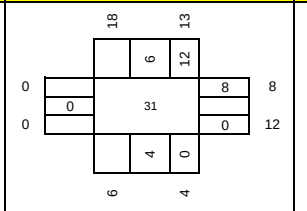


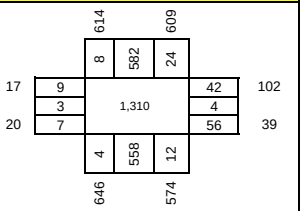
Pipeline Share = 0.8%



% Increase = 4.9%

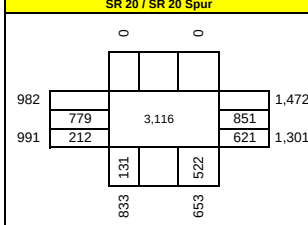


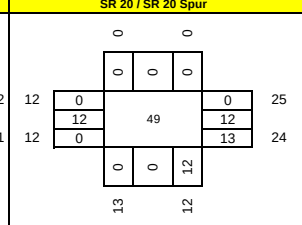




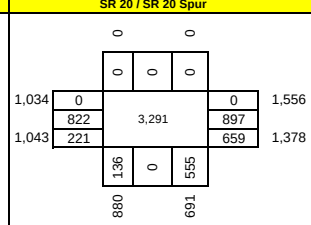
Project Share = 2.4%

7 SR 20 / SR 20 Spur

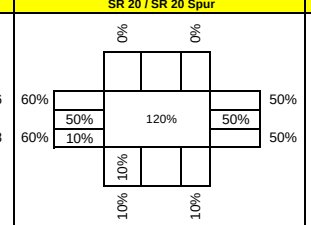


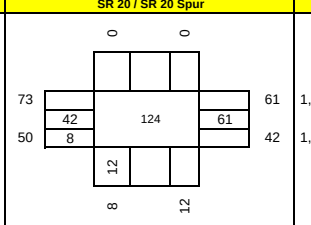


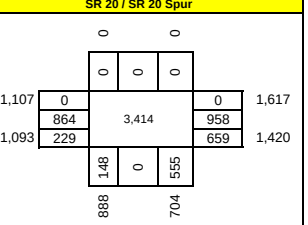
Pipeline Share = 1.5%



% Increase = 5.6%

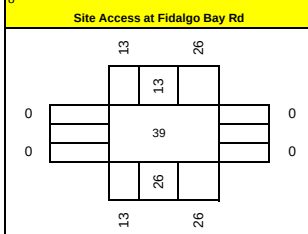


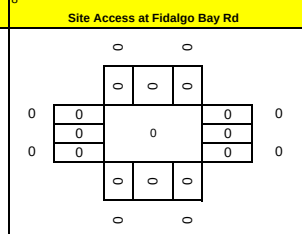




Project Share = 3.6%

8 Site Access at Fidalgo Bay Rd





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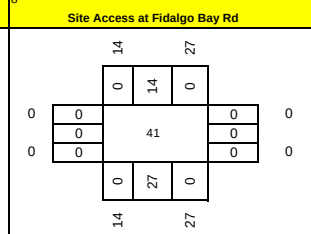
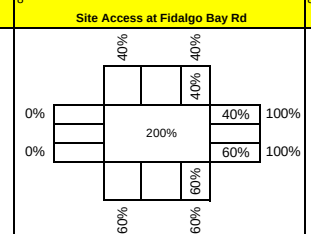
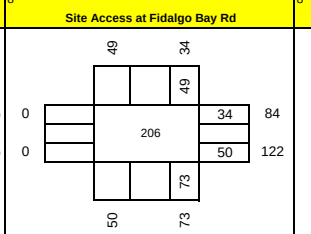
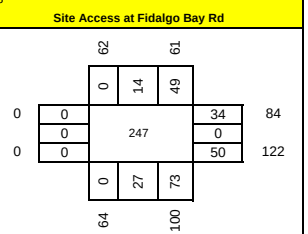


% Increase = 4.0%







Project Share = 83.5%

APPENDIX E

Mobile6.2 Output Files and Emission Calculation Files

Table 1a

Alternatives A and B - Percent Distribution, Trips, and Vehicle Miles Travels per Year

Routes[1]	Market Areas	Trip Distribution[1]	Distance (miles)	Alternative A		Alternaive B	
				Trips[1]	VMT/Year	Trips[1]	VMT/Year
State Route 20 West	Anacortes	0.50	5.0	565,750	2,828,750	401500	2,007,500
State Route 20 East	Mount Vernon, Burlington, Bay View	0.35	14.0	396,025	5,544,350	281050	3,934,700
Thompson Road North	Refinery	0.05	1.0	56,575	56,575	40150	40,150
Thompson Road South	Local traffic	0.03	1.0	33,945	33,945	24090	24,090
Summit Park Road West	Local traffic	0.02	1.0	22,630	22,630	16060	16,060
Reservation Road	Local traffic	0.05	1.0	56,575	56,575	40150	40,150
Total VMT (miles)					**8,542,825**		**6,062,650**

[1] Traffic Impact Study, 2011 (**Appendix D**).

Table 1b

Alternative C - Percent Distribution, Trips, and Vehicle Miles Travels per Year

Routes	Market Areas	Trip Distribution[1]	Distance (miles)	Trips[1]	VMT/Year
State Route 20 West	Anacortes	0.40	5.0	832,200	4,161,000
State Route 20 East	Mount Vernon, Burlington, Bay View	0.40	14.0	832,200	11,650,800
Thompson Road North	Refinery	0.07	1.0	145,635	145,635
Thompson Road South	Local traffic	0.03	1.0	62,415	62,415
Summit Park Road West	Local traffic	0.05	1.0	104,025	104,025
Reservation Road	Local traffic	0.05	1.0	104,025	104,025
Total VMT (miles)				**2,080,500**	**16,227,900**

[1] Traffic Impact Study, 2011 (**Appendix D**).

Table 1c

Alternative D - Percent Distribution, Trips, and Vehicle Miles Travels per Year

Routes	Market Areas	Trip Distribution[1]	Distance (miles)	Trips[1]	VMT/Year
State Route 20 West	Anacortes	0.40	3.0	452,600	1,357,800
State Route 20 East	Burlington, Bay View	0.50	15.0	565,750	8,486,250
State Route 20 South	Mount Vernon	0.10	15.0	113,150	1,697,250
Total VMT (miles)					**11,541,300**

[1] Traffic Impact Study, 2011 (**Appendix D**).

Table 2a
Buildout Mobile Operations Criteria Pollutant and GHG Emissions

Alternatives	**Alternative A**	**Alternative B**	**Alternative C**	**Alternative D**
Speed (mph)	**Freeway. Arterial, and Local**	**Freeway. Arterial, and Local**	**Freeway. Arterial, and Local**	**Freeway. Arterial, and Local**
vmt/yr	8,542,825	6,062,650	16,227,900	11,541,300
Criteria Pollutant Emissions (tpy)				
NOx	8.4	6.0	16.0	10.8
VOC	6.0	4.3	11.4	7.9
SO_2	0.1	0.1	0.2	0.2
CO	104.9	74.5	199.4	107.3
$PM_{2.5}$	0.2	0.1	0.4	0.3
PM_{10}	0.3	0.2	0.6	0.5
Greenhouse Gas				
CO_2	5,255	3,729	9,983	7,100

Criteria pollutant emissions were calculated using half summer/half winter emission factors.
Source: Mobile 6.2, 2003; AES, 2011.

Table 2b
Cumulative Mobile Operations Criteria Pollutant and GHG Emissions

Alternatives	**Alternative A**	**Alternative B**	**Alternative C**	**Alternative D**
Speed (mph)	**Freeway. Arterial, and Local**	**Freeway. Arterial, and Local**	**Freeway. Arterial, and Local**	**Freeway. Arterial, and Local**
vmt/yr	8,542,825	6,062,650	16,227,900	11,541,300
Criteria Pollutant Emissions (tpy)				
NOx	2.7	1.9	5.1	3.5
VOC	3.6	2.6	6.8	4.7
SO2	0.1	0.1	0.2	0.2
CO	82.8	58.8	157.4	85.1
PM2.5	0.1	0.1	0.2	0.2
PM10	0.3	0.2	0.5	0.3
Greenhouse Gas				
CO2	5,329	3,782	10,122	7,202

Criteria pollutant emissions were calculated using half summer/half winter emission factors.
Source: Mobile 6.2, 2003; AES, 2011.

Table 3a

Build Out Operational Emission Factors

Season	**Winter**	**Summer**
Default Speeds	**Freeway, Arterial, and Local[1]**	**Freeway, Arterial, and Local[1]**
Criteria Pollutant	**grams per mile**	
NOx	0.94	0.846
VOC	0.658	0.622
SO_2	0.0126	0.0126
CO	13.853	8.436
$PM_{2.5}$	0.0207	0.0201
PM_{10}	0.0362	0.0356
Greenhouse Gas		
CO_2	557.42	558.7

[1] Freeway, Arterial, and local speeds = 55, 40, and 25 miles per hour, repectively.

Source: Mobile6.2, 2003; AES, 2011

Table 3b

Cumulative Operational Emission Factors

Season	**Winter**	**Summer**
Default Speeds	**Freeway, Arterial, and Local[1]**	**Freeway, Arterial, and Local[1]**
Criteria Pollutant	**grams per mile**	
NOx	0.298	0.277
VOC	0.393	0.371
SO_2	0.0126	0.0126
CO	10.908	6.688
$PM_{2.5}$	0.0126	0.0126
PM_{10}	0.0274	0.0274
Greenhouse Gas		
CO_2	565.61	566.14

[1] Freeway, Arterial, and local speeds = 55, 40, and 25 miles per hour, repectively.

Source: Mobile6.2, 2003; AES, 2011

Table 4
Stationary Source Emissions

Pollutant/GHG	Emission Factors (lb/MMscf)	Alternative A		Alternative B		Alternative C		Alternative D	
		Natural Gas Use (MMscf)	Emissions (tons)	Natural Gas Use (MMscf)	Emissions (tons)	Natural Gas Use (MMscf)	Emissions (tons)	Natural Gas Use (MMscf)	Emissions (tons)
VOC	5.5	20	0.06	12	0.03	15	0.04	18	0.05
NOx	0.64	20	0.01	12	0.00	15	0.00	18	0.01
CO	11	20	0.11	12	0.07	15	0.08	18	0.10
SO2	0.6	20	0.01	12	0.00	15	0.00	18	0.01
PM10	5.7	20	0.06	12	0.03	15	0.04	18	0.05
PM2.5	1.9	20	0.02	12	0.01	15	0.01	18	0.02
Greenhouse Gas			**MT**		**MT**		**MT**		**MT**
CO2	120,000	20	1,200	12	720	15	900	18	1,080

Table 5

Construction - Fugitive Dust Emissions

Alternatives	Alternative A	Alternative B	Alternative C	Alternative D
Area to be Graded (acres)	9.40	7.40	11.41	2.4
Grading Duration (day)	22	17	30	18
PM_{10} Emisson Factor (tons PM_{10}/acre-day)	0.0191	0.0191	0.0191	0.0191
PM10 Emissions (tons/year)	**0.008**	**0.008**	**0.007**	**0.003**
$PM_{2.5}$ Emisson Factor (tons PM_{10}/acre/day)	0.005	0.005	0.005	0.005
$PM_{2.5}$ Emissions (tons/year)1	**0.002**	**0.002**	**0.002**	**0.001**

Source: OFFROAD air quality model, 2007.

Table 6a

Alternatives A and D - Construction Emissions

Construction Equipment[1]	Horsepower[2]	Load Factor[2]	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)[4]						Emisssion (tons/year)					
				CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$	CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$
Site Grading															
1 Bulldozer	352	0.59	8	1.38	0.36	4.76	0.74	0.33	0.32	0.92	0.24	3.18	0.49	0.22	0.21
2 Motor Grader	174	0.575	8	1.36	0.35	7.43	0.74	0.33	0.32	0.88	0.23	4.78	0.48	0.21	0.21
1 Water Truck	417	0.49	8	2.07	0.44	5.49	0.74	0.41	0.40	1.36	0.29	3.61	0.49	0.27	0.26
2 Other Construction Equipment	190	0.62	8	1.55	0.38	5.00	0.74	0.35	0.34	1.17	0.29	3.79	0.56	0.27	0.26
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		2,470		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.35	0.01	0.02	0.0002	0.0007	0.0004
Fugitive Dust														0.008	0.002
Total Site Grading Emissions										**4.68**	**1.06**	**15.38**	**2.02**	**0.98**	**0.94**
Construction															
1 Crane	190	0.43	8	1.30	0.44	5.72	0.73	0.34	0.33	0.34	0.12	1.50	0.19	0.09	0.09
3 Rough Terrain Forklift	94	0.475	8	7.76	1.98	8.56	0.95	1.39	1.35	3.34	0.83	3.58	0.40	0.58	0.56
1 Rubber Tire Loader	165	0.465	8	1.55	0.38	5.00	0.74	0.35	0.34	0.38	0.09	1.23	0.18	0.09	0.08
2 Tractors/Loader/Backhoe	79	0.465	8	8.21	1.85	7.22	0.95	1.37	1.33	1.94	0.44	1.71	0.22	0.32	0.31
2 Other Construction Equipment	190	0.62	8	1.55	0.38	5.00	0.74	0.35	0.34	1.17	0.29	3.79	0.56	0.27	0.26
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		2,470		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.35	0.01	0.02	0.0002	0.0007	0.0004
Paving															
Paver	132	0.59	8	8.5	1.0	5.8	0.17	0.16	0.15	2.13	0.25	1.45	0.04	0.04	0.04
Paving Equipment	111	0.53	8	8.5	1.0	5.8	0.14	0.16	0.15	1.61	0.19	1.10	0.03	0.03	0.03
2 Rollers	114	0.43	8	8.5	1.0	5.8	0.14	0.16	0.15	2.68	0.32	1.83	0.04	0.05	0.05
Architectural Coating															
Coating											1.12				
Total Construction Emissions										**13.95**	**3.65**	**16.21**	**1.67**	**1.47**	**1.42**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2007 air model.

[2] Hours per normal work day.

[3] Based on 9.5 mile trip length, 260 trips per day, and EMFAC, 2007 emission factors (grams/mile).

[4] Emission factors provided by EPA approved OFFROAD 2007, based on equipment age distribution in the U.S. in g/bhp/hr = grams per brake horsepower per hour

Table 6b

Alternative B - Construction Emissions

Construction Equipment[1]	Horsepower[2]	Load Factor[2]	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)[4]						Emisssion (tons/year)					
				CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$[3]	CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$[3]
Site Grading															
1 Bulldozer	352	0.59	8	1.38	0.36	4.76	0.74	0.33	0.32	0.92	0.24	3.18	0.49	0.22	0.21
1 Motor Grader	174	0.575	8	1.36	0.35	7.43	0.74	0.33	0.32	0.44	0.11	2.39	0.24	0.11	0.10
1 Water Truck	417	0.49	8	2.07	0.44	5.49	0.74	0.41	0.40	1.36	0.29	3.61	0.49	0.27	0.26
2 Other Construction Equipment	190	0.62	8	1.55	0.38	5.00	0.74	0.35	0.34	1.17	0.29	3.79	0.56	0.27	0.26
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		1,710		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.03	0.00	0.00	0.00	0.00	0.00
Fugitive Dust														0.008	0.002
Total Site Grading Emissions										**3.93**	**0.93**	**12.97**	**1.78**	**0.87**	**0.84**
Construction															
1 Crane	190	0.43	8	1.30	0.44	5.72	0.73	0.34	0.33	0.34	0.12	1.50	0.19	0.09	0.09
2 Rough Terrain Forklift	94	0.475	8	7.76	1.98	8.56	0.95	1.39	1.35	2.23	0.57	2.46	0.27	0.40	0.39
1 Rubber Tire Loader	165	0.465	8	1.55	0.38	5.00	0.74	0.35	0.34	0.38	0.09	1.23	0.18	0.09	0.08
1 Tractors/Loader/Backhoe	79	0.465	8	8.21	1.85	7.22	0.95	1.37	1.33	0.97	0.22	0.85	0.11	0.16	0.16
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		1,710		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.03	0.00	0.00	0.00	0.00	0.00
Paving[4]															
Paver	132	0.59	8	8.5	1.0	5.8	0.17	0.16	0.15	2.13	0.25	1.45	0.04	0.04	0.04
Paving Equipment	111	0.53	8	8.5	1.0	5.8	0.14	0.16	0.15	1.61	0.19	1.10	0.03	0.03	0.03
Rollers	114	0.43	8	8.5	1.0	5.8	0.14	0.16	0.15	1.34	0.16	0.91	0.02	0.03	0.02
Architectural Coating															
Coating											0.75				
Total Construction Emissions										**9.03**	**2.34**	**9.51**	**0.85**	**0.83**	**0.81**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2007 air model.

[2] Hours per normal work day.

[3] Based on 20 mile trip length, 600 trips per day, and EMFAC, 2007 emission factors (grams/mile).

[4] Emission factors provided by EPA approved OFFROAD 2007, based on equipment age distribution in the U.S. in g/bhp/hr = grams per brake horsepower per hour

Table 6c

Alternative C - Construction Emissions

Construction Equipment[1]	Horsepower[2]	Load Factor[2]	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)[4]						Emisssion (tons/year)					
				CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$[3]	CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$[3]
Site Grading															
1 Bulldozer	352	0.59	8	1.38	0.36	4.76	0.74	0.33	0.32	0.92	0.24	3.18	0.49	0.22	0.21
2 Motor Grader	174	0.575	8	1.36	0.35	7.43	0.74	0.33	0.32	0.88	0.23	4.78	0.48	0.21	0.21
1 Water Truck	417	0.49	8	2.07	0.44	5.49	0.74	0.41	0.40	1.36	0.29	3.61	0.49	0.27	0.26
2 Other Construction Equipment	190	0.62	8	1.55	0.38	5.00	0.74	0.35	0.34	1.17	0.29	3.79	0.56	0.27	0.26
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		1,900		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.04	0.00	0.00	0.00	0.00	0.00
Fugitive Dust														0.007	0.002
Total Site Grading Emissions										**4.37**	**1.04**	**15.36**	**2.02**	**0.97**	**0.94**
Construction															
2 Crane	190	0.43	8	1.30	0.44	5.72	0.73	0.34	0.33	0.68	0.23	3.01	0.38	0.18	0.17
4 Rough Terrain Forklift	94	0.475	8	7.76	1.98	8.56	0.95	1.39	1.35	4.46	1.14	4.92	0.55	0.80	0.78
2 Rubber Tire Loader	165	0.465	8	1.55	0.38	5.00	0.74	0.35	0.34	0.76	0.19	2.47	0.37	0.17	0.17
1 Tractors/Loader/Backhoe	79	0.465	8	8.21	1.85	7.22	0.95	1.37	1.33	0.97	0.22	0.85	0.11	0.16	0.16
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		1,900		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.04	0.00	0.00	0.00	0.00	0.00
Paving[4]															
Paver	132	0.59	8	8.5	1.0	5.8	0.17	0.16	0.15	2.13	0.25	1.45	0.04	0.04	0.04
Paving Equipment	111	0.53	8	8.5	1.0	5.8	0.14	0.16	0.15	1.61	0.19	1.10	0.03	0.03	0.03
2 Rollers	114	0.43	8	8.5	1.0	5.8	0.14	0.16	0.15	2.68	0.32	1.83	0.04	0.05	0.05
Architectural Coating															
Coating											3.18				
Total Construction Emissions										**13.33**	**5.71**	**15.62**	**1.52**	**1.43**	**1.39**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2007 air model.

[2] Hours per normal work day.

[3] Based on 20 mile trip length, 1,072 trips per day, and EMFAC, 2007 emission factors (grams/mile).

[4] Emission factors provided by EPA approved OFFROAD 2007, based on equipment age distribution in the U.S. in g/bhp/hr = grams per brake horsepower per hour

Table 7a

Alternatives A and D - Construction GHG Emissions

Construction Equipment[1]	Horsepower	Load Factor	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)3 CO_2	Emisssion (MT/year) CO_2
Site Grading					
1 Bulldozer	352.00	0.59	8.00	536.20	324.81
2 Motor Grader	174.00	0.58	8.00	536.30	313.01
1 Water Truck	417.00	0.49	8.00	536.00	319.45
2 Other Construction Equipment	190.00	0.62	8.00	536.20	368.47
		Miles Traveled		**Emission Factors (g/miles)**	**Emisssion (MT/year)**
Employee Trips		2,470		552.80	1.24
Construction					
1 Crane	190.00	0.43	8.00	530.20	126.35
3 Rough Terrain Forklift	94.00	0.48	8.00	690.80	269.90
1 Rubber Tire Loader	165.00	0.47	8.00	536.20	120.00
2 Tractors/Loader/Backhoe	79.00	0.47	8.00	691.10	148.10
2 Other Construction Equipment	190	0.62	8	530.20	364.35
		Miles Traveled		**Emission Factors (g/miles)**	**Emisssion (MT/year)**
Employee Trips		2,470		552.80	1.24
Paving					
Paver	132.00	0.59	8.00	520.30	118.19
Paving Equipment	111.00	0.53	8.00	520.30	89.28
2 Rollers	114.00	0.43	8.00	520.30	148.79
Total GHG Construction Emissions					**2,713.17**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2002 air model.

[2] Hours per normal work day.

[3] Emission factors provided by EPA approved NONROAD 2005; MT = metric tons.

Table 7b

Alternatives B - Construction GHG Emissions

Construction Equipment[1]	Horsepower	Load Factor	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)3 CO_2	Emisssion (MT/year) CO_2
Site Grading					
1 Bulldozer	352.00	0.59	8.00	536.20	324.81
1 Motor Grader	174.00	0.58	8.00	536.30	156.51
1 Water Truck	417.00	0.49	8.00	536.00	319.45
2 Other Construction Equipment	190.00	0.62	8.00	536.20	368.47
		Miles Traveled		**Emission Factors (g/miles)**	**Emisssion (MT/year)**
Employee Trips[3]		1,710		552.80	0.86
Construction					
1 Crane	190.00	0.43	8.00	530.20	126.35
2 Rough Terrain Forklift	94.00	0.48	8.00	690.80	179.93
1 Rubber Tire Loader	165.00	0.47	8.00	536.20	120.00
1 Tractors/Loader/Backhoe	79.00	0.47	8.00	691.10	74.05
2 Other Construction Equipment	190	0.62	8	530.20	364.35
		Miles Traveled		**Emission Factors (g/miles)**	**Emisssion (MT/year)**
Employee Trips[3]		1,710		552.80	0.86
Paving					
Paver	132.00	0.59	8.00	520.30	118.19
Paving Equipment	111.00	0.53	8.00	520.30	89.28
Rollers	114.00	0.43	8.00	520.30	74.39
Total GHG Construction Emissions					**2,317.49**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2002 air model.

[2] Hours per normal work day.

[3] Emission factors provided by EPA approved NONROAD 2005; MT = metric tons.

Table 7c

Alternatives C - Construction GHG Emissions

Construction Equipment[1]	Horsepower	Load Factor	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)[3] CO_2	Emisssion (MT/year) CO_2
Site Grading					
1 Bulldozer	352.00	0.59	8.00	536.20	324.81
2 Motor Grader	174.00	0.58	8.00	536.30	313.01
1 Water Truck	417.00	0.49	8.00	536.00	319.45
2 Other Construction Equipment	190.00	0.62	8.00	536.20	368.47
		Miles Traveled		**Emission Factors (g/miles)**	**Emisssion (MT/year)**
Employee Trips[3]		1,900		552.80	0.95
Construction					
2 Crane	190.00	0.43	8.00	530.20	252.69
4 Rough Terrain Forklift	94.00	0.48	8.00	690.80	359.86
2 Rubber Tire Loader	165.00	0.47	8.00	536.20	239.99
1 Tractors/Loader/Backhoe	79.00	0.47	8.00	691.10	74.05
		Miles Traveled		**Emission Factors (g/miles)**	**Emisssion (MT/year)**
Employee Trips[3]		1,900		552.80	0.95
Paving					
Paver	132.00	0.59	8.00	520.30	118.19
Paving Equipment	111.00	0.53	8.00	520.30	89.28
2 Rollers	114.00	0.43	8.00	520.30	148.79
Total GHG Construction Emissions					**2,610.50**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2002 air model.

[2] Hours per normal work day.

[3] Emission factors provided by EPA approved NONROAD 2005; MT = metric tons.

Alternative A: Electricity, Solid Waste, Water, Wastewater, and GHG Emissions Calculations

	Emission Factors				Use	Emissions
	CO_2		CH_4	N_2O		(MT of CO_2e)
	lbs of/MWh				MWh	
Electricity[1]	921.1		0.022	0.014	2,000	**840**
	MT of CO_2/MT of Solid Waste				MT of Solid Waste	
Solidwaste[1]	0.459				1,022	**469**
Water/Wastewater[2]	Indoors		Outdoor			
	MWh/million Gallons				Million Gallons	
	5.41	0.63 %	3.5	0.37 %	15	**29.62**

[1] WSDOE, 2011.

[2] EPA, 2009

CH4 and N2O Emission from Mobile Sources

Emission Factor (CH4/N2O)	Miles Traveled	CH4 Emissions	N2O Emissions	Total CO2e
g/mile	miles/day	tons per year		
0.0157/0.0101	23,405	0.148	0.095	32.589

Alternative B: Electricity, Solid Waste, Water, Wastewater, and GHG Emissions Calculations

	Emission Factors				Use	Emissions
	CO_2		CH_4	N_2O		(MT of CO_2e)
	lbs of/MWh				MWh	
Electricity[1]	921.1		0.022	0.014	1,280	**537**
	MT of CO_2/MT of Solid Waste				MT of Solid Waste	
Solidwaste[1]	0.459				654	**300**
Water/Wastewater[2]	Indoors		Outdoor			
	MWh/million Gallons				Million Gallons	
	5.41	0.63 %	3.5	0.37 %	9.6	**18.96**

[1] WSDOE, 2011.

[2] EPA, 2009

CH4 and N2O Emission from Mobile Sources

Emission Factor (CH4/N2O)	Miles Traveled	CH4 Emissions	N2O Emissions	Total CO2e
g/mile	miles/day	tons per year		
0.0157/0.0101	16,610	0.105	0.067	23.128

Alternative C: Electricity, Solid Waste, Water, Wastewater, and GHG Emissions Calculations

	Emission Factors				Use	Emissions
	CO_2		CH_4	N_2O		($MT of CO_2e$)
	lbs of/MWh				MWh	
Electricity[1]	921.1		0.022	0.014	1,640	**689**
	$MT of CO_2/MT of Solid Waste$				MT of Solid Waste	
Solidwaste[1]	0.459				824	**378**
Water/Wastewater[2]	Indoors		Outdoor			
	MWh/million Gallons				Million Gallons	
	5.41	0.63 %	3.5	0.37 %	12.4	**24.49**

[1] WSDOE, 2011.

[2] EPA, 2009

CH4 and N2O Emission from Mobile Sources

Emission Factor (CH4/N2O)	Miles Traveled	CH_4 Emissions	N_2O Emissions	Total CO2e
g/mile	miles/day	MT/yr		MT
0.0157/0.0101	44,460	0.281	0.181	61.906

Alternative D: Electricity, Solid Waste, Water, Wastewater, and GHG Emissions Calculations

	Emission Factors				Use	Emissions
	CO_2	CH_4	N_2O			(MT of CO_2e)
	lbs of/MWh				MWh	
Electricity[1]	921.1	0.022	0.014		2,000	**840**
	MT of CO_2/MT of Solid Waste				MT of Solid Waste	
Solidwaste[1]	0.459				1,022	**469**
Water/Wastewater[2]	Indoors			Outdoor		
	MWh/million Gallons				Million Gallons	
	5.41	0.63 %	3.5	0.37 %	15	**29.62**

[1] WSDOE, 2011.

[2] EPA, 2009

CH4 and N2O Emission from Mobile Sources

Emission Factor (CH4/N2O) g/mile	Miles Traveled miles/day	CH4 Emissions	N2O Emissions	Total CO2e
		tons per year		
0.0157/0.0101	31,620	0.200	0.128	44.027

References:

Transportation Engineering NorthWest (TENW), 2011. Samish Tribe Casino Transportation Impact Study. November 22, 201

Washington State Department of Ecology (WSDOE), 2011. GHG Reporting Rule, Chapter 173-441 WAC - Reporting of Emission of Greenhouse Gases. Available online at: http://www.ecy.wa.gov/programs/air/globalwarm_RegHaze/GreenHouseGasreporting_rule.html. View on June 6, 2013.

Environmental Protection Agency (EPA), 2009. Pollution Prevention Program, GHG calculator. Available online at: www.epa.gov/p2/pubs/resources/GHGConversion.xls. Viewed on June 6, 2013.

OFFROAD, 2007. Off Road Emission Air Quality Model. Available online at: http://www.arb.ca.gov/msei/offroad/offroad.htm. Viewed on February 8, 2011.

EPA, 2007. Overview Offroad Model. Available online: http://www.arb.ca.gov/msei/offroad/pubs/offroad_overview.pdf. Viewed on February 8, 2011.

Mobile6.2, 2003. EPA Vehicle Emissions Model. Available online at: http://www.epa.gov/oms/m6.htm. Viewed on February 8, 2011.

APPENDIX F

Natural Resources Conservation Service AD-1006 Form

NRCS

Natural Resources Conservation Service
1011 East Main, Suite 106
Puyallup, WA 98372
(253) 845-9272, Fax (253) 445-9934

November 23, 2011

Jacqueline McCrory
Analytical Environmental Services
1801 7th Street, Ste 100
Sacramento, CA 95811

Dear Ms. McCrory:

Attached is the completed AD 1006 Farmland Conversion Impact Rating form for the Samish Indian Nation Casino Project. The form was completed using a land evaluation system developed for Skagit County.

The evaluation for the project site was based on the potential for soil map units to be farmland. No on site investigation was made.

Please contact me if you have any questions.

Sincerely,

Charles Natsuhara
Area Soil Scientist

Attachments

Cc: Steve Nissley, NRCS District Conservationist, Mt. Vernon, WA
Brad Duncan, NRCS Assistant State Soil Scientist, Spokane, WA

received
11/28/11

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request November 3, 2011
Name of Project Samish Indian Nation Trust Acquisition and Casino Project	Federal Agency Involved Bureau of Indian Affairs
Proposed Land Use Commercial (casino, retail, parking)	County and StateSkagit County, Washington
PART II *(To be completed by NRCS)*	Date Request Received By NRCS November 7, 2011

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☒ NO ☐	Acres Irrigated 16,286	Average Farm Size 89 ac.

Major Crop(s) flower bulbs, potatoes, seed crops, corn silage, vegetables, berries, grass-legume hay	Farmable Land In Govt. Jurisdiction Acres: 246,297 % 38.8	Amount of Farmland As Defined in FPPA Acres: 246,297 %38.8
Name of Land Evaluation System Used Skagit County	Name of State or Local Site Assessment System none	Date Land Evaluation Returned by NRCS November 23, 2011

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	11.41	2.4		
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	11.41	2.4		
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	11.41	0		
B. Total Acres Statewide Important or Local Important Farmland	0	0		
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<0.01%	0		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	24.1	100		
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	65	0		

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	15(15)	3	5		
2. Perimeter In Non-urban Use	10(10)	0	0		
3. Percent Of Site Being Farmed	20(20)	0	0		
4. Protection Provided By State and Local Government	20(20)	0	0		
5. Distance From Urban Built-up Area	15(15)	0	0		
6. Distance To Urban Support Services	15(15)	0	0		
7. Size Of Present Farm Unit Compared To Average	10(10)	0	0		
8. Creation Of Non-farmable Farmland	10(10)	10	10		
9. Availability Of Farm Support Services	5(5)	5	5		
10. On-Farm Investments	20(20)	0	0		
11. Effects Of Conversion On Farm Support Services	10(10)	0	0		
12. Compatibility With Existing Agricultural Use	10(10)	0	0		
TOTAL SITE ASSESSMENT POINTS	160				
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100				
Total Site Assessment *(From Part VI above or local site assessment)*	160				
TOTAL POINTS *(Total of above 2 lines)*	260				

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES ☐ NO ☐

Reason For Selection:

Name of Federal agency representative completing this form:	Date:

(See Instructions on reverse side)

Form AD-1006 (03-02)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006.

Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)

Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days. In the event NRCS fails to complete a response within the required period, the agency may proceed as thought the site were not farmland.)

Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.

Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 - The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County And State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a State or Local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.

Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, FPPA suggests the agency consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites).

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160.
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance In completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

APPENDIX G

EDR Database Reports

Thompson Road
12715 Thompson Road
Anacortes, WA 98221

Inquiry Number: 3208157.1s
November 15, 2011

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

12715 THOMPSON ROAD
ANACORTES, WA 98221

COORDINATES

Latitude (North):	48.459100 - 48° 27' 32.8''
Longitude (West):	122.557700 - 122° 33' 27.7''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	532700.8
UTM Y (Meters):	5367205.0
Elevation:	76 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	48122-D5 ANACORTES SOUTH, WA
Most Recent Revision:	1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2009
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Facility Database

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST ---------- Aboveground Storage Tank Locations
INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

INST CONTROL ---------- Institutional Control Site List

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

VCP ---------- Voluntary Cleanup Program Sites
ICR ---------- Independent Cleanup Reports

State and tribal Brownfields sites

BROWNFIELDS ---------- Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
SWTIRE ---------- Solid Waste Tire Facilities
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---------- Clandestine Drug Labs
CSCSL NFA ---------- Confirmed & Contaminated Sites - No Further Action
CDL ---------- Clandestine Drug Lab Contaminated Site List
HIST CDL ---------- List of Sites Contaminated by Clandestine Drug Labs
US HIST CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---------- CERCLA Lien Information
LUCIS ---------- Land Use Control Information System

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
SPILLS ---------- Reported Spills

Other Ascertainable Records

DOT OPS ---------- Incident and Accident Data
DOD ---------- Department of Defense Sites
FUDS ---------- Formerly Used Defense Sites
CONSENT ---------- Superfund (CERCLA) Consent Decrees
ROD ---------- Records Of Decision
UMTRA ---------- Uranium Mill Tailings Sites
MINES ---------- Mines Master Index File
TRIS ---------- Toxic Chemical Release Inventory System
TSCA ---------- Toxic Substances Control Act
FTTS ---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS ---------- FIFRA/TSCA Tracking System Administrative Case Listing
SSTS ---------- Section 7 Tracking Systems
ICIS ---------- Integrated Compliance Information System

PADS PCB Activity Database System
MLTS Material Licensing Tracking System
RADINFO Radiation Information Database
FINDS Facility Index System/Facility Registry System
RAATS RCRA Administrative Action Tracking System
UIC Underground Injection Wells Listing
DRYCLEANERS Drycleaner List
NPDES Water Quality Permit System Data
AIRS Washington Emissions Data System
Inactive Drycleaners Inactive Drycleaners
SCRD DRYCLEANERS State Coalition for Remediation of Drycleaners Listing
FINANCIAL ASSURANCE Financial Assurance Information Listing
COAL ASH Coal Ash Disposal Site Listing
COAL ASH DOE Sleam-Electric Plan Operation Data
COAL ASH EPA Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER PCB Transformer Registration Database

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/09/2011 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TESORO ANACORTES REFINERY (FOR	***10200 WEST MARCH POINT***	***NW 1/2 - 1 (0.734 mi.)***	***7***	***41***

EXECUTIVE SUMMARY

State- and tribal - equivalent NPL

HSL: The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

A review of the HSL list, as provided by EDR, and dated 08/31/2011 has revealed that there are 2 HSL sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PADILLA HEIGHTS RD PROPERTY	***9655 PADILLA HEIGHTS RD***	***E 1/2 - 1 (0.969 mi.)***	***9***	***90***
Facility Type: Hazardous Sites List				

Lower Elevation	Address	Direction / Distance	Map ID	Page
MARCH POINT LANDFILL	***1/4 MI E OF BN WHITMARS***	***ENE 1/2 - 1 (0.663 mi.)***	***6***	***36***
Facility Type: Hazardous Sites List				

State- and tribal - equivalent CERCLIS

CSCSL: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Ecology's Confirmed & Suspected Contaminated Sites List.

A review of the CSCSL list, as provided by EDR, and dated 07/28/2011 has revealed that there are 5 CSCSL sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FRONTIER FORD ANACORTES	***1260 THOMPSON RD***	***SSW 1/8 - 1/4 (0.231 mi.)***	***2***	***8***
PADILLA HEIGHTS RD PROPERTY	***9655 PADILLA HEIGHTS RD***	***E 1/2 - 1 (0.969 mi.)***	***9***	***90***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MARCH POINT LANDFILL	***1/4 MI E OF BN WHITMARS***	***ENE 1/2 - 1 (0.663 mi.)***	***6***	***36***
TESORO ANACORTES REFINERY (FOR	***10200 WEST MARCH POINT***	***NW 1/2 - 1 (0.734 mi.)***	***7***	***41***
SIMILK INC GOLF COURSE	***1250 CHRISTIANSEN RD***	***W 1/2 - 1 (0.767 mi.)***	***8***	***87***

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Ecology's Leaking Underground Storage Tanks Site List.

A review of the LUST list, as provided by EDR, and dated 08/23/2011 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FRONTIER FORD ANACORTES	***1260 THOMPSON RD***	***SSW 1/8 - 1/4 (0.231 mi.)***	***2***	***8***

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Ecology's Statewide UST Site/Tank Report.

A review of the UST list, as provided by EDR, and dated 08/24/2011 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FRONTIER FORD ANACORTES	*1260 THOMPSON RD*	*SSW 1/8 - 1/4 (0.231 mi.)*	*2*	*8*

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

ALLSITES: Information on facilities and sites of interest to the Department of Ecology.

A review of the ALLSITES list, as provided by EDR, and dated 08/09/2011 has revealed that there are 5 ALLSITES sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FRONTIER FORD ANACORTES	*1260 THOMPSON RD*	*SSW 1/8 - 1/4 (0.231 mi.)*	*2*	*8*

Lower Elevation	Address	Direction / Distance	Map ID	Page
GOLDEN AGE THOMPSON EQUIPMENT	*THOMPSON RD & STEVENSON*	*WSW 0 - 1/8 (0.124 mi.)*	*1*	*7*
COUNTRY CORNER GROCERY MART	*7601 SR 20 STE A*	*ENE 1/4 - 1/2 (0.267 mi.)*	*3*	*15*
VINTAGE OIL INC	*732 S MARCH PT RD*	*NE 1/4 - 1/2 (0.296 mi.)*	*4*	*17*
T BAILEY INC	*12441 BARTHOLOMEW RD*	*NNW 1/4 - 1/2 (0.322 mi.)*	*5*	*19*

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 06/15/2011 has revealed that there is 1 RCRA-NonGen site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FRONTIER FORD ANACORTES	*1260 THOMPSON RD*	*SSW 1/8 - 1/4 (0.231 mi.)*	*2*	*8*

EXECUTIVE SUMMARY

MANIFEST: Hazardous waste manifest information.

A review of the MANIFEST list, as provided by EDR, and dated 12/31/2010 has revealed that there is 1 MANIFEST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FRONTIER FORD ANACORTES	***1260 THOMPSON RD***	***SSW 1/8 - 1/4 (0.231 mi.)***	***2***	***8***

INDIAN RESERV: This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

A review of the INDIAN RESERV list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 INDIAN RESERV site within approximately 1 mile of the target property.

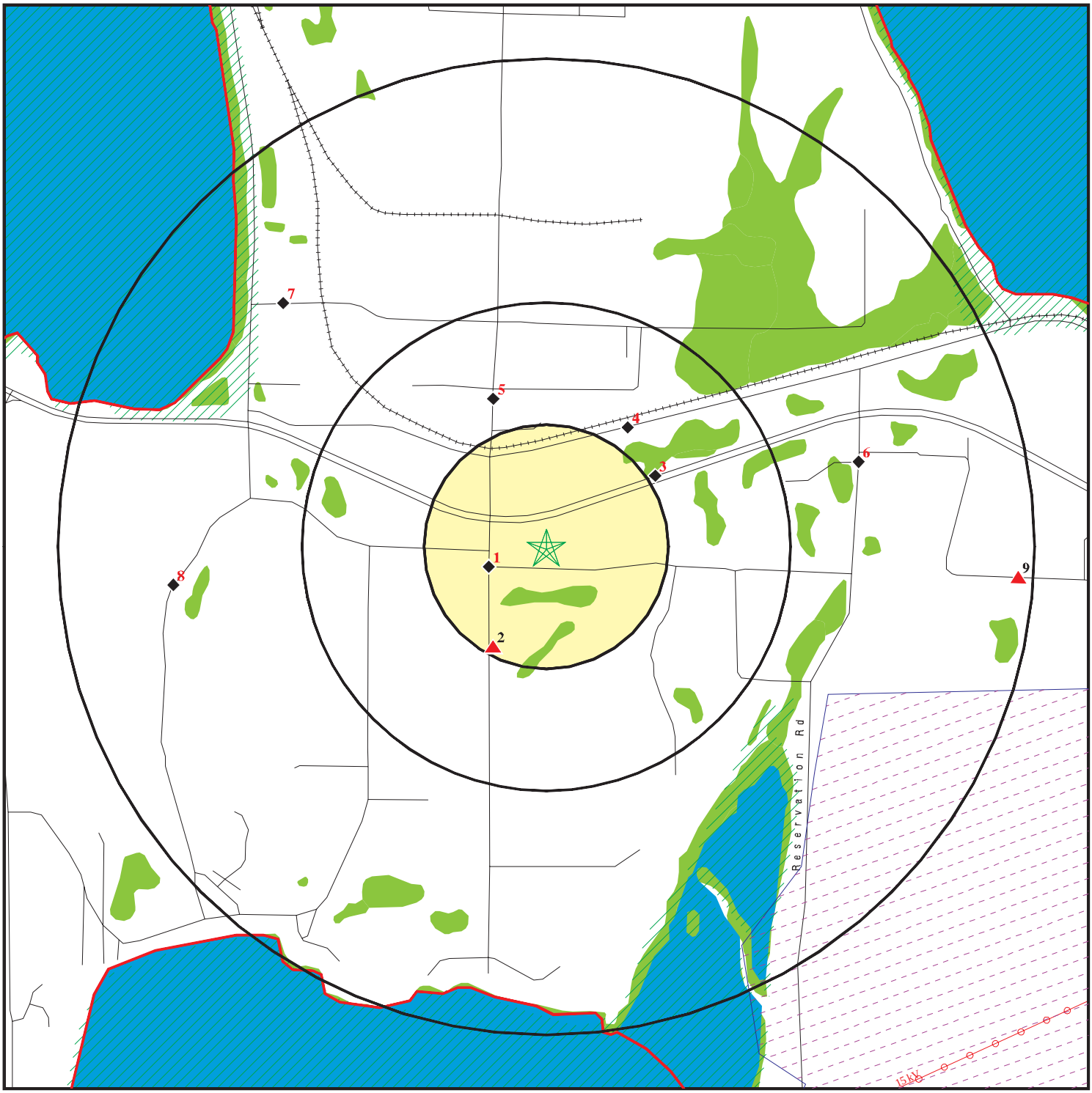
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SWINOMISH INDIAN RESERVATION		ESE 1/2 - 1 (0.652 mi.)	0	7

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 20 records.

Site Name	Database(s)
YATTA TRADING CO LTD	UST,ALLSITES
HAROLDS MARKET	FINDS,ALLSITES
SCIMITAR RIDGE RANCH	NPDES,ALLSITES
WHITMARSH SIDING MARCH PT RD	FINDS,RCRA-NLR,ALLSITES
PM NORTHWEST DUMP	FINDS,RCRA-NLR,CSCSL NFA,ALLSITES
BEACH MASTER INC	FINDS,ALLSITES
VERIZON WIRELESS ANACORTES	FINDS,ALLSITES
MARCH POINT COGENERATION	FINDS,ALLSITES
OLYMPC PIPELINE CO	RCRA-SQG,MANIFEST,ALLSITES,FINDS,SPILLS
JNK MARINE	FINDS,HWS,ALLSITES
1274 THOMPSON ROAD	PCB TRANSFORMER
1274 THOMPSON ROAD	PCB TRANSFORMER
WHITMARSH RAIL SIDING	CERCLIS-NFRAP
CHEVRON FACILITY 60091038	CSCSL NFA,UST
ANACORTES WA MARCH POINT ROAD	ERNS
ANACORTES WARF FACILITY MARCH POIN	ERNS
ANACORTES FERRY TERMINAL 2100 FERR	ERNS
ANACORTES FERRY TERMINAL 2100 FERR	ERNS
ANACORTES FERRY TERMINAL 2100 FERR	ERNS
SOUTH FIDALGO BAY ROAD EXT	FINDS

OVERVIEW MAP - 3208157.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Thompson Road	CLIENT: Analytical Environmental Serv.
ADDRESS: 12715 Thompson Road Anacortes WA 98221	CONTACT: David Sawyer
LAT/LONG: 48.4591 / 122.5577	INQUIRY #: 3208157.1s DATE: November 15, 2011 7:40 pm

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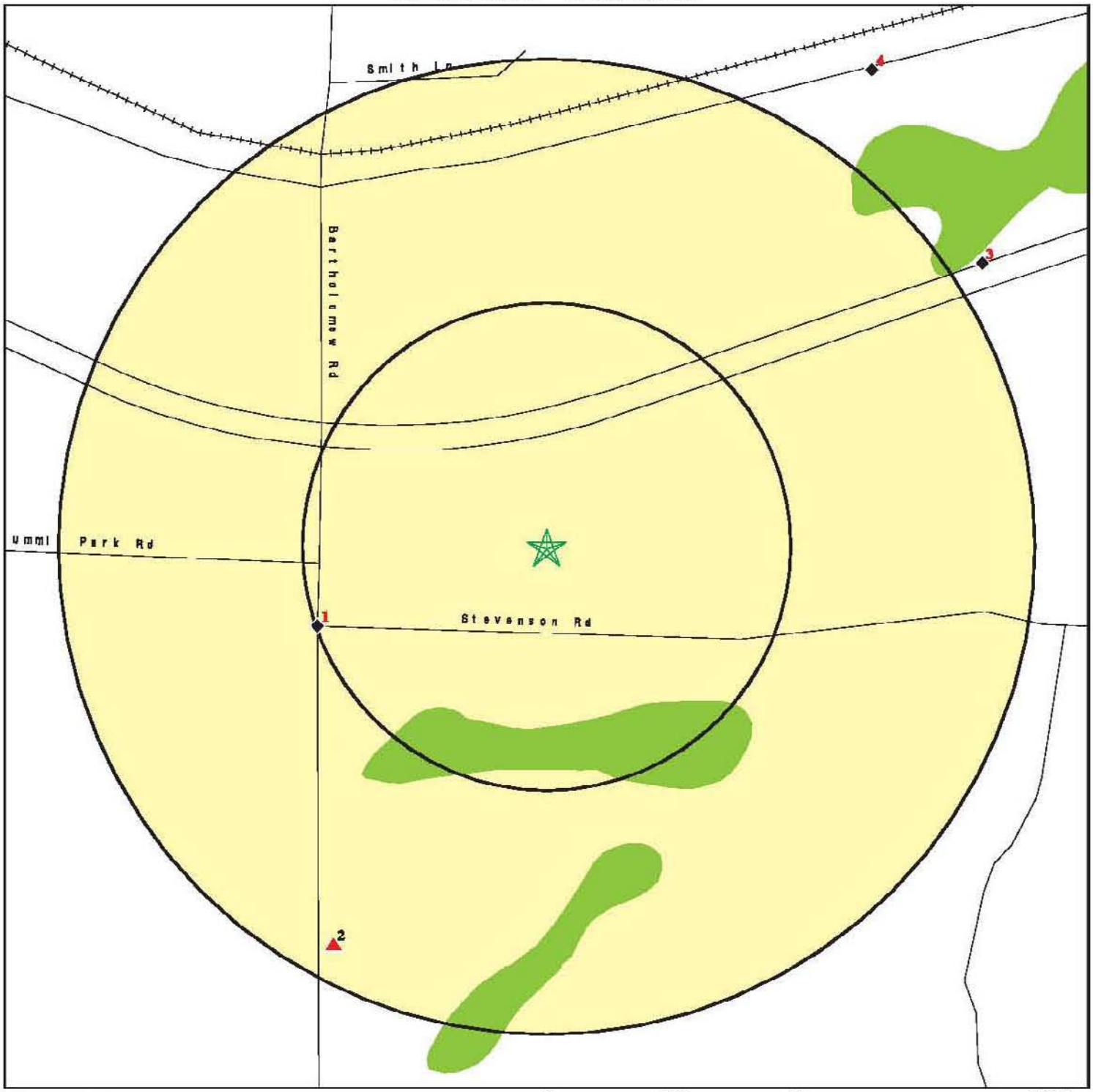
DETAIL MAP - 3208157.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Thompson Road ADDRESS: 12715 Thompson Road Anacortes WA 98221 LAT/LONG: 48.4591 / 122.5577	CLIENT: Analytical Environmental Serv. CONTACT: David Sawyer INQUIRY #: 3208157.1s DATE: November 15, 2011 7:40 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	1	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
HSL		1.000	0	0	0	2	NR	2
State- and tribal - equivalent CERCLIS								
CSCSL		1.000	0	1	0	4	NR	5
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	0	1	0	NR	NR	1
INDIAN LUST		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal registered storage tank lists								
UST		0.250	0	1	NR	NR	NR	1
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL		0.500	0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
ICR		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
SWTIRE		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
ALLSITES		0.500	1	1	3	NR	NR	5
CSCSL NFA		0.500	0	0	0	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
HIST CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
SPILLS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	1	NR	NR	NR	1

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
UIC		TP	NR	NR	NR	NR	NR	0
MANIFEST		0.250	0	1	NR	NR	NR	1
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
Inactive Drycleaners		0.250	0	0	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	1	NR	1
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
COAL ASH		0.500	0	0	0	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

IND RES **SWINOMISH INDIAN RESERVATION** **INDIAN RESERV** **CIND100042**
Region **N/A**
ESE **SWINOMISH INDIAN RESERVAT (County), WA**
1/2-1
3443 ft.

INDIAN RESERV:
Feature: Indian Reservation
Name: Swinomish Indian Reservation
Agency: BIA
State: WA

---

1 **GOLDEN AGE THOMPSON EQUIPMENT** **ALLSITES** **S110036970**
WSW **THOMPSON RD & STEVENSON RD** **NPDES** **N/A**
< 1/8 **ANACORTES, WA 98221**
0.124 mi.
654 ft.

Relative:
Lower

Actual:
72 ft.

ALLSITES:
Facility Id: 13913
Latitude: 48.4585999
Longitude: -122.56
Geographic location identifier (alias facid): 13913
Facility Name: GOLDEN AGE THOMPSON EQUIPMENT
Latitude Decimal Degrees: 48.458599999999997
Longitude Decimal Degrees: -122.56
Coordinate Point Areal Extent Code: 0
Horizontal Accuracy Code: 99
Coordinate Point Geographic Position Code: 0
Location Verified Code: Not reported

Geographic Location Identifier (Alias Facid): 13913
Interaction (Aka Env Int) Type Code: CONSTGP
Interaction (Aka Env Int) Description: Construction SW GP
Interaction Status: A
Federal Program Indentifier: WAR005437
Interaction Start Date: 2004-03-30 00:00:00
Interaction End Date: Not reported
prgm_facil: GOLDEN AGE THOMPSON EQUIPMENT
cur_sys_pr: WATQUAL
cur_sys_nm: PARIS

NPDES:
Facility Status: Active
Facility Type: Construction SW GP
Admin Region: Headquarters
Latitude: 48.45859999
Longitude: -122.56
Permit ID: WAR005437
Permit Version: 3
Permit Status: Active
Permit SubStatus: Coverage Issued
Ecology Contact: Kurt Baumgarten
WRIA: Lower Skagit-Samish
Permit Expiration Date: 12/31/2015
Effective Date: 01/01/2011

2
SSW
1/8-1/4
0.231 mi.
1220 ft.

Relative:
Higher

Actual:
79 ft.

FRONTIER FORD ANACORTES
1260 THOMPSON RD
ANACORTES, WA 98221

Database(s): RCRA-NonGen, FINDS, CSCSL, ALLSITES, LUST, UST, MANIFEST

EDR ID Number: 1001031719
EPA ID Number: WAR000004317

RCRA-NonGen:

Date form received by agency:	03/13/2006
Facility name:	FRONTIER FORD ANACORTES
Facility address:	1260 THOMPSON RD ANACORTES, WA 98221
EPA ID:	WAR000004317
Mailing address:	PO BOX 247 ANACORTES, WA 98221-0247
Contact:	JOHN WILLOUGHBY
Contact address:	PO BOX 247 ANACORTES, WA 98221-0247
Contact country:	US
Contact telephone:	(360)293-3105
Contact email:	Not reported
EPA Region:	10
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JERRY ALTRINGER
Owner/operator address:	PO BOX 247 ANACORTES, WA 98221
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	03/25/1997
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	12/31/2005
Facility name:	FRONTIER FORD ANACORTES

FRONTIER FORD ANACORTES (Continued) **1001031719**

Classification: Not a generator, verified

Date form received by agency: 12/31/2003
Facility name: FRONTIER FORD ANACORTES
Classification: Not a generator, verified

Facility Has Received Notices of Violations:
Regulation violated: SR - -200(1)(d)
Area of violation: Generators - General
Date violation determined: 08/04/2000
Date achieved compliance: 07/24/2001
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/10/2000
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -200(1)(b) / -630(5)(a)
Area of violation: Generators - General
Date violation determined: 08/04/2000
Date achieved compliance: 07/24/2001
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/10/2000
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -170(1)(a)
Area of violation: Generators - General
Date violation determined: 08/04/2000
Date achieved compliance: 07/24/2001
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/10/2000
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 08/04/2000
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/24/2001
Evaluation lead agency: State

FRONTIER FORD ANACORTES (Continued) **1001031719**

Evaluation date: 09/24/1996
Evaluation: COMPLIANCE ASSISTANCE VISIT
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110005401341

Environmental Interest/Information System

Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CSCSL:

Facility ID: 15567273
Region: Northwest
Lat/Long: 48.461620000000 / -122.56023
Brownfield Status: Not reported
Rank Status: Not reported
Clean Up Siteid: 8097
Site Status: Cleanup Started
PSI?: Not reported
Contaminant Name: Benzene
Ground Water: S
Surface Water: Not reported
Soil: C
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Northwest

Facility ID: 15567273
Region: Northwest
Lat/Long: 48.461620000000 / -122.56023
Brownfield Status: Not reported
Rank Status: Not reported
Clean Up Siteid: 8097
Site Status: Cleanup Started
PSI?: Not reported
Contaminant Name: Petroleum-Gasoline
Ground Water: S
Surface Water: Not reported
Soil: C
Sediment: Not reported

FRONTIER FORD ANACORTES (Continued) **1001031719**

Air: Not reported
Bedrock: Not reported
Responsible Unit: Northwest

Facility ID: 15567273
Region: Northwest
Lat/Long: 48.461620000000 / -122.56023
Brownfield Status: Not reported
Rank Status: Not reported
Clean Up Siteid: 8097
Site Status: Cleanup Started
PSI?: Not reported
Contaminant Name: Petroleum-Other
Ground Water: S
Surface Water: Not reported
Soil: C
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Northwest

ALLSITES:
Facility Id: 15567273
Latitude: 48.4616200
Longitude: -122.56023
Geographic location identifier (alias facid): 15567273
Facility Name: Frontier Ford Anacortes
Latitude Decimal Degrees: 48.461620000000003
Longitude Decimal Degrees: -122.56023
Coordinate Point Areal Extent Code: 99
Horizontal Accuracy Code: 4
Coordinate Point Geographic Position Code: 99
Location Verified Code: Y

LUST:
FS ID: 15567273
Cleanup Site ID: 8097
Cleanup Unit Type: Upland
Process Type: Independent Action
Facility Status: Cleanup Started
Alternate Name: FORD FRONTIER ANACORTES
Release Notification Date: Not reported
Release Status Date: 07/30/1992
Site Response Unit Code: Northwest
Lat/Long: 48.4616200 / -122.56023

FS ID: 15567273
Cleanup Site ID: 8097
Cleanup Unit Type: Upland
Process Type: Independent Action
Facility Status: Cleanup Started
Alternate Name: FORD FRONTIER ANACORTES
Release Notification Date: Not reported
Release Status Date: 07/01/2011
Site Response Unit Code: Northwest

FRONTIER FORD ANACORTES (Continued) **1001031719**

Lat/Long: 48.4616200 / -122.56023

FS ID: 15567273
Cleanup Site ID: 8097
Cleanup Unit Type: Upland
Process Type: Independent Action
Facility Status: RCU
Alternate Name: FORD FRONTIER ANACORTES
Release Notification Date: Not reported
Release Status Date: 05/21/1995
Site Response Unit Code: Northwest
Lat/Long: 48.4616200 / -122.56023

UST:
Facility ID: 15567273
Site ID: 200431
Lat Deg: 48
Lat Min: 27
Lat Sec: 41.832000000012499
Long Deg: -122
Long Min: 33
Long Sec: 36.828000000015209
UBI: Not reported
Phone Number: L00724

Tank ID: 575992
Tank Name: 1
Install Date: 01/01/1964
Capacity: Not reported
Tank Upgrade Date: 01/01/2001
TankSystem Status: Not reported
TankSystem Status Change Date: 07/09/2001
Tank Status: Removed
Tank Permit Expiration Date: 01/01/2001
Tank Closure Date: 01/01/2001
Tank Pumping System: Not reported
Tank Spill Prevention: Not reported
Tank Overfill Prevention: Not reported
Tank Material: Not reported
Tank Construction: Not reported
Tank Tightness Test: Not reported
Tank Corrosion Protection: Not reported
Pipe Material: Not reported
Pipe Construction: Not reported
Pipe Primary Release Detection: Not reported
Pipe Second Release Detection: Not reported
Pipe Corrosion Protection: Not reported
Tank Primary Release Detection: Not reported
Tank Second Release Detection: Not reported
Pipe Tightness Test: Not reported
Tank Actual Status Date: 07/09/2001
Tag Number: Not reported

Tank ID: 575997
Tank Name: 2
Install Date: 01/01/1900

FRONTIER FORD ANACORTES (Continued) **1001031719**

Capacity:	Not reported
Tank Upgrade Date:	01/01/2001
TankSystem Status:	Not reported
TankSystem Status Change Date:	07/09/2001
Tank Status:	Removed
Tank Permit Expiration Date:	01/01/2001
Tank Closure Date:	01/01/2001
Tank Pumping System:	Not reported
Tank Spill Prevention:	Not reported
Tank Overfill Prevention:	Not reported
Tank Material:	Not reported
Tank Construction:	Not reported
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Not reported
Pipe Material:	Not reported
Pipe Construction:	Not reported
Pipe Primary Release Detection:	Not reported
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Not reported
Tank Primary Release Detection:	Not reported
Tank Second Release Detection:	Not reported
Pipe Tightness Test:	Not reported
Tank Actual Status Date:	07/09/2001
Tag Number:	Not reported

WA MANIFEST:

Facility Site ID Number:	15567273
SWC Desc:	Not reported
FWC Desc:	Not reported
Form Comm:	Not reported
Data Year:	Not reported
Permit by Rule:	No
Treatment by Generator:	No
Mixed radioactive waste:	No
Importer of hazardous waste:	No
Immediate recycler:	No
Treatment/Storage/Disposal/Recycling Facility:	No
Generator of dangerous fuel waste:	No
Generator marketing to burner:	No
"Other marketers (i.e., blender, distributor, etc.)":	No
Utility boiler burner:	No
Industry boiler burner:	No
Industrial Furnace:	No
Smelter defferal:	No
Universal waste - batteries - generate:	No
Universal waste - thermostats - generate:	No
Universal waste - mercury - generate:	No
Universal waste - lamps - generate:	No
Universal waste - batteries - accumulate:	No
Universal waste - thermostats - accumulate:	No
Universal waste - mercury - accumulate:	No
Universal waste - lamps - accumulate:	No
Destination Facility for Universal Waste:	No
Off-specification used oil burner - utility boiler:	No
Off-specification used oil burner - industrial boiler:	No
Off-specification used oil burner - industrial furnace:	No
EPA ID:	WAR000004317

FRONTIER FORD ANACORTES (Continued) **1001031719**

Facility Address 2:	Not reported
TAX REG NBR:	601200393
NAICS CD:	44111
BUSINESS TYPE:	Not reported
MAIL NAME:	Frontier Ford
MAIL ADDR LINE1:	PO BOX 247
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221-0247
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	Frontier Ford Anacortes
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	PO BOX 247
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221-0247
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	(360)293-3105
LEGAL EFFECTIVE DATE:	3/5/2001
LAND ORG NAME:	Not reported
LAND ORG TYPE:	Private
LAND PERSON NAME:	Ron Rennebohm
LAND ADDR LINE1:	PO BOX 247
LAND CITY,ST,ZIP:	ANACORTES, WA 98221-0247
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	(360)293-3105
OPERATOR ORG NAME:	Not reported
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	PO BOX 247
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221-0247
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	(360) 293-3105
OPERATOR EFFECTIVE DATE:	3/25/1997
SITE CONTACT NAME:	John Willoughby
SITE CONTACT ADDR LINE1:	PO BOX 247
SITE CONTACT ZIP:	ANACORTES, WA 98221-0247
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	360293-3105
SITE CONTACT EMAIL:	Not reported
FORM CONTACT NAME:	John Willoughby
FORM CONTACT ADDR LINE1:	PO BOX 247
FORM CONTACT CITY,ST,ZIP:	ANACORTES, WA 98221-0247
FORM CONTACT COUNTRY:	UNITED STATES
FORM CONTACT PHONE NBR:	360293-3105
FORM CONTACT EMAIL:	jwilloughby@frontierfordusa.com
GEN STATUS CD:	XQG
MONTHLY GENERATION:	No
BATCH GENERATION:	No
ONE TIME GENERATION:	No
TRANSPORTS OWN WASTE:	No
TRANSPORTS OTHRS WASTE:	No
RECYCLER ONSITE:	No
TRANSFER FACILITY:	No
OTHER EXEMPTION:	Not reported
UW BATTERY GEN:	No
USED OIL TRANSPORTER:	No
USED OIL TRANSFER FACLTY:	No
USED OIL PROCESSOR:	No
USED OIL REREFINER:	No
USED OIL FUEL MRKTR DIRECTS SHPMNTS:	No
USED OIL FUEL MRKTR MEETS SPECS:	No

3
ENE
1/4-1/2
0.267 mi.
1407 ft.

COUNTRY CORNER GROCERY MART
7601 SR 20 STE A
ANACORTES, WA 98221

ALLSITES
UST

U003025050
N/A

Relative:
Lower

Actual:
64 ft.

ALLSITES:

Facility Id:	63894366	
Latitude:	48.462018	
Longitude:	-122.58250	
Geographic location identifier (alias facid):		63894366
Facility Name:		COUNTRY CORNER GROCERY MART
Latitude Decimal Degrees:		48.465336000000001
Longitude Decimal Degrees:		-122.58669999999999
Coordinate Point Areal Extent Code:		4
Horizontal Accuracy Code:		13
Coordinate Point Geographic Position Code:		5
Location Verified Code:		N

UST:

Facility ID:	63894366
Site ID:	100994
Lat Deg:	48
Lat Min:	27
Lat Sec:	43.264800000001742
Long Deg:	-122
Long Min:	34
Long Sec:	57.0215999999823
UBI:	6027626640010002
Phone Number:	3602938411
Tank ID:	21397
Tank Name:	3
Install Date:	07/15/1982
Capacity:	Not reported
Tank Upgrade Date:	02/18/1998
TankSystem Status:	Not reported
TankSystem Status Change Date:	08/26/1996
Tank Status:	Operational
Tank Permit Expiration Date:	09/30/2011
Tank Closure Date:	01/01/2001
Tank Pumping System:	Pressurized System
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Overfill Alarm
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Impressed Current and Interior Lining
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detection
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Corrosion Resistant
Tank Primary Release Detection:	Automatic Tank Gauging
Tank Second Release Detection:	Not reported
Pipe Tightness Test:	Annual
Tank Actual Status Date:	08/06/1996
Tag Number:	A3145

COUNTRY CORNER GROCERY MART (Continued) **U003025050**

Tank ID:	21500
Tank Name:	1
Install Date:	07/15/1982
Capacity:	10,000 to 19,999 Gallons
Tank Upgrade Date:	02/18/1998
TankSystem Status:	Not reported
TankSystem Status Change Date:	08/26/1996
Tank Status:	Operational
Tank Permit Expiration Date:	09/30/2011
Tank Closure Date:	01/01/2001
Tank Pumping System:	Pressurized System
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Overfill Alarm
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Impressed Current and Interior Lining
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detection
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Corrosion Resistant
Tank Primary Release Detection:	Automatic Tank Gauging
Tank Second Release Detection:	Not reported
Pipe Tightness Test:	Annual
Tank Actual Status Date:	08/06/1996
Tag Number:	A3145

Tank ID:	21601
Tank Name:	4
Install Date:	07/15/1982
Capacity:	Not reported
Tank Upgrade Date:	02/18/1998
TankSystem Status:	Not reported
TankSystem Status Change Date:	08/26/1996
Tank Status:	Operational
Tank Permit Expiration Date:	09/30/2011
Tank Closure Date:	01/01/2001
Tank Pumping System:	Pressurized System
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Overfill Alarm
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Impressed Current and Interior Lining
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detection
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Corrosion Resistant
Tank Primary Release Detection:	Automatic Tank Gauging
Tank Second Release Detection:	Not reported
Pipe Tightness Test:	Annual
Tank Actual Status Date:	08/06/1996
Tag Number:	A3145

COUNTRY CORNER GROCERY MART (Continued) **U003025050**

Tank ID:	21657
Tank Name:	2
Install Date:	07/15/1982
Capacity:	10,000 to 19,999 Gallons
Tank Upgrade Date:	02/18/1998
TankSystem Status:	Not reported
TankSystem Status Change Date:	08/26/1996
Tank Status:	Operational
Tank Permit Expiration Date:	09/30/2011
Tank Closure Date:	01/01/2001
Tank Pumping System:	Pressurized System
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Overfill Alarm
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Impressed Current and Interior Lining
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detection
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Corrosion Resistant
Tank Primary Release Detection:	Automatic Tank Gauging
Tank Second Release Detection:	Not reported
Pipe Tightness Test:	Annual
Tank Actual Status Date:	08/06/1996
Tag Number:	A3145

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4 **VINTAGE OIL INC** **RCRA-NonGen** **1000395678**
NE **732 S MARCH PT RD** **FINDS** **WAD981765241**
1/4-1/2 **ANACORTES, WA 98221** **ALLSITES**
0.296 mi.
1562 ft.

Relative:
Lower

Actual:
62 ft.

RCRA-NonGen:

Date form received by agency:	01/29/1987
Facility name:	VINTAGE OIL INC
Facility address:	732 S MARCH PT RD ANACORTES, WA 98221
EPA ID:	WAD981765241
Mailing address:	732 S MARCH POINT RD ANACORTES, WA 98221-9627
Contact:	W L BRIGGS
Contact address:	732 S MARCH POINT RD ANACORTES, WA 98221-9627
Contact country:	US
Contact telephone:	(503)286-8352
Contact email:	Not reported
EPA Region:	10
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	VINTAGE OIL INC
Owner/operator address:	732 S MARCH POINT RD ANACORTES, WA 98221

VINTAGE OIL INC (Continued) **1000395678**

Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/29/1987
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 10/16/2001
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

FINDS:

Registry ID: 110005341638

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ALLSITES:
Facility Id: 93714776
Latitude: 48.4626799
Longitude: -122.55374

VINTAGE OIL INC (Continued) **1000395678**

Geographic location identifier (alias facid):	93714776
Facility Name:	Vintage Oil Inc
Latitude Decimal Degrees:	48.462679999999999
Longitude Decimal Degrees:	-122.55374999999999
Coordinate Point Areal Extent Code:	99
Horizontal Accuracy Code:	99
Coordinate Point Geographic Position Code:	99
Location Verified Code:	N

5
NNW
1/4-1/2
0.322 mi.
1699 ft.

T BAILEY INC **RCRA-SQG 1005906243**
12441 BARTHOLOMEW RD **FINDS WAH000018291**
ANACORTES, WA 98221 **ALLSITES**
MANIFEST
HAZNET

Relative:
Lower

Actual:
70 ft.

RCRA-SQG:

Date form received by agency:	01/27/2010
Facility name:	T BAILEY INC
Facility address:	12441 BARTHOLOMEW RD ANACORTES, WA 98221
EPA ID:	WAH000018291
Contact:	MIKE S YEAGER
Contact address:	12441 BARTHOLOMEW RD ANACORTES, WA 98221
Contact country:	US
Contact telephone:	(360) 293-0682
Contact email:	MYEAGER@TBAILEY.COM
EPA Region:	10
Land type:	Private
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	T BAILEY INC
Owner/operator address:	12441 BARTHOLOMEW RD ANACORTES, WA 98221
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1900
Owner/Op end date:	Not reported

Owner/operator name:	T BAILEY INC
Owner/operator address:	12441 BARTHOLOMEW RD ANACORTES, 98221
Owner/operator country:	US
Owner/operator telephone:	(360)293-0682
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1900
Owner/Op end date:	Not reported

T BAILEY INC (Continued) **1005906243**

Owner/operator name: T BAILEY INC
Owner/operator address: 12441 BARTHOLOMEW RD
ANACORTES, WA 98221
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/23/2002
Owner/Op end date: Not reported

Owner/operator name: T BAILEY INC
Owner/operator address: 12441 BARTHOLOMEW RD
ANACORTES, 98221
Owner/operator country: US
Owner/operator telephone: (360)293-0682
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/23/2002
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: Yes
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/26/2008
Facility name: T BAILEY INC
Site name: SAN JUAN BLAST CLEANING & COATINGS INC
Classification: Small Quantity Generator

Date form received by agency: 01/01/2007
Facility name: T BAILEY INC
Site name: SAN JUAN BLAST CLEANING & COATINGS INC
Classification: Small Quantity Generator

Date form received by agency: 12/31/2005
Facility name: T BAILEY INC
Site name: SAN JUAN BLAST CLEANING & COATINGS INC
Classification: Small Quantity Generator

Date form received by agency: 12/31/2003
Facility name: T BAILEY INC
Site name: SAN JUAN BLAST CLEANING & COATINGS INC

T BAILEY INC (Continued) **1005906243**

Classification: Small Quantity Generator

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - Manifest
Date violation determined: 04/19/2011
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/19/2011
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Container Use and Management
Date violation determined: 04/19/2011
Date achieved compliance: Not reported
Violation lead agency: State

T BAILEY INC (Continued) **1005906243**

Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/19/2011
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/19/2011
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/19/2011
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 04/19/2011
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/19/2011
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -141(1)
Area of violation: Generators - General
Date violation determined: 02/01/2006
Date achieved compliance: 04/12/2006
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/05/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -515(6)
Area of violation: Generators - General
Date violation determined: 02/01/2006
Date achieved compliance: 04/13/2006
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL

T BAILEY INC (Continued) **1005906243**

Enforcement action date: 04/05/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -200(1)(c)
Area of violation: Generators - General
Date violation determined: 02/01/2006
Date achieved compliance: 04/12/2006
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/05/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -200(1)(b)
Area of violation: Generators - General
Date violation determined: 02/01/2006
Date achieved compliance: 05/12/2006
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/05/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -200(1)(d)
Area of violation: Generators - General
Date violation determined: 02/01/2006
Date achieved compliance: 04/11/2006
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/05/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -573(9)
Area of violation: Generators - General
Date violation determined: 02/01/2006
Date achieved compliance: 05/10/2006
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/05/2006

T BAILEY INC (Continued) **1005906243**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -200(1)(c) / -170(2)
Area of violation: Generators - General
Date violation determined: 12/12/2003
Date achieved compliance: 12/29/2003
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/23/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -200(1)(d) / -170(2)
Area of violation: Generators - General
Date violation determined: 12/12/2003
Date achieved compliance: 12/29/2003
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/23/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -630(6) / -200(1)(b)
Area of violation: Generators - General
Date violation determined: 12/12/2003
Date achieved compliance: 12/29/2003
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/23/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -070(3) / -170(1)
Area of violation: Generators - General
Date violation determined: 12/12/2003
Date achieved compliance: 04/02/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/23/2003
Enf. disposition status: Not reported

T BAILEY INC (Continued) **1005906243**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -141(1)
Area of violation: Generators - General
Date violation determined: 12/12/2003
Date achieved compliance: 12/29/2003
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/23/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -630(7) / -200(1)(b)
Area of violation: Generators - General
Date violation determined: 12/12/2003
Date achieved compliance: 01/27/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/23/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 04/19/2011
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/19/2011
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Manifest
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/19/2011
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/19/2011
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Container Use and Management
Date achieved compliance: Not reported

T BAILEY INC (Continued) **1005906243**

Evaluation lead agency: State

Evaluation date: 02/01/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/11/2006
Evaluation lead agency: State

Evaluation date: 02/01/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/12/2006
Evaluation lead agency: State

Evaluation date: 02/01/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/13/2006
Evaluation lead agency: State

Evaluation date: 02/01/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/10/2006
Evaluation lead agency: State

Evaluation date: 02/01/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/12/2006
Evaluation lead agency: State

Evaluation date: 12/12/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/29/2003
Evaluation lead agency: State

Evaluation date: 12/12/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/02/2004
Evaluation lead agency: State

Evaluation date: 12/12/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 01/27/2004
Evaluation lead agency: State

FINDS:

Registry ID: 110012559150

Environmental Interest/Information System
Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each

T BAILEY INC (Continued) **1005906243**

facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ALLSITES:

Facility Id:	46521742
Latitude:	48.4631867
Longitude:	-122.56108
Geographic location identifier (alias facid):	46521742
Facility Name:	T Bailey Inc
Latitude Decimal Degrees:	48.463186781700003
Longitude Decimal Degrees:	-122.561083004
Coordinate Point Areal Extent Code:	99
Horizontal Accuracy Code:	99
Coordinate Point Geographic Position Code:	8
Location Verified Code:	N

WA MANIFEST:

Facility Site ID Number:	46521742
SWC Desc:	Not reported
FWC Desc:	D001, D035, F003, F005D001 D018 D035 F003
Form Comm:	Not reported
Data Year:	Not reported
Permit by Rule:	False
Treatment by Generator:	False
Mixed radioactive waste:	False
Importer of hazardous waste:	False
Immediate recycler:	False
Treatment/Storage/Disposal/Recycling Facility:	False
Generator of dangerous fuel waste:	False
Generator marketing to burner:	False
"Other marketers (i.e., blender, distributor, etc.)":	False
Utility boiler burner:	False
Industry boiler burner:	False
Industrial Furnace:	False
Smelter defferal:	False
Universal waste - batteries - generate:	False
Universal waste - thermostats - generate:	False
Universal waste - mercury - generate:	False
Universal waste - lamps - generate:	False
Universal waste - batteries - accumulate:	False
Universal waste - thermostats - accumulate:	False
Universal waste - mercury - accumulate:	False
Universal waste - lamps - accumulate:	False
Destination Facility for Universal Waste:	False
Off-specification used oil burner - utility boiler:	False
Off-specification used oil burner - industrial boiler:	False

T BAILEY INC (Continued) **1005906243**

Off-specification used oil burner - industrial furnace: False
EPA ID: WAH000018291
Facility Address 2: Not reported
TAX REG NBR: 601908957
NAICS CD: 23731
BUSINESS TYPE: Not reported
MAIL NAME: San Juan Blast Cleaning & Coatings Inc
MAIL ADDR LINE1: 12441 Bartholomew Rd
MAIL CITY,ST,ZIP: ANACORTES, WA 98221
MAIL COUNTRY: UNITED STATES
LEGAL ORG NAME: T Bailey Inc
LEGAL ORG TYPE: Private
LEGAL ADDR LINE1: 12441 Bartholomew Rd
LEGAL CITY,ST,ZIP: ANACORTES, WA 98221
LEGAL COUNTRY: UNITED STATES
LEGAL PHONE NBR: (360)299-9444
LEGAL EFFECTIVE DATE: 5/23/2002
LAND ORG NAME: T Bailey Inc
LAND ORG TYPE: Private
LAND PERSON NAME: Not reported
LAND ADDR LINE1: 12441 Bartholomew Rd
LAND CITY,ST,ZIP: ANACORTES, WA 98221
LAND COUNTRY: UNITED STATES
LAND PHONE NBR: (360)299-9444
OPERATOR ORG NAME: T Bailey Inc
OPERATOR ORG TYPE: Private
OPERATOR ADDR LINE1: 12441 Bartholomew Rd
OPERATOR CITY,ST,ZIP: ANACORTES, WA 98221
OPERATOR COUNTRY: UNITED STATES
OPERATOR PHONE NBR: (360)299-9444
OPERATOR EFFECTIVE DATE: Not reported
SITE CONTACT NAME: James L Farrington
SITE CONTACT ADDR LINE1: 12441 Bartholomew Rd
SITE CONTACT ZIP: ANACORTES, WA 98221
SITE CONTACT COUNTRY: UNITED STATES
SITE CONTACT PHONE NBR: (360)293-0682,ext251
SITE CONTACT EMAIL: jfarrington@tbailey.com
FORM CONTACT NAME: James L Farrington
FORM CONTACT ADDR LINE1: 12441 Bartholomew Rd
FORM CONTACT CITY,ST,ZIP: ANACORTES, WA 98221
FORM CONTACT COUNTRY: UNITED STATES
FORM CONTACT PHONE NBR: (360)293-0682,ext251
FORM CONTACT EMAIL: jfarrington@tbailey.com
GEN STATUS CD: MQG
MONTHLY GENERATION: True
BATCH GENERATION: False
ONE TIME GENERATION: False
TRANSPORTS OWN WASTE: False
TRANSPORTS OTHRS WASTE: False
RECYCLER ONSITE: True
TRANSFER FACILITY: False
OTHER EXEMPTION: Not reported
UW BATTERY GEN: False
USED OIL TRANSPORTER: False
USED OIL TRANSFER FACLTY: False
USED OIL PROCESSOR: False
USED OIL REREFINER: False

T BAILEY INC (Continued) **1005906243**

USED OIL FUEL MRKTR DIRECTS SHPMNTS:	False
USED OIL FUEL MRKTR MEETS SPECS:	False
Facility Site ID Number:	46521742
SWC Desc:	Not reported
FWC Desc:	Not reported
Form Comm:	Not reported
Data Year:	2010
Permit by Rule:	False
Treatment by Generator:	False
Mixed radioactive waste:	False
Importer of hazardous waste:	False
Immediate recycler:	False
Treatment/Storage/Disposal/Recycling Facility:	False
Generator of dangerous fuel waste:	False
Generator marketing to burner:	False
"Other marketers (i.e., blender, distributor, etc.)":	False
Utility boiler burner:	False
Industry boiler burner:	False
Industrial Furnace:	False
Smelter defferal:	False
Universal waste - batteries - generate:	False
Universal waste - thermostats - generate:	False
Universal waste - mercury - generate:	False
Universal waste - lamps - generate:	False
Universal waste - batteries - accumulate:	False
Universal waste - thermostats - accumulate:	False
Universal waste - mercury - accumulate:	False
Universal waste - lamps - accumulate:	False
Destination Facility for Universal Waste:	False
Off-specification used oil burner - utility boiler:	False
Off-specification used oil burner - industrial boiler:	False
Off-specification used oil burner - industrial furnace:	False
EPA ID:	WAH000018291
Facility Address 2:	Not reported
TAX REG NBR:	601351925
NAICS CD:	238320
BUSINESS TYPE:	Paint Shop
MAIL NAME:	T Bailey Inc
MAIL ADDR LINE1:	12441 Bartholomew Rd
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	T Bailey Inc
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	12441 Bartholomew Rd
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	(360)293-0682
LEGAL EFFECTIVE DATE:	5/23/2002
LAND ORG NAME:	T Bailey Inc
LAND ORG TYPE:	Private
LAND PERSON NAME:	Not reported
LAND ADDR LINE1:	12441 Bartholomew Rd
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	(360)293-0682
OPERATOR ORG NAME:	T Bailey Inc

T BAILEY INC (Continued) **1005906243**

OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	12441 Bartholomew Rd
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	(360)293-0682
OPERATOR EFFECTIVE DATE:	Not reported
SITE CONTACT NAME:	Mike S Yeager
SITE CONTACT ADDR LINE1:	12441 Bartholomew Rd
SITE CONTACT ZIP:	ANACORTES, WA 98221
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	(360)293-0682 ext 246
SITE CONTACT EMAIL:	myeager@tbailey.com
FORM CONTACT NAME:	Michael A Jackson
FORM CONTACT ADDR LINE1:	12441 Bartholomew Rd
FORM CONTACT CITY,ST,ZIP:	ANACORTES, WA 98221
FORM CONTACT COUNTRY:	UNITED STATES
FORM CONTACT PHONE NBR:	(360)293-0682 ext 235
FORM CONTACT EMAIL:	mjackson@tbailey.com
GEN STATUS CD:	MQG
MONTHLY GENERATION:	False
BATCH GENERATION:	True
ONE TIME GENERATION:	False
TRANSPORTS OWN WASTE:	True
TRANSPORTS OTHRS WASTE:	False
RECYCLER ONSITE:	True
TRANSFER FACILITY:	False
OTHER EXEMPTION:	Not reported
UW BATTERY GEN:	False
USED OIL TRANSPORTER:	False
USED OIL TRANSFER FACLTY:	False
USED OIL PROCESSOR:	False
USED OIL REREFINER:	False
USED OIL FUEL MRKTR DIRECTS SHPMNTS:	False
USED OIL FUEL MRKTR MEETS SPECS:	False

Facility Site ID Number:	46521742
SWC Desc:	Not reported
FWC Desc:	D001, D035, F003, F005D001 D018 D035 F003
Form Comm:	Not reported
Data Year:	Not reported
Permit by Rule:	No
Treatment by Generator:	No
Mixed radioactive waste:	No
Importer of hazardous waste:	No
Immediate recycler:	No
Treatment/Storage/Disposal/Recycling Facility:	No
Generator of dangerous fuel waste:	No
Generator marketing to burner:	No
"Other marketers (i.e., blender, distributor, etc.)":	No
Utility boiler burner:	No
Industry boiler burner:	No
Industrial Furnace:	No
Smelter defferal:	No
Universal waste - batteries - generate:	No
Universal waste - thermostats - generate:	No
Universal waste - mercury - generate:	No
Universal waste - lamps - generate:	No

T BAILEY INC (Continued) **1005906243**

Universal waste - batteries - accumulate:	No
Universal waste - thermostats - accumulate:	No
Universal waste - mercury - accumulate:	No
Universal waste - lamps - accumulate:	No
Destination Facility for Universal Waste:	No
Off-specification used oil burner - utility boiler:	No
Off-specification used oil burner - industrial boiler:	No
Off-specification used oil burner - industrial furnace:	No
EPA ID:	WAH000018291
Facility Address 2:	Not reported
TAX REG NBR:	601908957
NAICS CD:	23731
BUSINESS TYPE:	Not reported
MAIL NAME:	San Juan Blast Cleaning & Coatings Inc
MAIL ADDR LINE1:	12441 Bartholomew Rd
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	T Bailey Inc
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	12441 Bartholomew Rd
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	(360)299-9444
LEGAL EFFECTIVE DATE:	5/23/2002
LAND ORG NAME:	T Bailey Inc
LAND ORG TYPE:	Private
LAND PERSON NAME:	Not reported
LAND ADDR LINE1:	12441 Bartholomew Rd
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	(360)299-9444
OPERATOR ORG NAME:	T Bailey Inc
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	12441 Bartholomew Rd
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	(360)299-9444
OPERATOR EFFECTIVE DATE:	Not reported
SITE CONTACT NAME:	James L Farrington
SITE CONTACT ADDR LINE1:	12441 Bartholomew Rd
SITE CONTACT ZIP:	ANACORTES, WA 98221
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	(360)293-0682ext251
SITE CONTACT EMAIL:	jfarrington@tbailey.com
FORM CONTACT NAME:	James L Farrington
FORM CONTACT ADDR LINE1:	12441 Bartholomew Rd
FORM CONTACT CITY,ST,ZIP:	ANACORTES, WA 98221
FORM CONTACT COUNTRY:	UNITED STATES
FORM CONTACT PHONE NBR:	(360)293-0682ext251
FORM CONTACT EMAIL:	jfarrington@tbailey.com
GEN STATUS CD:	MQG
MONTHLY GENERATION:	No
BATCH GENERATION:	No
ONE TIME GENERATION:	No
TRANSPORTS OWN WASTE:	No
TRANSPORTS OTHRS WASTE:	No
RECYCLER ONSITE:	No

T BAILEY INC (Continued) **1005906243**

TRANSFER FACILITY:	No
OTHER EXEMPTION:	Not reported
UW BATTERY GEN:	No
USED OIL TRANSPORTER:	No
USED OIL TRANSFER FACLTY:	No
USED OIL PROCESSOR:	No
USED OIL REREFINER:	No
USED OIL FUEL MRKTR DIRECTS SHPMNTS:	No
USED OIL FUEL MRKTR MEETS SPECS:	No

Facility Site ID Number:	46521742
SWC Desc:	Not reported
FWC Desc:	D001, D035, F003, F005D001 D018 D035 F003
Form Comm:	Not reported
Data Year:	Not reported
Permit by Rule:	FALSE
Treatment by Generator:	FALSE
Mixed radioactive waste:	FALSE
Importer of hazardous waste:	FALSE
Immediate recycler:	FALSE
Treatment/Storage/Disposal/Recycling Facility:	FALSE
Generator of dangerous fuel waste:	FALSE
Generator marketing to burner:	FALSE
"Other marketers (i.e., blender, distributor, etc.)":	FALSE
Utility boiler burner:	FALSE
Industry boiler burner:	FALSE
Industrial Furnace:	FALSE
Smelter defferal:	FALSE
Universal waste - batteries - generate:	FALSE
Universal waste - thermostats - generate:	FALSE
Universal waste - mercury - generate:	FALSE
Universal waste - lamps - generate:	FALSE
Universal waste - batteries - accumulate:	FALSE
Universal waste - thermostats - accumulate:	FALSE
Universal waste - mercury - accumulate:	FALSE
Universal waste - lamps - accumulate:	FALSE
Destination Facility for Universal Waste:	FALSE
Off-specification used oil burner - utility boiler:	FALSE
Off-specification used oil burner - industrial boiler:	FALSE
Off-specification used oil burner - industrial furnace:	FALSE
EPA ID:	WAH000018291
Facility Address 2:	Not reported
TAX REG NBR:	601908957
NAICS CD:	23731
BUSINESS TYPE:	Not reported
MAIL NAME:	San Juan Blast Cleaning & Coatings Inc
MAIL ADDR LINE1:	12441 Bartholomew Rd
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	T Bailey Inc
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	12441 Bartholomew Rd
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	(360)299-9444
LEGAL EFFECTIVE DATE:	5/23/2002
LAND ORG NAME:	T Bailey Inc

T BAILEY INC (Continued) **1005906243**

LAND ORG TYPE:	Private
LAND PERSON NAME:	Not reported
LAND ADDR LINE1:	12441 Bartholomew Rd
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	(360)299-9444
OPERATOR ORG NAME:	T Bailey Inc
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	12441 Bartholomew Rd
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	(360)299-9444
OPERATOR EFFECTIVE DATE:	Not reported
SITE CONTACT NAME:	James L Farrington
SITE CONTACT ADDR LINE1:	12441 Bartholomew Rd
SITE CONTACT ZIP:	ANACORTES, WA 98221
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	(360)293-0682,ext251
SITE CONTACT EMAIL:	jfarrington@tbailey.com
FORM CONTACT NAME:	James L Farrington
FORM CONTACT ADDR LINE1:	12441 Bartholomew Rd
FORM CONTACT CITY,ST,ZIP:	ANACORTES, WA 98221
FORM CONTACT COUNTRY:	UNITED STATES
FORM CONTACT PHONE NBR:	(360)293-0682,ext251
FORM CONTACT EMAIL:	jfarrington@tbailey.com
GEN STATUS CD:	MQG
MONTHLY GENERATION:	TRUE
BATCH GENERATION:	FALSE
ONE TIME GENERATION:	FALSE
TRANSPORTS OWN WASTE:	FALSE
TRANSPORTS OTHRS WASTE:	FALSE
RECYCLER ONSITE:	TRUE
TRANSFER FACILITY:	FALSE
OTHER EXEMPTION:	Not reported
UW BATTERY GEN:	FALSE
USED OIL TRANSPORTER:	FALSE
USED OIL TRANSFER FACLTY:	FALSE
USED OIL PROCESSOR:	FALSE
USED OIL REREFINER:	FALSE
USED OIL FUEL MRKTR DIRECTS SHPMNTS:	FALSE
USED OIL FUEL MRKTR MEETS SPECS:	FALSE

Facility Site ID Number:	46521742
SWC Desc:	Not reported
FWC Desc:	D001,D035,F003,F005
Form Comm:	Not reported
Data Year:	2009
Permit by Rule:	False
Treatment by Generator:	False
Mixed radioactive waste:	False
Importer of hazardous waste:	False
Immediate recycler:	False
Treatment/Storage/Disposal/Recycling Facility:	False
Generator of dangerous fuel waste:	False
Generator marketing to burner:	False
"Other marketers (i.e., blender, distributor, etc.)":	False
Utility boiler burner:	False

T BAILEY INC (Continued) **1005906243**

Industry boiler burner:	False
Industrial Furnace:	False
Smelter defferal:	False
Universal waste - batteries - generate:	False
Universal waste - thermostats - generate:	False
Universal waste - mercury - generate:	False
Universal waste - lamps - generate:	False
Universal waste - batteries - accumulate:	False
Universal waste - thermostats - accumulate:	False
Universal waste - mercury - accumulate:	False
Universal waste - lamps - accumulate:	False
Destination Facility for Universal Waste:	False
Off-specification used oil burner - utility boiler:	False
Off-specification used oil burner - industrial boiler:	False
Off-specification used oil burner - industrial furnace:	False
EPA ID:	WAH000018291
Facility Address 2:	Not reported
TAX REG NBR:	601351925
NAICS CD:	238320
BUSINESS TYPE:	Paint Shop
MAIL NAME:	T Bailey Inc
MAIL ADDR LINE1:	12441 Bartholomew Rd
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	T Bailey Inc
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	12441 Bartholomew Rd
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	(360)293-0682
LEGAL EFFECTIVE DATE:	5/23/2002
LAND ORG NAME:	T Bailey Inc
LAND ORG TYPE:	Private
LAND PERSON NAME:	Mike Yeager
LAND ADDR LINE1:	12441 Bartholomew Rd
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	(360)293-0682
OPERATOR ORG NAME:	T Bailey Inc
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	12441 Bartholomew Rd
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	(360)293-0682
OPERATOR EFFECTIVE DATE:	Not reported
SITE CONTACT NAME:	Mike S Yeager
SITE CONTACT ADDR LINE1:	12441 Bartholomew Rd
SITE CONTACT ZIP:	ANACORTES, WA 98221
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	(360)293-0682 ext 246
SITE CONTACT EMAIL:	myeager@tbailey.com
FORM CONTACT NAME:	Michael A Jackson
FORM CONTACT ADDR LINE1:	12441 Bartholomew Rd
FORM CONTACT CITY,ST,ZIP:	ANACORTES, WA 98221
FORM CONTACT COUNTRY:	UNITED STATES
FORM CONTACT PHONE NBR:	(360)293-0682 ext 235
FORM CONTACT EMAIL:	mjackson@tbailey.com

T BAILEY INC (Continued) **1005906243**

GEN STATUS CD:	MQG
MONTHLY GENERATION:	True
BATCH GENERATION:	False
ONE TIME GENERATION:	False
TRANSPORTS OWN WASTE:	False
TRANSPORTS OTHRS WASTE:	False
RECYCLER ONSITE:	True
TRANSFER FACILITY:	False
OTHER EXEMPTION:	Not reported
UW BATTERY GEN:	False
USED OIL TRANSPORTER:	False
USED OIL TRANSFER FACLTY:	False
USED OIL PROCESSOR:	False
USED OIL REREFINER:	False
USED OIL FUEL MRKTR DIRECTS SHPMNTS:	False
USED OIL FUEL MRKTR MEETS SPECS:	False

Click this hyperlink while viewing on your computer to access
1 additional WA MANIFEST: record(s) in the EDR Site Report.

HAZNET:

Year:	2008
Gepaid:	WAH000018291
Contact:	STAMBACK, GREG
Telephone:	360299944
Mailing Name:	Not reported
Mailing Address:	12441 BARTHOLOMWS RD
Mailing City,St,Zip:	ANACORTES, WA 98221
Gen County:	99
TSD EPA ID:	CAD059494310
TSD County:	Santa Clara
Waste Category:	Not reported
Disposal Method:	STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)
Tons:	1.255
Facility County:	99

Year:	2003
Gepaid:	WAH000018291
Contact:	STAMBACK, GREG
Telephone:	360299944
Mailing Name:	Not reported
Mailing Address:	12441 BARTHOLOMWS RD
Mailing City,St,Zip:	ANACORTES, WA 98221
Gen County:	99
TSD EPA ID:	CAD980884183
TSD County:	99
Waste Category:	Other organic solids
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	99

Year:	2003
Gepaid:	WAH000018291
Contact:	STAMBACK, GREG
Telephone:	360299944
Mailing Name:	Not reported

T BAILEY INC (Continued) **1005906243**

Mailing Address: 12441 BARTHOLOMWS RD
Mailing City,St,Zip: ANACORTES, WA 98221
Gen County: 99
TSD EPA ID: CAD980884183
TSD County: 99
Waste Category: Off-specification, aged or surplus organics
Disposal Method: D99
Tons: 0.57
Facility County: 99

Year: 2002
Gepaid: WAH000018291
Contact: STAMBACK, GREG
Telephone: 360299944
Mailing Name: Not reported
Mailing Address: 12441 BARTHOLOMWS RD
Mailing City,St,Zip: ANACORTES, WA 98221
Gen County: Not reported
TSD EPA ID: Not reported
TSD County: Sacramento
Waste Category: Other organic solids
Disposal Method: D99
Tons: 3.15
Facility County: Not reported

Year: 2002
Gepaid: WAH000018291
Contact: STAMBACK, GREG
Telephone: 360299944
Mailing Name: Not reported
Mailing Address: 12441 BARTHOLOMWS RD
Mailing City,St,Zip: ANACORTES, WA 98221
Gen County: Not reported
TSD EPA ID: Not reported
TSD County: Sacramento
Waste Category: Off-specification, aged or surplus organics
Disposal Method: D99
Tons: 1.37
Facility County: Not reported

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

6
ENE
1/2-1
0.663 mi.
3501 ft.

MARCH POINT LANDFILL
1/4 MI E OF BN WHITMARSH
ANACORTES, WA 98221

FINDS **1007080352**
CSCSL **N/A**
HSL
ALLSITES
NPDES

Relative: Lower

Actual: 25 ft.

FINDS:

Registry ID: 110015570700

Environmental Interest/Information System
Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air

MARCH POINT LANDFILL (Continued) **1007080352**

Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

CSCSL:

Facility ID:	2662
Region:	Northwest
Lat/Long:	48.461620000000 / -122.5437699999
Brownfield Status:	Not reported
Rank Status:	2
Clean Up Siteid:	304
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Conventional Contaminants, Inorganic
Ground Water:	S
Surface Water:	S
Soil:	S
Sediment:	S
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2662
Region:	Northwest
Lat/Long:	48.461620000000 / -122.5437699999
Brownfield Status:	Not reported
Rank Status:	2
Clean Up Siteid:	304
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Conventional Contaminants, Organic
Ground Water:	S
Surface Water:	S
Soil:	S
Sediment:	S
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2662
Region:	Northwest
Lat/Long:	48.461620000000 / -122.5437699999
Brownfield Status:	Not reported
Rank Status:	2
Clean Up Siteid:	304
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Metals Priority Pollutants
Ground Water:	S
Surface Water:	S
Soil:	S
Sediment:	S
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2662

MARCH POINT LANDFILL (Continued) **1007080352**

Region: Northwest
Lat/Long: 48.461620000000 / -122.5437699999
Brownfield Status: Not reported
Rank Status: 2
Clean Up Siteid: 304
Site Status: Cleanup Started
PSI?: Yes
Contaminant Name: Non-Halogenated Solvents
Ground Water: S
Surface Water: S
Soil: S
Sediment: S
Air: Not reported
Bedrock: Not reported
Responsible Unit: Headquarters

Facility ID: 2662
Region: Northwest
Lat/Long: 48.461620000000 / -122.5437699999
Brownfield Status: Not reported
Rank Status: 2
Clean Up Siteid: 304
Site Status: Cleanup Started
PSI?: Yes
Contaminant Name: Pesticides-Unspecified
Ground Water: S
Surface Water: S
Soil: S
Sediment: S
Air: Not reported
Bedrock: Not reported
Responsible Unit: Headquarters

Facility ID: 2662
Region: Northwest
Lat/Long: 48.461620000000 / -122.5437699999
Brownfield Status: Not reported
Rank Status: 2
Clean Up Siteid: 304
Site Status: Cleanup Started
PSI?: Yes
Contaminant Name: Petroleum Products - unspecified
Ground Water: S
Surface Water: S
Soil: S
Sediment: S
Air: Not reported
Bedrock: Not reported
Responsible Unit: Headquarters

Facility ID: 2662
Region: Northwest
Lat/Long: 48.461620000000 / -122.5437699999
Brownfield Status: Not reported
Rank Status: 2
Clean Up Siteid: 304
Site Status: Cleanup Started

MARCH POINT LANDFILL (Continued) **1007080352**

PSI?: Yes
Contaminant Name: Phenolic Compounds
Ground Water: S
Surface Water: S
Soil: S
Sediment: S
Air: Not reported
Bedrock: Not reported
Responsible Unit: Headquarters

Facility ID: 2662
Region: Northwest
Lat/Long: 48.461620000000 / -122.5437699999
Brownfield Status: Not reported
Rank Status: 2
Clean Up Siteid: 304
Site Status: Cleanup Started
PSI?: Yes
Contaminant Name: Polychlorinated biPhenyls (PCB)
Ground Water: S
Surface Water: S
Soil: S
Sediment: S
Air: Not reported
Bedrock: Not reported
Responsible Unit: Headquarters

Facility ID: 2662
Region: Northwest
Lat/Long: 48.461620000000 / -122.5437699999
Brownfield Status: Not reported
Rank Status: 2
Clean Up Siteid: 304
Site Status: Cleanup Started
PSI?: Yes
Contaminant Name: Polynuclear Aromatic Hydrocarbons
Ground Water: S
Surface Water: S
Soil: S
Sediment: S
Air: Not reported
Bedrock: Not reported
Responsible Unit: Headquarters

HSL:
edr_fstat: WA
edr_fzip: Not reported
edr_fcnty: SKAGIT
edr_zip: Not reported
Facility Type: Hazardous Sites List
Facility Status: Cleanup Started
FSID Number: 2662
Rank: 2
Region: HQ

ALLSITES:

MARCH POINT LANDFILL (Continued) **1007080352**

Facility Id:	2662
Latitude:	48.4616200
Longitude:	-122.54376
Geographic location identifier (alias facid):	2662
Facility Name:	MARCH POINT LANDFILL
Latitude Decimal Degrees:	48.461620000000003
Longitude Decimal Degrees:	-122.54376999999999
Coordinate Point Areal Extent Code:	99
Horizontal Accuracy Code:	4
Coordinate Point Geographic Position Code:	99
Location Verified Code:	Y

Geographic Location Identifier (Alias Facid):	2662
Interaction (Aka Env Int) Type Code:	SCS
Interaction (Aka Env Int) Description:	State Cleanup Site
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	1900-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	MARCH POINT LANDFILL
cur_sys_pr:	TOXICS
cur_sys_nm:	ISIS

Geographic Location Identifier (Alias Facid):	2662
Interaction (Aka Env Int) Type Code:	SEDIMENT
Interaction (Aka Env Int) Description:	Sediments
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	1900-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	MARCH POINT LANDFILL
cur_sys_pr:	TOXICS
cur_sys_nm:	ISIS

Geographic Location Identifier (Alias Facid):	2662
Interaction (Aka Env Int) Type Code:	ENFORFNL
Interaction (Aka Env Int) Description:	Enforcement Final
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	2008-08-27 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	TOXICS
cur_sys_nm:	DMS

Geographic Location Identifier (Alias Facid):	2662
Interaction (Aka Env Int) Type Code:	INDUSTGP
Interaction (Aka Env Int) Description:	Industrial SW GP
Interaction Status:	A
Federal Program Indentifier:	WAR010087
Interaction Start Date:	2008-02-21 00:00:00
Interaction End Date:	Not reported
prgm_facil:	VENOIL LLC
cur_sys_pr:	WATQUAL
cur_sys_nm:	PARIS

MARCH POINT LANDFILL (Continued) **1007080352**

NPDES:

Facility Status:	Active
Facility Type:	Industrial SW GP
Admin Region:	Headquarters
Latitude:	48.46162000
Longitude:	-122.543769
Permit ID:	WAR010087
Permit Version:	2
Permit Status:	Active
Permit SubStatus:	Coverage Issued
Ecology Contact:	Mak Kaufman
WRIA:	Lower Skagit-Samish
Permit Expiration Date:	01/01/2015
Effective Date:	01/01/2010

7
NW
1/2-1
0.734 mi.
3875 ft.

Relative:
Lower

Actual:
21 ft.

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) **1000144953**
10200 WEST MARCH POINT ROAD **98221PGTSN60**
ANACORTES, WA 98221

RCRA-TSDF
CERC-NFRAP
CORRACTS
RCRA-LQG
US ENG CONTROLS
TRIS
CSCSL
ALLSITES
MANIFEST
SPILLS
NPDES

RCRA-TSDF:

Date form received by agency:	02/25/2010
Facility name:	SHELL OPUS PUGET SOUND REFINERY
Facility address:	8505 S TEXAS RD ANACORTES, WA 98221
EPA ID:	WAD009276197
Mailing address:	PO BOX 622 ANACORTES, WA 98221
Contact:	DIANE RUSHER
Contact address:	PO BOX 622 ANACORTES, WA 98221
Contact country:	US
Contact telephone:	(360) 293-1551
Contact email:	DIANE.RUSHER@SHELL.COM
EPA Region:	10
Land type:	Private
Classification:	TSDF
Description:	Handler is engaged in the treatment, storage or disposal of hazardous waste
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: SHELL OPUS PUGET SOUND REFINERY
Owner/operator address: PO BOX 622
ANACORTES, 98221
Owner/operator country: US
Owner/operator telephone: 360-293-0800
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/2002
Owner/Op end date: Not reported

Owner/operator name: SHELL OPUS PUGET SOUND REFINERY
Owner/operator address: PO BOX 622
ANACORTES, 98221
Owner/operator country: US
Owner/operator telephone: 360-293-0800
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/2002
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: Yes
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/29/2008
Facility name: SHELL OPUS PUGET SOUND REFINERY
Classification: Large Quantity Generator

Date form received by agency: 12/31/2007
Facility name: SHELL OPUS PUGET SOUND REFINERY
Classification: Large Quantity Generator

Date form received by agency: 12/31/2005
Facility name: SHELL OPUS PUGET SOUND REFINERY
Classification: Large Quantity Generator

Date form received by agency: 12/31/2003
Facility name: SHELL OPUS PUGET SOUND REFINERY

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Classification: Large Quantity Generator

Date form received by agency: 07/26/2002
Facility name: SHELL OPUS PUGET SOUND REFINERY
Site name: PUGET SOUND REFINING CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/2000
Facility name: SHELL OPUS PUGET SOUND REFINERY
Site name: PUGET SOUND REFINING CO
Classification: Large Quantity Generator

Date form received by agency: 03/02/1998
Facility name: SHELL OPUS PUGET SOUND REFINERY
Site name: TEXACO REFINING & MARKETING
Classification: Large Quantity Generator

Date form received by agency: 03/01/1996
Facility name: SHELL OPUS PUGET SOUND REFINERY
Site name: TEXACO REFINING & MARKETING INC-PUGET SO
Classification: Large Quantity Generator

Date form received by agency: 02/28/1994
Facility name: SHELL OPUS PUGET SOUND REFINERY
Site name: TEXACO REFINING & MARKETING
Classification: Large Quantity Generator

Date form received by agency: 09/01/1993
Facility name: SHELL OPUS PUGET SOUND REFINERY
Site name: TEXACO REFINING AND MARKETING
Classification: Large Quantity Generator

Date form received by agency: 12/31/1990
Facility name: SHELL OPUS PUGET SOUND REFINERY
Site name: TEXACO REFINING & MARKETING IN
Classification: Large Quantity Generator

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D003

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D006
Waste name: CADMIUM

Waste code: D007
Waste name: CHROMIUM

Waste code: D009
Waste name: MERCURY

Waste code: D011
Waste name: SILVER

Waste code: D018
Waste name: BENZENE

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F037
Waste name: PETROLEUM REFINERY PRIMARY OIL/WATER/SOLIDS SEPARATION SLUDGE-ANY SLUDGE GENERATED FROM THE GRAVITATIONAL SEPARATION OF OIL/WATER/SOLIDS DURING THE STORAGE OR TREATMENT OF PROCESS WASTEWATERS AND OILY COOLING WASTEWATERS FROM PETROLEUM REFINERIES. SUCH SLUDGES INCLUDE, BUT ARE NOT LIMITED TO, THOSE GENERATED IN: OIL/WATER/SOLIDS SEPARATORS; TANKS AND IMPOUNDMENTS; DITCHES AND OTHER CONVEYANCES; SUMPS; AND STORMWATER UNITS RECEIVING DRY WEATHER FLOW. SLUDGE GENERATED IN STORMWATER UNITS THAT DO NOT RECEIVE DRY WEATHER FLOW, SLUDGES GENERATED FROM NON-CONTACT ONCE-THROUGH COOLING WATERS SEGREGATED FOR TREATMENT FROM OTHER PROCESS OR OILY COOLING WATERS, SLUDGES GENERATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS AS DEFINED IN SECTION 261.31(B)(2) (INCLUDING SLUDGES GENERATED IN ONE OR MORE ADDITIONAL UNITS AFTER WASTEWATERS HAVE BEEN TREATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS) AND K051 WASTES ARE NOT INCLUDED IN THIS LISTING.

Waste code: K048
Waste name: DISSOLVED AIR FLOTATION (DAF) FLOAT FROM THE PETROLEUM REFINING INDUSTRY

Waste code: K049
Waste name: SLOP OIL EMULSION SOLIDS FROM THE PETROLEUM REFINING INDUSTRY

Waste code: K050
Waste name: HEAT EXCHANGER BUNDLE CLEANING SLUDGE FROM THE PETROLEUM REFINING INDUSTRY

Waste code: K169
Waste name: Crude oil storage tank sediment from petroleum refining operations.

Waste code: K170
Waste name: Clarified slurry oil storage tank sediment and/or in-line filter/separation solids from petroleum refining operations.

Waste code: K171
Waste name: Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (excludes inert support media)

Waste code: WSC2
Waste name: Washington State solid or semisolid corrosive Dangerous Waste with a pH less than or equal to 2, or greater than or equal to 12.5, based upon a specific testing method.

Waste code: WT02
Waste name: Washington State Dangerous Toxic Waste with a toxic constituents concentration greater than or equal to 0.001% and less than 1.0%,

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

determined by biological testing methods or a book designation procedure.

Biennial Reports:

Last Biennial Reporting Year: 2011

Annual Waste Handled:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs):	4080
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs):	210
Waste code:	D003
Waste name:	A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
Amount (Lbs):	905
Waste code:	D006
Waste name:	CADMIUM
Amount (Lbs):	800
Waste code:	D007
Waste name:	CHROMIUM
Amount (Lbs):	6500
Waste code:	D009
Waste name:	MERCURY
Amount (Lbs):	205
Waste code:	D011
Waste name:	SILVER
Amount (Lbs):	200
Waste code:	D018
Waste name:	BENZENE
Amount (Lbs):	625415
Waste code:	D035
Waste name:	METHYL ETHYL KETONE

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Amount (Lbs): 100

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 45

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 45

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 45

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 45

Waste code: F037
Waste name: PETROLEUM REFINERY PRIMARY OIL/WATER/SOLIDS SEPARATION SLUDGE-ANY SLUDGE GENERATED FROM THE GRAVITATIONAL SEPARATION OF OIL/WATER/SOLIDS DURING THE STORAGE OR TREATMENT OF PROCESS WASTEWATERS AND OILY COOLING WASTEWATERS FROM PETROLEUM REFINERIES. SUCH SLUDGES INCLUDE, BUT ARE NOT LIMITED TO, THOSE GENERATED IN: OIL/WATER/SOLIDS SEPARATORS; TANKS AND IMPOUNDMENTS; DITCHES AND OTHER CONVEYANCES; SUMPS; AND STORMWATER UNITS RECEIVING DRY WEATHER FLOW. SLUDGE GENERATED IN STORMWATER UNITS THAT DO NOT RECEIVE DRY WEATHER FLOW,

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

SLUDGES GENERATED FROM NON-CONTACT ONCE-THROUGH COOLING WATERS SEGREGATED FOR TREATMENT FROM OTHER PROCESS OR OILY COOLING WATERS, SLUDGES GENERATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS AS DEFINED IN SECTION 261.31(B)(2) (INCLUDING SLUDGES GENERATED IN ONE OR MORE ADDITIONAL UNITS AFTER WASTEWATERS HAVE BEEN TREATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS) AND K051 WASTES ARE NOT INCLUDED IN THIS LISTING.
Amount (Lbs): 105500

Waste code: K048
Waste name: DISSOLVED AIR FLOTATION (DAF) FLOAT FROM THE PETROLEUM REFINING INDUSTRY
Amount (Lbs): 6700

Waste code: K049
Waste name: SLOP OIL EMULSION SOLIDS FROM THE PETROLEUM REFINING INDUSTRY
Amount (Lbs): 6300

Waste code: K050
Waste name: HEAT EXCHANGER BUNDLE CLEANING SLUDGE FROM THE PETROLEUM REFINING INDUSTRY
Amount (Lbs): 24000

Waste code: K169
Waste name: Crude oil storage tank sediment from petroleum refining operations.
Amount (Lbs): 82080

Waste code: K170
Waste name: Clarified slurry oil storage tank sediment and/or in-line filter/separation solids from petroleum refining operations.
Amount (Lbs): 100

Waste code: K171
Waste name: Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (excludes inert support media)
Amount (Lbs): 965571

Corrective Action Summary:

Event date: 08/05/1988
Event: RFA Completed

Event date: 08/05/1988
Event: RFA Determination Of Need For An RFI, RFI is Necessary;

Event date: 03/31/1989
Event: RFI Imposition

Event date: 12/16/1990
Event: RFI Workplan Approved

Event date: 04/01/1991
Event: RFI Report Received

Event date: 10/04/1991
Event: CA Prioritization, Facility or area was assigned a medium corrective

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action priority.

Event date: 12/18/1991
Event: Stabilization Measures Evaluation,This facility is not amenable to stabilization activity because of a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available.

Event date: 05/21/1992
Event: Stabilization Measures Implemented, Groundwater extraction and treatment (e.g., to achieve groundwater containment, to achieve MCL).

Event date: 06/25/1992
Event: Stabilization Measures Evaluation,This facility is amenable to stabilization activity based on the status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations.

Event date: 10/08/1992
Event: CA Prioritization, Facility or area was assigned a high corrective action priority.

Event date: 12/28/1992
Event: CA550RC

Event date: 12/28/1992
Event: Stabilization Construction Completed

Event date: 12/28/1992
Event: CA770GW

Event date: 04/07/1997
Event: RFA Determination Of Need For An RFI, RFI is Necessary;

Event date: 04/07/1997
Event: RFA Determination Of Need For An RFI, RFI is Not Necessary;

Event date: 04/07/1997
Event: RFA Determination Of Need For An RFI, RFI is Not Necessary;

Event date: 08/26/1997
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 08/26/1997
Event: Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that

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monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 04/18/2001
Event: Igration of Contaminated Groundwater under Control, More information is needed to make a determination.

Event date: 04/18/2001
Event: Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 04/18/2001
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 01/22/2002
Event: Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 01/22/2002
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 09/28/2005
Event: CA550RC

Event date: 09/28/2005
Event: CA550RC

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Event date: 12/08/2009
Event: RFA Determination Of Need For An RFI, RFI is Not Necessary;

Event date: Not reported
Event: RFA Determination Of Need For An RFI, RFI is Necessary;

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: TSD - Financial Requirements
Date violation determined: 04/21/2011
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/10/2011
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 09/16/2009
Date achieved compliance: Not reported
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2009
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - Financial Requirements
Date violation determined: 09/16/2009
Date achieved compliance: Not reported
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2009
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - Financial Requirements
Date violation determined: 09/01/2009
Date achieved compliance: Not reported
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2009
Enf. disposition status: Not reported

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Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - LESS THAN 90 DAY ACCUMULATION
Area of violation: Generators - General
Date violation determined: 04/23/1997
Date achieved compliance: 06/14/1997
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/13/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - SATELLITE ACCUMULATION
Area of violation: Generators - General
Date violation determined: 04/23/1997
Date achieved compliance: 06/14/1997
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/13/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - SITE MANAGEMENT
Area of violation: Generators - General
Date violation determined: 04/23/1997
Date achieved compliance: 06/14/1997
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/13/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - INSPECTION LOGS
Area of violation: Generators - Records/Reporting
Date violation determined: 04/23/1997
Date achieved compliance: 06/14/1997
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/13/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - WAC 173-303-630(5)(c)
Area of violation: Generators - General
Date violation determined: 03/15/1995
Date achieved compliance: 07/15/1995
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - WAC 173-303-200(1)(d)
Area of violation: Generators - General
Date violation determined: 03/14/1995
Date achieved compliance: 07/15/1995
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - WAC 173-303-630(5)(c)
Area of violation: Generators - General
Date violation determined: 03/14/1995
Date achieved compliance: 07/15/1995
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - WAC 173-303-310
Area of violation: TSD - Land Treatment Standards
Date violation determined: 03/14/1995
Date achieved compliance: 07/15/1995
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - WAC 173-303-630(5)(a)
Area of violation: Generators - General
Date violation determined: 03/14/1995
Date achieved compliance: 07/15/1995
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - -200(1)(c)(d)
Area of violation: Generators - General
Date violation determined: 06/26/1991
Date achieved compliance: 09/02/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 06/22/1990
Date achieved compliance: 06/26/1991
Violation lead agency: State
Enforcement action: INITIAL MONITORING,ANALYSIS,TEST ORDER
Enforcement action date: 02/07/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 5500
Final penalty amount: 3000
Paid penalty amount: 3000

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 09/08/1988
Date achieved compliance: 06/26/1991
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 09/30/1987
Date achieved compliance: 05/16/1988
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/30/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 6000
Final penalty amount: 3000
Paid penalty amount: 3000

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 01/12/1987
Date achieved compliance: 04/25/1990
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 01/12/1987
Date achieved compliance: 05/16/1988
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/30/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 6000
Final penalty amount: 3000
Paid penalty amount: 3000

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 01/12/1987
Date achieved compliance: 12/01/1987
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 09/30/1986
Date achieved compliance: 05/16/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/03/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 09/30/1986
Date achieved compliance: 06/23/1987
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 09/30/1986
Date achieved compliance: 06/23/1997
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 09/30/1986
Date achieved compliance: 05/16/1988
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 04/23/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 20000
Final penalty amount: 15000
Paid penalty amount: 15000

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Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 04/02/1986
Date achieved compliance: 04/25/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/16/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 04/02/1986
Date achieved compliance: 12/01/1987
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/30/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 6000
Final penalty amount: 3000
Paid penalty amount: 3000

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 04/02/1986
Date achieved compliance: 04/25/1990
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/30/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 6000
Final penalty amount: 3000
Paid penalty amount: 3000

Regulation violated: Not reported
Area of violation: Permits - Application
Date violation determined: 07/16/1985
Date achieved compliance: 11/08/1985
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/16/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Area of violation: TSD - Closure/Post-Closure
Date violation determined: 07/25/1984
Date achieved compliance: 11/01/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/13/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 07/25/1984
Date achieved compliance: 11/01/1984
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 12/04/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 10000
Final penalty amount: 10000
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 07/25/1984
Date achieved compliance: 11/01/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/13/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 07/25/1984
Date achieved compliance: 04/25/1990
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 12/04/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 10000
Final penalty amount: 10000
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - Closure/Post-Closure

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Date violation determined: 07/25/1984
Date achieved compliance: 11/01/1984
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 12/04/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 10000
Final penalty amount: 10000
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 05/24/1984
Date achieved compliance: 11/01/1984
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/14/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 29750
Final penalty amount: 29750
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 05/24/1984
Date achieved compliance: 11/01/1984
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/24/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 10/25/1983
Date achieved compliance: 04/25/1990
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/14/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 10/15/1983

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Date achieved compliance: 11/10/1983
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 10/15/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 1500
Final penalty amount: 1500
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 10/15/1983
Date achieved compliance: 01/30/1984
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 10/15/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 1500
Final penalty amount: 1500
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 10/15/1983
Date achieved compliance: 01/30/1984
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 02/17/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 10/15/1983
Date achieved compliance: 06/14/1984
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 02/17/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 07/19/1983
Date achieved compliance: 04/25/1990

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/14/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 05/25/2011
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/21/2011
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/01/2009
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: State Statute or Regulation
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 09/01/2009
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 09/22/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/13/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/20/2002
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/05/2000
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Evaluation lead agency: State

Evaluation date: 06/08/1999
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/21/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/14/1997
Evaluation lead agency: EPA

Evaluation date: 04/21/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Records/Reporting
Date achieved compliance: 06/14/1997
Evaluation lead agency: EPA

Evaluation date: 11/12/1996
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 03/14/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/15/1995
Evaluation lead agency: State

Evaluation date: 03/14/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Land Treatment Standards
Date achieved compliance: 07/15/1995
Evaluation lead agency: State

Evaluation date: 09/02/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/22/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA Contractor/Grantee

Evaluation date: 06/22/1992
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA Contractor/Grantee

Evaluation date: 06/27/1991

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/26/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/02/1992
Evaluation lead agency: State

Evaluation date: 06/22/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 06/26/1991
Evaluation lead agency: State

Evaluation date: 04/14/1989
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 09/08/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 06/26/1991
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 09/30/1987
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 05/16/1988
Evaluation lead agency: State

Evaluation date: 01/12/1987
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 12/01/1987
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 01/12/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 04/25/1990
Evaluation lead agency: EPA

Evaluation date: 01/12/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 12/01/1987
Evaluation lead agency: EPA

Evaluation date: 01/12/1987
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 05/16/1988

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Evaluation lead agency: State

Evaluation date: 12/10/1986
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/30/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 06/23/1997
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 09/30/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 06/23/1987
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 09/30/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 05/16/1988
Evaluation lead agency: State

Evaluation date: 04/02/1986
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 04/25/1990
Evaluation lead agency: State

Evaluation date: 04/02/1986
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 12/01/1987
Evaluation lead agency: State

Evaluation date: 07/16/1985
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Permits - Application
Date achieved compliance: 11/08/1985
Evaluation lead agency: EPA

Evaluation date: 05/10/1985
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/25/1984
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/25/1984

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 04/25/1990
Evaluation lead agency: State

Evaluation date: 07/25/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 11/01/1984
Evaluation lead agency: State

Evaluation date: 07/25/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 11/01/1984
Evaluation lead agency: State

Evaluation date: 05/24/1984
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: TSD - General
Date achieved compliance: 11/01/1984
Evaluation lead agency: EPA

Evaluation date: 10/31/1983
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 10/25/1983
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 04/25/1990
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 10/15/1983
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 01/30/1984
Evaluation lead agency: State

Evaluation date: 10/15/1983
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 11/10/1983
Evaluation lead agency: State

Evaluation date: 10/15/1983
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 06/14/1984
Evaluation lead agency: State

Evaluation date: 07/19/1983
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 04/25/1990

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

CERC-NFRAP:
Site ID: 1000651
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:
Contact Sequence ID: 13152871.00000
Person ID: 10270424.00000

CERCLIS-NFRAP Site Alias Name(s):
Alias Name: TEXACO
Alias Address: P.O. BOX 622
ANACORTES, WA 98221

Alias Name: PUGET SOUND REF
Alias Address: Not reported
WA

Alias Name: TEXACO INC
Alias Address: MARCH PT
ANACORTES, WA 98221

Program Priority:
Description: TASWER Survey Site

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: Not reported
Date Completed: 07/01/1979
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: 07/01/1979
Date Completed: 07/01/1979
Priority Level: Higher priority for further assessment

Action: SITE INSPECTION
Date Started: 11/01/1979
Date Completed: 11/30/1979
Priority Level: Higher priority for further assessment

Action: SITE INSPECTION
Date Started: 08/16/1988
Date Completed: 08/16/1988
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 08/16/1988
Priority Level: Not reported

CORRACTS:

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 01/22/2002
Action: CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 01/22/2002
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: REMAINDER
Actual Date: 03/31/1989
Action: CA100 - RFI Imposition
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 11 West Impounding Basin
Actual Date: 04/01/1991
Action: CA190 - RFI Report Received
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: 04/01/1991
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMUS 38, 39, 41, AND 42
Actual Date: 04/07/1997
Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMUS 8, 9, 10, 30, AND 31
Actual Date: 04/07/1997

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 1 OILY WATER SEWER
Actual Date: 04/07/1997
Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 04/18/2001
Action: CA750IN - Migration of Contaminated Groundwater under Control, More information is needed to make a determination
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 04/18/2001
Action: CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 04/18/2001
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 11 West Impounding Basin
Actual Date: 05/21/1992
Action: CA600GW - Stabilization Measures Implemented, Groundwater extraction and treatment
NAICS Code(s): 32411
Petroleum Refineries

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 06/25/1992
Action: CA225YE - Stabilization Measures Evaluation, This facility ,is amenable to stabilization activity based on the, status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 08/05/1988
Action: CA050 - RFA Completed
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 08/05/1988
Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: 08/05/1988
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 08/26/1997
Action: CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 08/26/1997
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 46 NO. 1 OVERFLOW BASIN
Actual Date: 09/28/2005
Action: CA550RC
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 40 EQUALIZATION BASIN
Actual Date: 09/28/2005
Action: CA550RC
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 10/04/1991
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 10/08/1992
Action: CA075HI - CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 55
Actual Date: 12/08/2009
Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: REMAINDER
Actual Date: 12/16/1990
Action: CA150 - RFI Workplan Approved

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: ENTIRE FACILITY
Actual Date: 12/18/1991
Action: CA225IN - Stabilization Measures Evaluation, This facility is not, amenable to stabilization activity because of, a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 11 West Impounding Basin
Actual Date: 12/28/1992
Action: CA650 - Stabilization Construction Completed
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: 12/28/1992
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 11 West Impounding Basin
Actual Date: 12/28/1992
Action: CA550RC
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 11 West Impounding Basin
Actual Date: 12/28/1992
Action: CA770GW
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: WAD009276197
EPA Region: 10
Area Name: SWMU 1 OILY WATER SEWER
Actual Date: Not reported
Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s): 32411
Petroleum Refineries
Original schedule date: 12/31/2010

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Schedule end date: Not reported

US ENG CONTROLS:
EPA ID: WAD009276197
Site ID: Not reported
Name: SHELL OPUS PUGET SOUND REFINERY
Address: 8505 S TEXAS RD
ANACORTES, WA 98221
EPA Region: 10
County: SKAGIT
Event Code: CA770GW
Actual Date: 28-DEC-92

Action ID: Not reported
Action Name: Not reported
Action Completion date: Not reported
Planned Complet. date: Not reported
Operable Unit: Not reported
Contaminated Media : Not reported
Engineering Control: Not reported

CSCSL:
Facility ID: 7
Region: Northwest
Lat/Long: 48.467551 / -122.570059
Brownfield Status: Not reported
Rank Status: Not reported
Clean Up Siteid: 2865
Site Status: Cleanup Complete-Active O&M/Monitoring
PSI?: Yes
Contaminant Name: Petroleum Products - unspecified
Ground Water: Not reported
Surface Water: Not reported
Soil: C
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Industrial

ALLSITES:
Facility Id: 7
Latitude: 48.467551
Longitude: -122.57005
Geographic location identifier (alias facid): 7
Facility Name: Shell OPUS Puget Sound Refinery
Latitude Decimal Degrees: 48.467551
Longitude Decimal Degrees: -122.570059
Coordinate Point Areal Extent Code: 99
Horizontal Accuracy Code: 5
Coordinate Point Geographic Position Code: 8
Location Verified Code: N

Geographic Location Identifier (Alias Facid): 7
Interaction (Aka Env Int) Type Code: AQOPS
Interaction (Aka Env Int) Description: Air Qual Oper Permit Source

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Interaction Status:	A
Federal Program Indentifier:	D 057 0003
Interaction Start Date:	1977-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	AIRQUAL
cur_sys_nm:	AIRSIS

Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	HWG
Interaction (Aka Env Int) Description:	Hazardous Waste Generator
Interaction Status:	A
Federal Program Indentifier:	WAD009276197
Interaction Start Date:	1980-08-18 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	HAZWASTE
cur_sys_nm:	TURBOWASTE

Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	HWTSDF
Interaction (Aka Env Int) Description:	Haz Treatment Storage Facility
Interaction Status:	I
Federal Program Indentifier:	WAD009276197
Interaction Start Date:	1980-08-18 00:00:00
Interaction End Date:	2004-02-09 00:00:00
prgm_facil:	Not reported
cur_sys_pr:	HAZWASTE
cur_sys_nm:	TURBOWASTE

Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	TRI
Interaction (Aka Env Int) Description:	Toxics Release Inventory
Interaction Status:	A
Federal Program Indentifier:	WAD009276197
Interaction Start Date:	1987-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	HAZWASTE
cur_sys_nm:	EPCRA

Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	TIER2
Interaction (Aka Env Int) Description:	Emergency/Haz Chem Rpt TIER2
Interaction Status:	A
Federal Program Indentifier:	WAD009276197
Interaction Start Date:	1988-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	HAZWASTE
cur_sys_nm:	EPCRA

Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	HWP
Interaction (Aka Env Int) Description:	Hazardous Waste Planner
Interaction Status:	A
Federal Program Indentifier:	WAD009276197

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Interaction Start Date:	1991-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	HAZWASTE
cur_sys_nm:	HWPPRT
Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	CPLAN
Interaction (Aka Env Int) Description:	Oil Facility Contingency Plan
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	1991-07-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	SPILLS
cur_sys_nm:	SPILLS
Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	INDPNDNT
Interaction (Aka Env Int) Description:	Independent Cleanup
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	1996-01-31 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Shell OPUS Puget Sound Refinery
cur_sys_pr:	TOXICS
cur_sys_nm:	ISIS
Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	HWTSDF
Interaction (Aka Env Int) Description:	Haz Treatment Storage Facility
Interaction Status:	A
Federal Program Indentifier:	WAD009276197
Interaction Start Date:	2003-12-31 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	HAZWASTE
cur_sys_nm:	TURBOWASTE
Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	LANDFILL
Interaction (Aka Env Int) Description:	Landfill
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	1900-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Shell Puget Sound Refinery
cur_sys_pr:	W2R
cur_sys_nm:	SWFD
Geographic Location Identifier (Alias Facid):	7
Interaction (Aka Env Int) Type Code:	NONENFNL
Interaction (Aka Env Int) Description:	Non Enforcement Final
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	2006-03-24 00:00:00
Interaction End Date:	Not reported

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

prgm_facil: Not reported
cur_sys_pr: INDUSTRIAL
cur_sys_nm: DMS

Geographic Location Identifier (Alias Facid): 7
Interaction (Aka Env Int) Type Code: ENFORFNL
Interaction (Aka Env Int) Description: Enforcement Final
Interaction Status: A
Federal Program Indentifier: Not reported
Interaction Start Date: 2006-03-24 00:00:00
Interaction End Date: Not reported
prgm_facil: Not reported
cur_sys_pr: INDUSTRIAL
cur_sys_nm: DMS

Geographic Location Identifier (Alias Facid): 7
Interaction (Aka Env Int) Type Code: ENFORFNL
Interaction (Aka Env Int) Description: Enforcement Final
Interaction Status: A
Federal Program Indentifier: Not reported
Interaction Start Date: 2006-10-18 00:00:00
Interaction End Date: Not reported
prgm_facil: Not reported
cur_sys_pr: SPILLS
cur_sys_nm: DMS

Geographic Location Identifier (Alias Facid): 7
Interaction (Aka Env Int) Type Code: INDUSTIP
Interaction (Aka Env Int) Description: Industrial IP
Interaction Status: A
Federal Program Indentifier: WA0002941
Interaction Start Date: 1990-03-01 00:00:00
Interaction End Date: Not reported
prgm_facil: SHELL OIL PRODUCTS US
cur_sys_pr: WATQUAL
cur_sys_nm: PARIS

WA MANIFEST:
Facility Site ID Number: 7
SWC Desc: Not reported
FWC Desc: Not reported
Form Comm: Not reported
Data Year: 2010
Permit by Rule: False
Treatment by Generator: False
Mixed radioactive waste: False
Importer of hazardous waste: False
Immediate recycler: False
Treatment/Storage/Disposal/Recycling Facility: True
Generator of dangerous fuel waste: False
Generator marketing to burner: False
"Other marketers (i.e., blender, distributor, etc.)": False
Utility boiler burner: False
Industry boiler burner: False
Industrial Furnace: False
Smelter defferal: False

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Universal waste - batteries - generate:	False
Universal waste - thermostats - generate:	False
Universal waste - mercury - generate:	True
Universal waste - lamps - generate:	True
Universal waste - batteries - accumulate:	True
Universal waste - thermostats - accumulate:	False
Universal waste - mercury - accumulate:	True
Universal waste - lamps - accumulate:	True
Destination Facility for Universal Waste:	False
Off-specification used oil burner - utility boiler:	False
Off-specification used oil burner - industrial boiler:	False
Off-specification used oil burner - industrial furnace:	False
EPA ID:	WAD009276197
Facility Address 2:	Not reported
TAX REG NBR:	602160526
NAICS CD:	324110
BUSINESS TYPE:	Petroluem Refinery
MAIL NAME:	Shell OPUS Puget Sound Refinery
MAIL ADDR LINE1:	PO BOX 622
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	Shell OPUS Puget Sound Refinery
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	PO BOX 622
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	360-293-0800
LEGAL EFFECTIVE DATE:	1/1/2002
LAND ORG NAME:	Shell OPUS Puget Sound Refinery
LAND ORG TYPE:	Private
LAND PERSON NAME:	Not reported
LAND ADDR LINE1:	PO BOX 622
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	360-293-0800
OPERATOR ORG NAME:	Shell OPUS Puget Sound Refinery
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	PO BOX 622
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	360-293-0800
OPERATOR EFFECTIVE DATE:	1/1/2002
SITE CONTACT NAME:	Diane Rusher
SITE CONTACT ADDR LINE1:	PO BOX 622
SITE CONTACT ZIP:	ANACORTES, WA 98221
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	360-293-1551
SITE CONTACT EMAIL:	diane.rusher@shell.com
FORM CONTACT NAME:	Michael P DuBois
FORM CONTACT ADDR LINE1:	PO Box 622
FORM CONTACT CITY,ST,ZIP:	Anacortes, WA 98221
FORM CONTACT COUNTRY:	UNITED STATES
FORM CONTACT PHONE NBR:	360-293-0865
FORM CONTACT EMAIL:	michael.dubois@shell.com
GEN STATUS CD:	LQG
MONTHLY GENERATION:	True
BATCH GENERATION:	False

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

ONE TIME GENERATION: False
TRANSPORTS OWN WASTE: False
TRANSPORTS OTHRS WASTE: False
RECYCLER ONSITE: False
TRANSFER FACILITY: False
OTHER EXEMPTION: Not reported
UW BATTERY GEN: True
USED OIL TRANSPORTER: False
USED OIL TRANSFER FACLTY: False
USED OIL PROCESSOR: False
USED OIL REREFINER: False
USED OIL FUEL MRKTR DIRECTS SHPMNTS: False
USED OIL FUEL MRKTR MEETS SPECS: False

Facility Site ID Number: 7
SWC Desc: WT02, WSC2
FWC Desc: D001, D018, K048, K049, K050, K051, K169, K170, K171, FO37, F038
Form Comm: Not reported
Data Year: 2009
Permit by Rule: True
Treatment by Generator: False
Mixed radioactive waste: False
Importer of hazardous waste: False
Immediate recycler: False
Treatment/Storage/Disposal/Recycling Facility: True
Generator of dangerous fuel waste: False
Generator marketing to burner: False
"Other marketers (i.e., blender, distributor, etc.)": False
Utility boiler burner: False
Industry boiler burner: False
Industrial Furnace: False
Smelter defferal: False
Universal waste - batteries - generate: False
Universal waste - thermostats - generate: False
Universal waste - mercury - generate: False
Universal waste - lamps - generate: False
Universal waste - batteries - accumulate: False
Universal waste - thermostats - accumulate: False
Universal waste - mercury - accumulate: False
Universal waste - lamps - accumulate: False
Destination Facility for Universal Waste: False
Off-specification used oil burner - utility boiler: False
Off-specification used oil burner - industrial boiler: False
Off-specification used oil burner - industrial furnace: False
EPA ID: WAD009276197
Facility Address 2: Not reported
TAX REG NBR: 602160526
NAICS CD: 324110
BUSINESS TYPE: Petroluem Refinery
MAIL NAME: Shell OPUS Puget Sound Refinery
MAIL ADDR LINE1: PO BOX 622
MAIL CITY,ST,ZIP: ANACORTES, WA 98221
MAIL COUNTRY: UNITED STATES
LEGAL ORG NAME: Shell OPUS Puget Sound Refinery
LEGAL ORG TYPE: Private
LEGAL ADDR LINE1: PO BOX 622
LEGAL CITY,ST,ZIP: ANACORTES, WA 98221

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	360-293-0800
LEGAL EFFECTIVE DATE:	1/1/2002
LAND ORG NAME:	Shell OPUS Puget Sound Refinery
LAND ORG TYPE:	Private
LAND PERSON NAME:	Not reported
LAND ADDR LINE1:	PO BOX 622
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	360-293-0800
OPERATOR ORG NAME:	Shell OPUS Puget Sound Refinery
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	PO BOX 622
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	360-293-0800
OPERATOR EFFECTIVE DATE:	1/1/2002
SITE CONTACT NAME:	Diane Rusher
SITE CONTACT ADDR LINE1:	PO BOX 622
SITE CONTACT ZIP:	ANACORTES, WA 98221
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	360-293-1551
SITE CONTACT EMAIL:	diane.rusher@shell.com
FORM CONTACT NAME:	Peter Klemm
FORM CONTACT ADDR LINE1:	PO Box 622
FORM CONTACT CITY,ST,ZIP:	Anacortes, WA 98221
FORM CONTACT COUNTRY:	UNITED STATES
FORM CONTACT PHONE NBR:	360-293-0868
FORM CONTACT EMAIL:	peter.klemm@shell.com
GEN STATUS CD:	LQG
MONTHLY GENERATION:	True
BATCH GENERATION:	False
ONE TIME GENERATION:	False
TRANSPORTS OWN WASTE:	False
TRANSPORTS OTHRS WASTE:	False
RECYCLER ONSITE:	False
TRANSFER FACILITY:	False
OTHER EXEMPTION:	Not reported
UW BATTERY GEN:	False
USED OIL TRANSPORTER:	False
USED OIL TRANSFER FACLTY:	False
USED OIL PROCESSOR:	False
USED OIL REREFINER:	False
USED OIL FUEL MRKTR DIRECTS SHPMNTS:	False
USED OIL FUEL MRKTR MEETS SPECS:	False

Facility Site ID Number:	7
SWC Desc:	WT01WT02WP01WP02WP03WL01WL02WSC2W001WT01,WT02,
FWC Desc:	D001,D002,D003,D004,D005,D006,D007,D008,D009,D010,D018,D023,D024,D025,D026,F003,F037,F
Form Comm:	Not reported
Data Year:	Not reported
Permit by Rule:	No
Treatment by Generator:	Yes
Mixed radioactive waste:	No
Importer of hazardous waste:	No
Immediate recycler:	No
Treatment/Storage/Disposal/Recycling Facility:	Yes

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Generator of dangerous fuel waste:	No
Generator marketing to burner:	No
"Other marketers (i.e., blender, distributor, etc.)":	No
Utility boiler burner:	No
Industry boiler burner:	No
Industrial Furnace:	No
Smelter defferal:	No
Universal waste - batteries - generate:	No
Universal waste - thermostats - generate:	No
Universal waste - mercury - generate:	No
Universal waste - lamps - generate:	No
Universal waste - batteries - accumulate:	No
Universal waste - thermostats - accumulate:	No
Universal waste - mercury - accumulate:	No
Universal waste - lamps - accumulate:	No
Destination Facility for Universal Waste:	No
Off-specification used oil burner - utility boiler:	No
Off-specification used oil burner - industrial boiler:	No
Off-specification used oil burner - industrial furnace:	No
EPA ID:	WAD009276197
Facility Address 2:	Not reported
TAX REG NBR:	602160526
NAICS CD:	324110
BUSINESS TYPE:	Petroluem Refinery
MAIL NAME:	Shell OPUS Puget Sound Refinery
MAIL ADDR LINE1:	PO BOX 622
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	Shell OPUS Puget Sound Refinery
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	PO BOX 622
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	360-293-0800
LEGAL EFFECTIVE DATE:	1/1/2002
LAND ORG NAME:	Shell OPUS Puget Sound Refinery
LAND ORG TYPE:	Private
LAND PERSON NAME:	Not reported
LAND ADDR LINE1:	PO BOX 622
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	360-293-0800
OPERATOR ORG NAME:	Shell OPUS Puget Sound Refinery
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	PO BOX 622
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	360-293-0800
OPERATOR EFFECTIVE DATE:	1/1/2002
SITE CONTACT NAME:	Mark J Koslicki
SITE CONTACT ADDR LINE1:	PO BOX 622
SITE CONTACT ZIP:	ANACORTES, WA 98221
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	360-293-1710
SITE CONTACT EMAIL:	mark.koslicki@shell.com
FORM CONTACT NAME:	Jeffery E Mussen
FORM CONTACT ADDR LINE1:	PO Box 622

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

FORM CONTACT CITY,ST,ZIP: Anacortes, WA 98221
FORM CONTACT COUNTRY: UNITED STATES
FORM CONTACT PHONE NBR: 360-293-0865
FORM CONTACT EMAIL: jeff.mussen@shell.com
GEN STATUS CD: LQG
MONTHLY GENERATION: Yes
BATCH GENERATION: No
ONE TIME GENERATION: No
TRANSPORTS OWN WASTE: No
TRANSPORTS OTHRS WASTE: No
RECYCLER ONSITE: No
TRANSFER FACILITY: No
OTHER EXEMPTION: Not reported
UW BATTERY GEN: No
USED OIL TRANSPORTER: No
USED OIL TRANSFER FACLTY: No
USED OIL PROCESSOR: No
USED OIL REREFINER: No
USED OIL FUEL MRKTR DIRECTS SHPMNTS: No
USED OIL FUEL MRKTR MEETS SPECS: No

Facility Site ID Number: 7
SWC Desc: WT01WT02WP01WP02WP03WL01WL02WSC2W001WT01,WT02,
FWC Desc: D001,D002,D003,D004,D005,D006,D007,D008,D009,D010,D018,D023,D024,D025,D026,F003,F037,F
Form Comm: Not reported
Data Year: Not reported
Permit by Rule: FALSE
Treatment by Generator: TRUE
Mixed radioactive waste: FALSE
Importer of hazardous waste: FALSE
Immediate recycler: FALSE
Treatment/Storage/Disposal/Recycling Facility: TRUE
Generator of dangerous fuel waste: FALSE
Generator marketing to burner: FALSE
"Other marketers (i.e., blender, distributor, etc.)": FALSE
Utility boiler burner: FALSE
Industry boiler burner: FALSE
Industrial Furnace: FALSE
Smelter defferal: FALSE
Universal waste - batteries - generate: FALSE
Universal waste - thermostats - generate: FALSE
Universal waste - mercury - generate: FALSE
Universal waste - lamps - generate: FALSE
Universal waste - batteries - accumulate: FALSE
Universal waste - thermostats - accumulate: FALSE
Universal waste - mercury - accumulate: FALSE
Universal waste - lamps - accumulate: FALSE
Destination Facility for Universal Waste: FALSE
Off-specification used oil burner - utility boiler: FALSE
Off-specification used oil burner - industrial boiler: FALSE
Off-specification used oil burner - industrial furnace: FALSE
EPA ID: WAD009276197
Facility Address 2: Not reported
TAX REG NBR: 602160526
NAICS CD: 324110
BUSINESS TYPE: Petroluem Refinery
MAIL NAME: Shell OPUS Puget Sound Refinery

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

MAIL ADDR LINE1:	PO BOX 622
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	Shell OPUS Puget Sound Refinery
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	PO BOX 622
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	360-293-0800
LEGAL EFFECTIVE DATE:	1/1/2002
LAND ORG NAME:	Shell OPUS Puget Sound Refinery
LAND ORG TYPE:	Private
LAND PERSON NAME:	Not reported
LAND ADDR LINE1:	PO BOX 622
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	360-293-0800
OPERATOR ORG NAME:	Shell OPUS Puget Sound Refinery
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	PO BOX 622
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	360-293-0800
OPERATOR EFFECTIVE DATE:	1/1/2002
SITE CONTACT NAME:	Diane Rusher
SITE CONTACT ADDR LINE1:	PO BOX 622
SITE CONTACT ZIP:	ANACORTES, WA 98221
SITE CONTACT COUNTRY:	UNITED STATES
SITE CONTACT PHONE NBR:	360-293-1551
SITE CONTACT EMAIL:	diane.rusher@shell.com
FORM CONTACT NAME:	Jeffery E Mussen
FORM CONTACT ADDR LINE1:	PO Box 622
FORM CONTACT CITY,ST,ZIP:	Anacortes, WA 98221
FORM CONTACT COUNTRY:	UNITED STATES
FORM CONTACT PHONE NBR:	360-293-0865
FORM CONTACT EMAIL:	jeff.mussen@shell.com
GEN STATUS CD:	LQG
MONTHLY GENERATION:	TRUE
BATCH GENERATION:	FALSE
ONE TIME GENERATION:	FALSE
TRANSPORTS OWN WASTE:	FALSE
TRANSPORTS OTHRS WASTE:	FALSE
RECYCLER ONSITE:	FALSE
TRANSFER FACILITY:	FALSE
OTHER EXEMPTION:	Not reported
UW BATTERY GEN:	FALSE
USED OIL TRANSPORTER:	FALSE
USED OIL TRANSFER FACLTY:	FALSE
USED OIL PROCESSOR:	FALSE
USED OIL REREFINER:	FALSE
USED OIL FUEL MRKTR DIRECTS SHPMNTS:	FALSE
USED OIL FUEL MRKTR MEETS SPECS:	FALSE

Facility Site ID Number:	7
SWC Desc:	WT01,WT02,WP01,WP02,WP03,WL01,WL02,WSC2,WPCB
FWC Desc:	D001,D002,D003,D004,D005,D006,D007,D008,D009,D010,D018,D023,D024,D025,D026,F003,F037,F
Form Comm:	Not reported

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Data Year:	2008
Permit by Rule:	False
Treatment by Generator:	True
Mixed radioactive waste:	False
Importer of hazardous waste:	False
Immediate recycler:	False
Treatment/Storage/Disposal/Recycling Facility:	True
Generator of dangerous fuel waste:	False
Generator marketing to burner:	False
"Other marketers (i.e., blender, distributor, etc.)":	False
Utility boiler burner:	False
Industry boiler burner:	False
Industrial Furnace:	False
Smelter defferal:	False
Universal waste - batteries - generate:	False
Universal waste - thermostats - generate:	False
Universal waste - mercury - generate:	False
Universal waste - lamps - generate:	False
Universal waste - batteries - accumulate:	False
Universal waste - thermostats - accumulate:	False
Universal waste - mercury - accumulate:	False
Universal waste - lamps - accumulate:	False
Destination Facility for Universal Waste:	False
Off-specification used oil burner - utility boiler:	False
Off-specification used oil burner - industrial boiler:	False
Off-specification used oil burner - industrial furnace:	False
EPA ID:	WAD009276197
Facility Address 2:	Not reported
TAX REG NBR:	602160526
NAICS CD:	324110
BUSINESS TYPE:	Petroluem Refinery
MAIL NAME:	Shell OPUS Puget Sound Refinery
MAIL ADDR LINE1:	PO BOX 622
MAIL CITY,ST,ZIP:	ANACORTES, WA 98221
MAIL COUNTRY:	UNITED STATES
LEGAL ORG NAME:	Shell OPUS Puget Sound Refinery
LEGAL ORG TYPE:	Private
LEGAL ADDR LINE1:	PO BOX 622
LEGAL CITY,ST,ZIP:	ANACORTES, WA 98221
LEGAL COUNTRY:	UNITED STATES
LEGAL PHONE NBR:	360-293-0800
LEGAL EFFECTIVE DATE:	1/1/2002
LAND ORG NAME:	Shell OPUS Puget Sound Refinery
LAND ORG TYPE:	Private
LAND PERSON NAME:	Not reported
LAND ADDR LINE1:	PO BOX 622
LAND CITY,ST,ZIP:	ANACORTES, WA 98221
LAND COUNTRY:	UNITED STATES
LAND PHONE NBR:	360-293-0800
OPERATOR ORG NAME:	Shell OPUS Puget Sound Refinery
OPERATOR ORG TYPE:	Private
OPERATOR ADDR LINE1:	PO BOX 622
OPERATOR CITY,ST,ZIP:	ANACORTES, WA 98221
OPERATOR COUNTRY:	UNITED STATES
OPERATOR PHONE NBR:	360-293-0800
OPERATOR EFFECTIVE DATE:	1/1/2002
SITE CONTACT NAME:	Diane Rusher

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

SITE CONTACT ADDR LINE1: PO BOX 622
SITE CONTACT ZIP: ANACORTES, WA 98221
SITE CONTACT COUNTRY: UNITED STATES
SITE CONTACT PHONE NBR: 360-293-1551
SITE CONTACT EMAIL: diane.rusher@shell.com
FORM CONTACT NAME: Jeffery E Mussen
FORM CONTACT ADDR LINE1: PO Box 622
FORM CONTACT CITY,ST,ZIP: Anacortes, WA 98221
FORM CONTACT COUNTRY: UNITED STATES
FORM CONTACT PHONE NBR: 360-293-0865
FORM CONTACT EMAIL: jeff.mussen@shell.com
GEN STATUS CD: LQG
MONTHLY GENERATION: True
BATCH GENERATION: False
ONE TIME GENERATION: False
TRANSPORTS OWN WASTE: False
TRANSPORTS OTHRS WASTE: False
RECYCLER ONSITE: False
TRANSFER FACILITY: False
OTHER EXEMPTION: Not reported
UW BATTERY GEN: False
USED OIL TRANSPORTER: False
USED OIL TRANSFER FACLTY: False
USED OIL PROCESSOR: False
USED OIL REREFINER: False
USED OIL FUEL MRKTR DIRECTS SHPMNTS: False
USED OIL FUEL MRKTR MEETS SPECS: False

Click this hyperlink while viewing on your computer to access
1 additional WA MANIFEST: record(s) in the EDR Site Report.

SPILLS:

Facility ID: 613150
Medium: SOIL
Material Desc: PETROLEUM - OIL OTHER
Material Qty: 5
Material Units: GALLON
Date Received: 5/30/2009 4:32:00 PM
Contact Name: Not reported

Facility ID: 560414
Medium: Not reported
Material Desc: PETROLEUM - OIL OTHER
Material Qty: 1
Material Units: GALLON
Date Received: 1/30/2007
Contact Name: Not reported

Facility ID: 559110
Medium: Not reported
Material Desc: PETROLEUM - HYDRAULIC OIL
Material Qty: 1
Material Units: QUART
Date Received: 11/22/2006
Contact Name: MUSSEN

Facility ID: 559734

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Medium: Not reported
Material Desc: PETROLEUM - UNKNOWN
Material Qty: 1
Material Units: SHEEN
Date Received: 12/28/2006
Contact Name: UNK

Facility ID: 523624
Medium: Not reported
Material Desc: PETROLEUM - DIESEL FUEL
Material Qty: 1
Material Units: OUNCE
Date Received: 1/15/2002
Contact Name: Not reported

Facility ID: 600921
Medium: Not reported
Material Desc: WASTE WATER
Material Qty: Not reported
Material Units: Not reported
Date Received: 9/24/2007 10:20:00 AM
Contact Name: Not reported

Facility ID: 510160
Medium: Not reported
Material Desc: CHEMICAL
Material Qty: Not reported
Material Units: Not reported
Date Received: 3/22/2000
Contact Name: EQUILON

Facility ID: 600904
Medium: Not reported
Material Desc: PETROLEUM - CRUDE OIL
Material Qty: 1
Material Units: GALLON
Date Received: 9/22/2007 9:30:00 AM
Contact Name: Not reported

Facility ID: 561296
Medium: Not reported
Material Desc: UNKNOWN
Material Qty: Not reported
Material Units: Not reported
Date Received: 3/19/2007
Contact Name: UNK

Facility ID: 562394
Medium: Not reported
Material Desc: OTHER - SEE NOTE
Material Qty: Not reported
Material Units: Not reported
Date Received: 5/7/2007
Contact Name: Not reported

Facility ID: 616736
Medium: AIR

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Material Desc: CHEMICAL
Material Qty: Not reported
Material Units: Not reported
Date Received: 11/25/2009 2:27:00 AM
Contact Name: Not reported

Facility ID: 612355
Medium: AIR
Material Desc: OTHER - SEE NOTE
Material Qty: Not reported
Material Units: Not reported
Date Received: 4/23/2009 7:39:00 PM
Contact Name: Not reported

Facility ID: 510163
Medium: Not reported
Material Desc: CHEMICAL
Material Qty: Not reported
Material Units: Not reported
Date Received: 3/26/2000
Contact Name: EQUILON

Facility ID: 558960
Medium: Not reported
Material Desc: CHEMICAL
Material Qty: Not reported
Material Units: Not reported
Date Received: 11/15/2006
Contact Name: Not reported

Facility ID: 604226
Medium: Not reported
Material Desc: PETROLEUM - UNKNOWN
Material Qty: Not reported
Material Units: GALLON
Date Received: 3/10/2008 11:03:00 AM
Contact Name: UNKNOWN

Facility ID: 616631
Medium: SOIL
Material Desc: PETROLEUM - OIL OTHER
Material Qty: 5
Material Units: GALLON
Date Received: 11/20/2009 3:40:00 AM
Contact Name: Not reported

Facility ID: 560413
Medium: Not reported
Material Desc: PETROLEUM - UNKNOWN
Material Qty: 1
Material Units: SHEEN
Date Received: 1/30/2007
Contact Name: Not reported

Facility ID: 562644
Medium: Not reported
Material Desc: PETROLEUM - UNKNOWN

TESORO ANACORTES REFINERY (FORMERLY TEXACO INC) (Continued) **1000144953**

Material Qty: 1
Material Units: SHEEN
Date Received: 5/17/2007
Contact Name: Not reported

Facility ID: 560374
Medium: Not reported
Material Desc: PETROLEUM - CRUDE OIL
Material Qty: 1
Material Units: SHEEN
Date Received: 1/27/2007
Contact Name: Not reported

Facility ID: 541815
Medium: Not reported
Material Desc: VEGETABLE OIL
Material Qty: 3
Material Units: DRIP
Date Received: 6/30/2004
Contact Name: Not reported

Facility ID: 618116
Medium: SURFACE WATER-MARINE
Material Desc: PETROLEUM - OIL OTHER
Material Qty: 1
Material Units: GALLON
Date Received: 2/13/2010 9:37:00 AM
Contact Name: Not reported

Facility ID: 618323
Medium: AIR
Material Desc: CHEMICAL
Material Qty: Not reported
Material Units: Not reported
Date Received: 2/25/2010 11:06:00 PM
Contact Name: Not reported

NPDES:
Facility Status: Active
Facility Type: Industrial NPDES IP
Admin Region: Industrial
Latitude: 48.467551
Longitude: -122.570059
Permit ID: WA0002941
Permit Version: 3
Permit Status: Active
Permit SubStatus: Renewed
Ecology Contact: Mark Dirkx
WRIA: Lower Skagit-Samish
Permit Expiration Date: 07/01/2013
Effective Date: 07/01/2008

8
West
1/2-1
0.767 mi.
4051 ft.

SIMILK INC GOLF COURSE
1250 CHRISTIANSEN RD
ANACORTES, WA 98221

CSCSL
ALLSITES
LUST
UST
ICR

U000586768
N/A

Relative:
Lower

Actual:
31 ft.

CSCSL:

Facility ID:	43397816
Region:	Northwest
Lat/Long:	48.462029999999 / -122.57129
Brownfield Status:	Not reported
Rank Status:	Not reported
Clean Up Siteid:	9174
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Benzene
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	C
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID:	43397816
Region:	Northwest
Lat/Long:	48.462029999999 / -122.57129
Brownfield Status:	Not reported
Rank Status:	Not reported
Clean Up Siteid:	9174
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Diesel
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	RB
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID:	43397816
Region:	Northwest
Lat/Long:	48.462029999999 / -122.57129
Brownfield Status:	Not reported
Rank Status:	Not reported
Clean Up Siteid:	9174
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Gasoline
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	C
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID: 43397816

SIMILK INC GOLF COURSE (Continued) **U000586768**

Region:	Northwest
Lat/Long:	48.462029999999 / -122.57129
Brownfield Status:	Not reported
Rank Status:	Not reported
Clean Up Siteid:	9174
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Other
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	C
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

ALLSITES:

Facility Id:	43397816	
Latitude:	48.4620299	
Longitude:	-122.57129	
Geographic location identifier (alias facid):		43397816
Facility Name:		SIMILK INC GOLF COURSE
Latitude Decimal Degrees:		48.462029999999999
Longitude Decimal Degrees:		-122.57129
Coordinate Point Areal Extent Code:		4
Horizontal Accuracy Code:		4
Coordinate Point Geographic Position Code:		5
Location Verified Code:		Y

LUST:

FS ID:	43397816
Cleanup Site ID:	9174
Cleanup Unit Type:	Upland
Process Type:	Independent Action
Facility Status:	Cleanup Started
Alternate Name:	SIMILK BEACH GOLF COURSE
Release Notification Date:	Not reported
Release Status Date:	06/01/1995
Site Response Unit Code:	Northwest
Lat/Long:	48.4620299 / -122.57129

FS ID:	43397816
Cleanup Site ID:	9174
Cleanup Unit Type:	Upland
Process Type:	Independent Action
Facility Status:	RCU
Alternate Name:	SIMILK BEACH GOLF COURSE
Release Notification Date:	Not reported
Release Status Date:	03/07/2003
Site Response Unit Code:	Northwest
Lat/Long:	48.4620299 / -122.57129

FS ID:	43397816
Cleanup Site ID:	9174
Cleanup Unit Type:	Upland

SIMILK INC GOLF COURSE (Continued) **U000586768**

Process Type: Independent Action
Facility Status: Cleanup Started
Alternate Name: SIMILK BEACH GOLF COURSE
Release Notification Date: Not reported
Release Status Date: 07/01/2011
Site Response Unit Code: Northwest
Lat/Long: 48.4620299 / -122.57129

UST:
Facility ID: 43397816
Site ID: 1466
Lat Deg: 48
Lat Min: 27
Lat Sec: 43.307999999994991
Long Deg: -122
Long Min: 34
Long Sec: 16.644000000017058
UBI: Not reported
Phone Number: 2062933444

Tank ID: 20735
Tank Name: 2 DIESEL
Install Date: 12/31/1964
Capacity: 111 TO 1,100 Gallons
Tank Upgrade Date: 01/01/2001
TankSystem Status: Not reported
TankSystem Status Change Date: 08/26/1996
Tank Status: Removed
Tank Permit Expiration Date: 01/01/2001
Tank Closure Date: 01/01/2001
Tank Pumping System: Not reported
Tank Spill Prevention: Not reported
Tank Overfill Prevention: Not reported
Tank Material: Steel
Tank Construction: Not reported
Tank Tightness Test: Not reported
Tank Corrosion Protection: Not reported
Pipe Material: Steel
Pipe Construction: Above Ground Piping
Pipe Primary Release Detection: Not reported
Pipe Second Release Detection: Not reported
Pipe Corrosion Protection: Not reported
Tank Primary Release Detection: Not reported
Tank Second Release Detection: Not reported
Pipe Tightness Test: Not reported
Tank Actual Status Date: 08/06/1996
Tag Number: Not reported

Tank ID: 7941
Tank Name: 1 GASOLINE
Install Date: 12/31/1964
Capacity: 111 TO 1,100 Gallons
Tank Upgrade Date: 01/01/2001
TankSystem Status: Not reported
TankSystem Status Change Date: 08/26/1996
Tank Status: Removed

SIMILK INC GOLF COURSE (Continued) **U000586768**

Tank Permit Expiration Date:	01/01/2001
Tank Closure Date:	01/01/2001
Tank Pumping System:	Not reported
Tank Spill Prevention:	Not reported
Tank Overfill Prevention:	Not reported
Tank Material:	Steel
Tank Construction:	Not reported
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Not reported
Pipe Material:	Steel
Pipe Construction:	Above Ground Piping
Pipe Primary Release Detection:	Not reported
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Not reported
Tank Primary Release Detection:	Not reported
Tank Second Release Detection:	Not reported
Pipe Tightness Test:	Not reported
Tank Actual Status Date:	08/06/1996
Tag Number:	Not reported

ICR:

Date Ecology Received Report:	03/17/93
Contaminants Found at Site:	Total petroleum hydrocarbons, Non-haologenated solvents
Media Contaminated:	Soil
Waste Management:	Not reported
Region:	North Western
Type of Report Ecology Received:	Interim cleanup report
Site Register Issue:	92-48
County Code:	29
Contact:	Not reported
Report Title:	Not reported

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9 **PADILLA HEIGHTS RD PROPERTY** **FINDS** **1007223762**
East **9655 PADILLA HEIGHTS RD** **CSCSL** **N/A**
1/2-1 **ANACORTES, WA 98221** **ALLSITES**
0.969 mi. **HSL**
5117 ft.

Relative: Higher

Actual: 148 ft.

FINDS:

Registry ID: 110016833827

Environmental Interest/Information System
Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

CSCSL:

Facility ID:	7443386
Region:	Northwest
Lat/Long:	48.460219000000 / -122.538003
Brownfield Status:	Not reported
Rank Status:	5

PADILLA HEIGHTS RD PROPERTY (Continued) **1007223762**

Clean Up Siteid: 2437
Site Status: Awaiting Cleanup
PSI?: Yes
Contaminant Name: Corrosive Wastes
Ground Water: Not reported
Surface Water: Not reported
Soil: S
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Northwest

Facility ID: 7443386
Region: Northwest
Lat/Long: 48.460219000000 / -122.538003
Brownfield Status: Not reported
Rank Status: 5
Clean Up Siteid: 2437
Site Status: Awaiting Cleanup
PSI?: Yes
Contaminant Name: Metals - Other
Ground Water: Not reported
Surface Water: S
Soil: S
Sediment: Not reported
Air: S
Bedrock: Not reported
Responsible Unit: Northwest

Facility ID: 7443386
Region: Northwest
Lat/Long: 48.460219000000 / -122.538003
Brownfield Status: Not reported
Rank Status: 5
Clean Up Siteid: 2437
Site Status: Awaiting Cleanup
PSI?: Yes
Contaminant Name: Metals Priority Pollutants
Ground Water: S
Surface Water: S
Soil: S
Sediment: Not reported
Air: S
Bedrock: Not reported
Responsible Unit: Northwest

Facility ID: 7443386
Region: Northwest
Lat/Long: 48.460219000000 / -122.538003
Brownfield Status: Not reported
Rank Status: 5
Clean Up Siteid: 2437
Site Status: Awaiting Cleanup
PSI?: Yes
Contaminant Name: Non-Halogenated Solvents
Ground Water: S
Surface Water: S

PADILLA HEIGHTS RD PROPERTY (Continued) **1007223762**

Soil:	S
Sediment:	Not reported
Air:	S
Bedrock:	Not reported
Responsible Unit:	Northwest
Facility ID:	7443386
Region:	Northwest
Lat/Long:	48.460219000000 / -122.538003
Brownfield Status:	Not reported
Rank Status:	5
Clean Up Siteid:	2437
Site Status:	Awaiting Cleanup
PSI?:	Yes
Contaminant Name:	Other Reactive Wastes
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	S
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest
Facility ID:	7443386
Region:	Northwest
Lat/Long:	48.460219000000 / -122.538003
Brownfield Status:	Not reported
Rank Status:	5
Clean Up Siteid:	2437
Site Status:	Awaiting Cleanup
PSI?:	Yes
Contaminant Name:	Petroleum Products - unspecified
Ground Water:	Not reported
Surface Water:	S
Soil:	C
Sediment:	Not reported
Air:	S
Bedrock:	Not reported
Responsible Unit:	Northwest
Facility ID:	7443386
Region:	Northwest
Lat/Long:	48.460219000000 / -122.538003
Brownfield Status:	Not reported
Rank Status:	5
Clean Up Siteid:	2437
Site Status:	Awaiting Cleanup
PSI?:	Yes
Contaminant Name:	Polynuclear Aromatic Hydrocarbons
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	S
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

PADILLA HEIGHTS RD PROPERTY (Continued) **1007223762**

ALLSITES:

Facility Id:	7443386	
Latitude:	48.4602190	
Longitude:	-122.53800	
Geographic location identifier (alias facid):		7443386
Facility Name:		Padilla Heights Rd Property
Latitude Decimal Degrees:		48.460219000000002
Longitude Decimal Degrees:		-122.538003
Coordinate Point Areal Extent Code:		3
Horizontal Accuracy Code:		12
Coordinate Point Geographic Position Code:		5
Location Verified Code:		N

HSL:

edr_fstat:	WA
edr_fzip:	Not reported
edr_fcnty:	SKAGIT
edr_zip:	Not reported
Facility Type:	**Hazardous Sites List**
Facility Status:	Awaiting Cleanup
FSID Number:	7443386
Rank:	5
Region:	NW

Count: 20 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ANACORTES	1000660534	WHITMARSH SIDING MARCH PT RD	T34N R2E S3 MARCH PT RD	98221	FINDS,RCRA-NLR,ALLSITES
ANACORTES	1001600528	PM NORTHWEST DUMP	PADILLA HEIGHTS RD OFF HWY 20	98221	FINDS,RCRA-NLR,CSCSL NFA,ALLSITES
ANACORTES	1005906254	OLYMPC PIPELINE CO	700 N TEXAS RD		RCRA-SQG,MANIFEST,ALLSITES,FI
ANACORTES	1007063790	HAROLDS MARKET	1477 HWY 20	98221	FINDS,ALLSITES
ANACORTES	1007064648	MARCH POINT COGENERATION	600 S TEXAS RD MARCH PT		FINDS,ALLSITES
LA CONNER	1007073447	JNK MARINE	LA CONNER MARINA	98257	FINDS,HWS,ALLSITES
ANACORTES	1007087881	BEACH MASTER INC	662 STEVENSON RD	98221	FINDS,ALLSITES
ANACORTES	1007117500	WHITMARSH RAIL SIDING	WHITMARSH JUNCTION - MARCH PT.	98221	CERCLIS-NFRAP
ANACORTES	1011932103	VERIZON WIRELESS ANACORTES	TEXACO OIL REFIENRY MARCH POIN	98221	FINDS,ALLSITES
ANACORTES	1011967879	1274 THOMPSON ROAD	1274 THOMPSON ROAD	98221	PCB TRANSFORMER
ANACORTES	1011968942	1274 THOMPSON ROAD	1274 THOMPSON ROAD	98221	PCB TRANSFORMER
ANACORTES	1012277716	SOUTH FIDALGO BAY ROAD EXT	S FIDALGO BAY ROAD TO OLD BROO	98221	FINDS
ANACORTES	96499148	ANACORTES WA MARCH POINT ROAD	ANACORTES WA MARCH POINT ROAD		ERNS
ANACORTES	99622750	ANACORTES WARF FACILITY MARCH POIN	ANACORTES WARF FACILITY MARCH		ERNS
ANACORTES	99628027	ANACORTES FERRY TERMINAL 2100 FERR	ANACORTES FERRY TERMINAL 2100	98104	ERNS
ANACORTES	99638051	ANACORTES FERRY TERMINAL 2100 FERR	ANACORTES FERRY TERMINAL 2100	98104	ERNS
ANACORTES	99648335	ANACORTES FERRY TERMINAL 2100 FERR	ANACORTES FERRY TERMINAL 2100	98104	ERNS
ANACORTES	S110625488	SCIMITAR RIDGE RANCH	7535 HWY 20	-	NPDES,ALLSITES
ANACORTES	U001122849	CHEVRON FACILITY 60091038	1251 HWY 20	98221	CSCSL NFA,UST
ANACORTES	U001778132	YATTA TRADING CO LTD	HWY 20 & HWY 20 SPUR	98221	UST,ALLSITES

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/10/2010
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/14/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/09/2011
Date Data Arrived at EDR: 03/15/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 91

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/14/2011
Next Scheduled EDR Contact: 02/27/2012
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 10/03/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Annually

State- and tribal - equivalent NPL

HSL: Hazardous Sites List

The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 08/31/2011
Date Data Arrived at EDR: 09/22/2011
Date Made Active in Reports: 11/10/2011
Number of Days to Update: 49

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 09/13/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

State- and tribal - equivalent CERCLIS

CSCSL: Confirmed and Suspected Contaminated Sites List

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 07/28/2011
Date Data Arrived at EDR: 07/29/2011
Date Made Active in Reports: 09/08/2011
Number of Days to Update: 41

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 10/27/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facility Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 10/11/2011
Date Data Arrived at EDR: 10/11/2011
Date Made Active in Reports: 11/10/2011
Number of Days to Update: 30

Source: Department of Ecology
Telephone: 360-407-6132
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tanks Site List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/23/2011
Date Data Arrived at EDR: 08/25/2011
Date Made Active in Reports: 09/21/2011
Number of Days to Update: 27

Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 08/25/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/31/2011
Date Data Arrived at EDR: 02/01/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 48

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/12/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 32

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/02/2011
Date Data Arrived at EDR: 11/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 7

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2011
Date Data Arrived at EDR: 11/01/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 10

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/16/2011
Date Data Arrived at EDR: 06/02/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 103

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 25

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/24/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 19

Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 08/26/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Locations
A listing of aboveground storage tank locations regulated by the Department of Ecology's Spill Prevention, Preparedness and Response Program.

Date of Government Version: 05/27/2009
Date Data Arrived at EDR: 05/28/2009
Date Made Active in Reports: 06/19/2009
Number of Days to Update: 22

Source: Department of Ecology
Telephone: 360-407-7562
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/12/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 32

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 39

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 25

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/02/2011
Date Data Arrived at EDR: 11/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 7

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2011
Date Data Arrived at EDR: 11/01/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 10

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 07/01/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 18

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2011
Date Data Arrived at EDR: 06/01/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 13
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/17/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Institutional Control Site List
Sites that have institutional controls.

Date of Government Version: 08/17/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 26
Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 08/19/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites
Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 07/22/2011
Date Data Arrived at EDR: 08/02/2011
Date Made Active in Reports: 08/18/2011
Number of Days to Update: 16
Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 10/25/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

ICR: Independent Cleanup Reports
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree. This database is no longer updated by the Department of Ecology.

Date of Government Version: 12/01/2002
Date Data Arrived at EDR: 01/03/2003
Date Made Active in Reports: 01/22/2003
Number of Days to Update: 19
Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 08/10/2009
Next Scheduled EDR Contact: 11/09/2009
Data Release Frequency: No Update Planned

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites Listing
A listing of brownfields sites included in the Confirmed & Suspected Sites Listing. Brownfields are abandoned, idle or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination. Brownfields vary in size, location, age, and past use -- they can be anything from a five-hundred acre automobile assembly plant to a small, abandoned corner gas station.

Date of Government Version: 07/28/2011
Date Data Arrived at EDR: 07/29/2011
Date Made Active in Reports: 08/18/2011
Number of Days to Update: 20
Source: Department of Ecology
Telephone: 360-725-4030
Last EDR Contact: 10/27/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/27/2011
Date Data Arrived at EDR: 06/27/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 78
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/28/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWTIRE: Solid Waste Tire Facilities
This study identified sites statewide with unauthorized accumulations of scrap tires.

Date of Government Version: 11/01/2005
Date Data Arrived at EDR: 03/16/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 28
Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 09/15/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/08/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 13
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/07/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Quarterly

ALLSITES: Facility/Site Identification System Listing
Information on facilities and sites of interest to the Department of Ecology.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 36
Source: Department of Ecology
Telephone: 360-407-6423
Last EDR Contact: 11/08/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Quarterly

CSCSL NFA: Confirmed and Contaminated Sites - No Further Action
The data set contains information about sites previously on the Confirmed and Suspected Contaminated Sites list that have received a No Further Action (NFA) determination. Because it is necessary to maintain historical records of sites that have been investigated and cleaned up, sites are not deleted from the database when cleanup activities are completed. Instead, a No Further Action code is entered based upon the type of NFA determination the site received.

Date of Government Version: 07/28/2011
Date Data Arrived at EDR: 07/29/2011
Date Made Active in Reports: 08/18/2011
Number of Days to Update: 20

Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 10/27/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Semi-Annually

CDL: Clandestine Drug Lab Contaminated Site List

Illegal methamphetamine labs use hazardous chemicals that create public health hazards. Chemicals and residues can cause burns, respiratory and neurological damage, and death. Biological hazards associated with intravenous needles, feces, and blood also pose health risks.

Date of Government Version: 02/09/2009
Date Data Arrived at EDR: 03/18/2009
Date Made Active in Reports: 03/24/2009
Number of Days to Update: 6

Source: Department of Health
Telephone: 360-236-3380
Last EDR Contact: 11/15/2011
Next Scheduled EDR Contact: 02/27/2012
Data Release Frequency: Varies

HIST CDL: List of Sites Contaminated by Clandestine Drug Labs

This listing of contaminated sites by Clandestine Drug Labs includes non-remediated properties. The current CDL listing does not. This listing is no longer updated by the state agency.

Date of Government Version: 02/08/2007
Date Data Arrived at EDR: 06/26/2007
Date Made Active in Reports: 07/19/2007
Number of Days to Update: 23

Source: Department of Health
Telephone: 360-236-3381
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/09/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/11/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 10/04/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Annually

SPILLS: Reported Spills

Spills reported to the Spill Prevention, Preparedness and Response Division.

Date of Government Version: 09/23/2011
Date Data Arrived at EDR: 09/27/2011
Date Made Active in Reports: 11/10/2011
Number of Days to Update: 44

Source: Department of Ecology
Telephone: 360-407-6950
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/29/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 94

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/08/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 41

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/31/2011
Date Data Arrived at EDR: 09/14/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 15

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/14/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 99

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 09/08/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 21

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/08/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 94

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/27/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Every 4 Years

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/07/2011
Date Data Arrived at EDR: 01/21/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/19/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 60

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/13/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (206) 553-1200
Last EDR Contact: 09/13/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Biennially

UIC: Underground Injection Wells Listing

A listing of underground injection wells.

Date of Government Version: 08/23/2011
Date Data Arrived at EDR: 08/25/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 20

Source: Department of Ecology
Telephone: 360-407-6143
Last EDR Contact: 08/25/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

WA MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/30/2011
Date Made Active in Reports: 07/27/2011
Number of Days to Update: 27

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Annually

DRYCLEANERS: Drycleaner List

A listing of registered drycleaners who registered with the Department of Ecology (using the SIC code of 7215 and 7216) as hazardous waste generators.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/30/2011
Date Made Active in Reports: 07/27/2011
Number of Days to Update: 27

Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

NPDES: Water Quality Permit System Data

A listing of permitted wastewater facilities.

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/03/2011
Date Made Active in Reports: 08/31/2011
Number of Days to Update: 28

Source: Department of Ecology
Telephone: 360-407-6073
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Quarterly

AIRS (EMI): Washington Emissions Data System

Emissions inventory data.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/23/2011
Number of Days to Update: 43

Source: Department of Ecology
Telephone: 360-407-6040
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Annually

INACTIVE DRYCLEANERS: Inactive Drycleaners
A listing of inactive drycleaner facility locations.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/30/2011
Date Made Active in Reports: 07/27/2011
Number of Days to Update: 27
Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Annually

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34
Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54
Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

FINANCIAL ASSURANCE 3: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/19/2007
Number of Days to Update: 44
Source: Department of Ecology
Telephone: 360-407-6136
Last EDR Contact: 08/23/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE 1: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/24/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/21/2011
Number of Days to Update: 26
Source: Department of Ecology
Telephone: 360-586-1060
Last EDR Contact: 08/22/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/23/2011
Date Data Arrived at EDR: 05/26/2011
Date Made Active in Reports: 06/27/2011
Number of Days to Update: 32
Source: Department of Ecology
Telephone: 360-407-6754
Last EDR Contact: 08/22/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Site Listing
A listing of coal ash disposal site locations.

Date of Government Version: 06/29/2009
Date Data Arrived at EDR: 07/02/2009
Date Made Active in Reports: 07/08/2009
Number of Days to Update: 6
Source: Department of Ecology
Telephone: 360-407-6933
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/18/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/16/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/04/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339
Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

COUNTY RECORDS

KING COUNTY:

Abandoned Landfill Study in King County
The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/1985
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE COUNTY:

Abandoned Landfill Study in the City of Seattle
The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/1984
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE/KING COUNTY:

Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project
This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/1986
Date Data Arrived at EDR: 08/18/1995
Date Made Active in Reports: 09/20/1995
Number of Days to Update: 33

Source: Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 08/14/1995
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SNOHOMISH COUNTY:

Solid Waste Sites of Record at Snohomish Health District
Solid waste disposal and/or utilization sites in Snohomish County.

Date of Government Version: 03/08/2011
Date Data Arrived at EDR: 03/31/2011
Date Made Active in Reports: 05/06/2011
Number of Days to Update: 36

Source: Snohomish Health District
Telephone: 206-339-5250
Last EDR Contact: 09/30/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Semi-Annually

TACOMA/PIERCE COUNTY:

Closed Landfill Survey

Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 09/01/2002
Date Data Arrived at EDR: 03/24/2003
Date Made Active in Reports: 05/14/2003
Number of Days to Update: 51

Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Last EDR Contact: 03/19/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 10/28/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/16/2011
Number of Days to Update: 38

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/08/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/15/2011
Number of Days to Update: 27

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Daycare Center Listing
Source: Department of Social & Health Services
Telephone: 253-383-1735

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

THOMPSON ROAD
12715 THOMPSON ROAD
ANACORTES, WA 98221

TARGET PROPERTY COORDINATES

Latitude (North):	48.45910 - 48° 27' 32.8''
Longitude (West):	122.5577 - 122° 33' 27.7''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	532700.8
UTM Y (Meters):	5367205.0
Elevation:	76 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	48122-D5 ANACORTES SOUTH, WA
Most Recent Revision:	1980

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

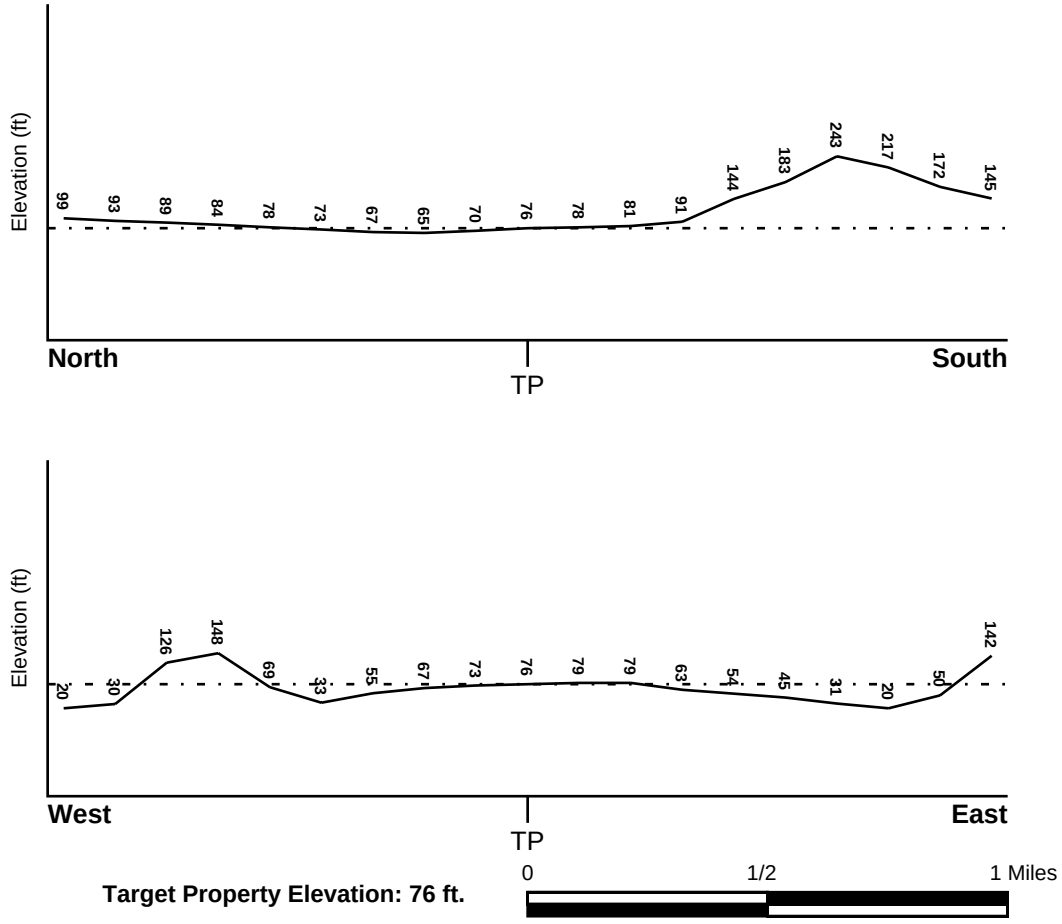
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 76 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SKAGIT, WA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 5301510225C - FEMA Q3 Flood data

Additional Panels in search area: 5300000225C - FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ANACORTES SOUTH	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

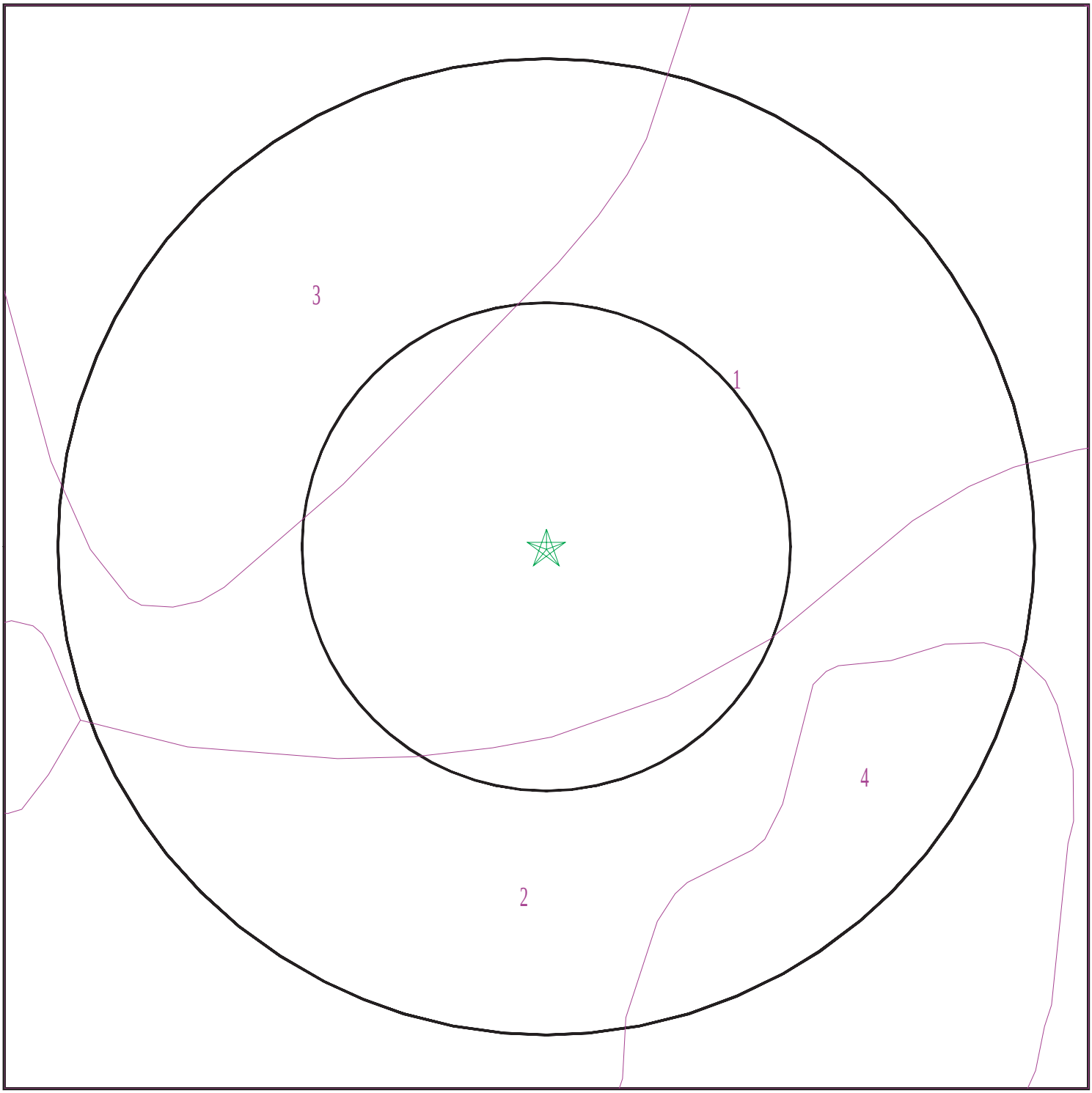
Era:	Mesozoic
System:	Cretaceous
Series:	Upper Mesozoic
Code:	uMze*(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 3208157.1s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Thompson Road	CLIENT:	Analytical Environmental Serv.
ADDRESS:	12715 Thompson Road Anacortes WA 98221	CONTACT:	David Sawyer
		INQUIRY #:	3208157.1s
LAT/LONG:	48.4591 / 122.5577	DATE:	November 15, 2011 7:40 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Coveland

Soil Surface Texture: gravelly loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 23 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1
2	9 inches	14 inches	very gravelly sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1
3	14 inches	51 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1
4	51 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1

Soil Map ID: 2

Soil Component Name: Bow

Soil Surface Texture: gravelly loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 31 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1
2	7 inches	22 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1
3	22 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1

Soil Map ID: 3

Soil Component Name: Bow

Soil Surface Texture: gravelly loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Somewhat poorly drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 31 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1
2	7 inches	22 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1
3	22 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.1

Soil Map ID: 4

Soil Component Name: Swinomish

Soil Surface Texture: gravelly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 76 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 0.42 Min: 0.01	Max: 6 Min: 5.1
2	3 inches	20 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 0.42 Min: 0.01	Max: 6 Min: 5.1
3	20 inches	31 inches	very gravelly fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 0.42 Min: 0.01	Max: 6 Min: 5.1
4	31 inches	59 inches	very gravelly sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 0.42 Min: 0.01	Max: 6 Min: 5.1

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS3260287	1/4 - 1/2 Mile SSW
A2	USGS3260341	1/2 - 1 Mile NW
A3	USGS3260343	1/2 - 1 Mile NW
4	USGS3260286	1/2 - 1 Mile SW
B5	USGS3260285	1/2 - 1 Mile SE
B6	USGS3260282	1/2 - 1 Mile SE
7	USGS3260311	1/2 - 1 Mile ESE
8	USGS3260295	1/2 - 1 Mile ESE
C9	USGS3260323	1/2 - 1 Mile East
C10	USGS3260329	1/2 - 1 Mile East
11	USGS3260326	1/2 - 1 Mile East
12	USGS3260320	1/2 - 1 Mile East
13	USGS3260305	1/2 - 1 Mile ESE
D14	USGS3260290	1/2 - 1 Mile WSW
D15	USGS3260296	1/2 - 1 Mile WSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

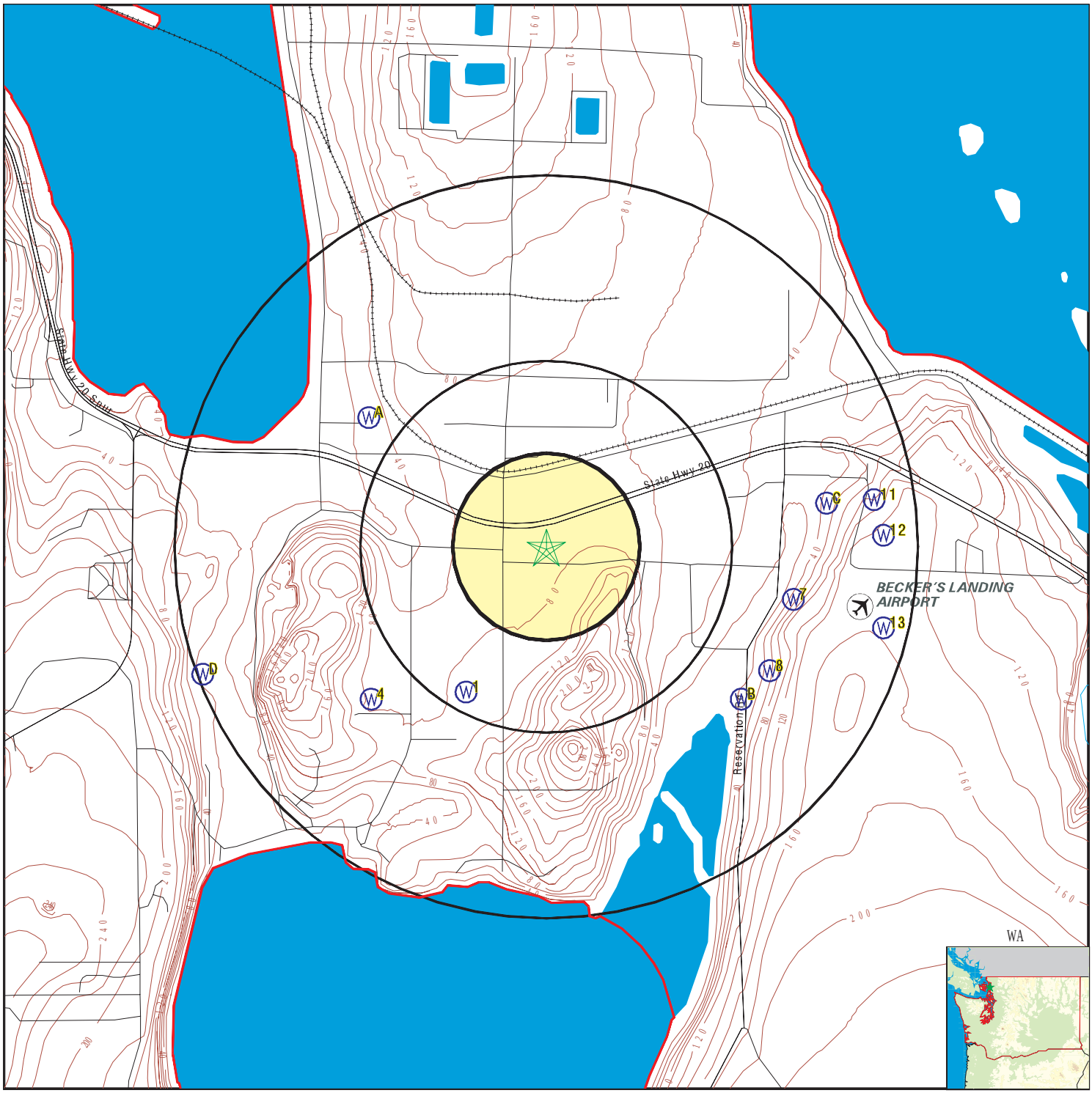
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 3208157.1s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data

SITE NAME:	Thompson Road	CLIENT:	Analytical Environmental Serv.
ADDRESS:	12715 Thompson Road Anacortes WA 98221	CONTACT:	David Sawyer
		INQUIRY #:	3208157.1s
LAT/LONG:	48.4591 / 122.5577	DATE:	November 15, 2011 7:40 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
SSW
1/4 - 1/2 Mile
Higher

FED USGS **USGS3260287**

Agency cd:	USGS	Site no:	482713122334001
Site name:	34N/02E-09C01		
Latitude:	482713	EDR Site id:	USGS3260287
Longitude:	1223340	Dec lat:	48.45343742
Dec lon:	-122.56239073	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NE NW S09 T34N R02E W
Location map:	DECEPTION PASS	Map scale:	62500
Altitude:	70		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19530513
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	186	Hole depth:	Not Reported
Source of depth data:	driller		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

A2
NW
1/2 - 1 Mile
Lower

FED USGS **USGS3260341**

Agency cd:	USGS	Site no:	482751122340001
Site name:	34N/02E-04G01		
Latitude:	482751	EDR Site id:	USGS3260341
Longitude:	1223400	Dec lat:	48.46399314
Dec lon:	-122.56794675	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	SW NE S04 T34N R02E W
Location map:	DECEPTION PASS	Map scale:	62500

Altitude:	40		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

A3
NW
1/2 - 1 Mile
Lower

FED USGS **USGS3260343**

Agency cd:	USGS	Site no:	482752122340101
Site name:	34N/02E-46G02		
Latitude:	482752	EDR Site id:	USGS3260343
Longitude:	1223401	Dec lat:	48.46427092
Dec lon:	-122.56822455	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	SW NE S46 T34N R02E W
Location map:	DECEPTION PASS	Map scale:	62500
Altitude:	40		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	108	Hole depth:	Not Reported
Source of depth data:	driller		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

4
SW
1/2 - 1 Mile
Higher

FED USGS **USGS3260286**

Agency cd:	USGS	Site no:	482712122340001
Site name:	34N/02E-09D01		
Latitude:	482712	EDR Site id:	USGS3260286
Longitude:	1223400	Dec lat:	48.45315957
Dec lon:	-122.56794652	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NW NW S09 T34N R02E W
Location map:	DECEPTION PASS	Map scale:	62500
Altitude:	90		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19470101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	50	Hole depth:	Not Reported
Source of depth data:	driller		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

B5
SE
1/2 - 1 Mile
Lower

FED USGS **USGS3260285**

Agency cd:	USGS	Site no:	482712122324701
Site name:	34N/02E-10D03		
Latitude:	482713	EDR Site id:	USGS3260285
Longitude:	1223242	Dec lat:	48.45343761
Dec lon:	-122.54627894	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NW NW S10 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600
Altitude:	10		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	2		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19950727
Date inventoried:	19960814	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	77	Hole depth:	77
Source of depth data:	driller		
Project number:	WA40200		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1996-08-14
Water quality data end date:	1996-08-14	Water quality data count:	1
Ground water data begin date:	1995-07-27	Ground water data end date:	1996-08-14
Ground water data count:	2		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1996-08-14	5.74				
Note: The site had been pumped recently.					
1995-07-27	4				

B6
SE
1/2 - 1 Mile
Lower

FED USGS **USGS3260282**

Agency cd:	USGS	Site no:	482710122324101
Site name:	34N/02E-10D02		
Latitude:	482711	EDR Site id:	USGS3260282
Longitude:	1223242	Dec lat:	48.45288205
Dec lon:	-122.54627893	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NW NW S10 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600

Altitude:	15		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	2		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Hillside (slope)		
Site type:	Ground-water other than Spring	Date construction:	19750723
Date inventoried:	19960814	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	6	Hole depth:	Not Reported
Source of depth data:	reporting agency (generally USGS)		
Project number:	WA40200		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1996-08-28
Water quality data end date:	1996-08-28	Water quality data count:	1
Ground water data begin date:	1975-07-23	Ground water data end date:	1996-08-14
Ground water data count:	2		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1996-08-14	1.15		1975-07-23	5	

7
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS3260311**

Agency cd:	USGS	Site no:	482726122323101
Site name:	34N/02E-03P01		
Latitude:	482726	EDR Site id:	USGS3260311
Longitude:	1223231	Dec lat:	48.45704885
Dec lon:	-122.54322334	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	SE SW S03 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600
Altitude:	55		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Hillside (slope)		
Site type:	Ground-water other than Spring	Date construction:	19630101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	ALLUVIUM		
Well depth:	15	Hole depth:	15
Source of depth data:	driller		
Project number:	WA18100		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1975-07-23	Ground water data end date:	1975-07-23
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1975-07-23	1	

8
ESE **FED USGS** **USGS3260295**
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	482716122323601
Site name:	34N/02E-10D01		
Latitude:	482716	EDR Site id:	USGS3260295
Longitude:	1223236	Dec lat:	48.45427099
Dec lon:	-122.54461222	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NW NW S10 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600
Altitude:	35		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Hillside (slope)		
Site type:	Ground-water other than Spring	Date construction:	19750723
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported		
Project number:	WA18100		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1975-10-23
Water quality data end date:	1976-01-21	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

C9
East **FED USGS** **USGS3260323**
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	482738122322401
Site name:	34N/02E-03L03		
Latitude:	482738	EDR Site id:	USGS3260323
Longitude:	1223224	Dec lat:	48.46038229
Dec lon:	-122.54127889	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NE SW S03 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600
Altitude:	46		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Hillside (slope)		
Site type:	Ground-water other than Spring	Date construction:	19750723
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	24	Hole depth:	Not Reported
Source of depth data:	reporting agency (generally USGS)		
Project number:	WA18100		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1975-07-23	Ground water data end date:	1975-07-23
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1975-07-23	13.1	

C10
East
1/2 - 1 Mile
Lower

FED USGS **USGS3260329**

Agency cd:	USGS	Site no:	482741122322401
Site name:	34N/02E-03L02		
Latitude:	482741	EDR Site id:	USGS3260329
Longitude:	1223224	Dec lat:	48.46121564
Dec lon:	-122.54127891	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NE SW S03 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600
Altitude:	32		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Hillside (slope)		
Site type:	Ground-water other than Spring	Date construction:	19750723
Date inventoried:	Not Reported	Mean greenwich time offset:	PST

Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	44	Hole depth:	Not Reported
Source of depth data:	driller		
Project number:	WA18100		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

11
East
1/2 - 1 Mile
Higher

FED USGS **USGS3260326**

Agency cd:	USGS	Site no:	482740122321401
Site name:	34N/02E-03L01		
Latitude:	482740	EDR Site id:	USGS3260326
Longitude:	1223214	Dec lat:	48.46093789
Dec lon:	-122.538501	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NE SW S03 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600
Altitude:	90		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19010101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	108	Hole depth:	128
Source of depth data:	reporting agency (generally USGS)		
Project number:	WA18100		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1978-06-13
Water quality data end date:	1978-06-13	Water quality data count:	1
Ground water data begin date:	1955-10-20	Ground water data end date:	1975-09-22
Ground water data count:	5		

Ground-water levels, Number of Measurements: 5

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1975-09-22	74.15		1975-07-23	73.68	
1956-01-06	84.5		1955-11-14	86.3	
1955-10-20	86.1				

12
East
1/2 - 1 Mile
Higher

FED USGS **USGS3260320**

Agency cd:	USGS	Site no:	482735122321201
Site name:	34N/02E-03K01		
Latitude:	482735	EDR Site id:	USGS3260320
Longitude:	1223212	Dec lat:	48.45954897
Dec lon:	-122.53794539	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NW SE S03 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600
Altitude:	144		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	20		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19551101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	ALLUVIUM		
Well depth:	200	Hole depth:	200
Source of depth data:	driller		
Project number:	WA18100		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1962-11-19
Water quality data end date:	1962-11-19	Water quality data count:	1
Ground water data begin date:	1955-11-14	Ground water data end date:	1976-07-28
Ground water data count:	10		

Ground-water levels, Number of Measurements: 10

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1976-07-28	128.6		1976-07-19	129.4	
1976-06-14	128.9		1976-05-20	128.8	
1976-03-18	128.51		1976-03-11	129.61	
1960-10-19	136.5		1956-01-06	130.7	
1955-11-15	132		1955-11-14	133	

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

13
ESE
1/2 - 1 Mile
Higher | **FED USGS** | **USGS3260305**

Agency cd:	USGS	Site no:	482722122321201
Site name:	34N/02E-03Q01		
Latitude:	482722	EDR Site id:	USGS3260305
Longitude:	1223212	Dec lat:	48.45593778
Dec lon:	-122.53794531	Coor meth:	M
Coor accr:	M	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	SW SE S03 T34N R02E W
Location map:	SWINOMISH RESERVATIO	Map scale:	9600
Altitude:	149		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	20		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19610101
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	ALLUVIUM (QUATERNARY)		
Well depth:	Not Reported	Hole depth:	170
Source of depth data:	driller		
Project number:	WA18100		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1961-01-01	Ground water data end date:	1961-01-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1961-01-01	25	

D14
WSW
1/2 - 1 Mile
Lower | **FED USGS** | **USGS3260290**

Agency cd:	USGS	Site no:	482715122343501
Site name:	34N/02E-08B01		
Latitude:	482715	EDR Site id:	USGS3260290
Longitude:	1223435	Dec lat:	48.4539928
Dec lon:	-122.57766917	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NW NE S08 T34N R02E W
Location map:	DECEPTION PASS	Map scale:	62500
Altitude:	30		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19530513
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	113	Hole depth:	Not Reported
Source of depth data:	driller		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1953-05-13	Ground water data end date:	1953-05-13
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1953-05-13		

Note: The site was flowing, but the head could not be measured without additional equipment.

D15
WSW
1/2 - 1 Mile
Lower

FED USGS **USGS3260296**

Agency cd:	USGS	Site no:	482716122343601
Site name:	34N/02E-08B02		
Latitude:	482716	EDR Site id:	USGS3260296
Longitude:	1223436	Dec lat:	48.45427058
Dec lon:	-122.57794697	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NW NE S08 T34N R02E W
Location map:	DECEPTION PASS	Map scale:	62500

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Altitude:	30		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19530513
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	211	Hole depth:	Not Reported
Source of depth data:	driller		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1953-05-13	Ground water data end date:	1953-05-13
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1953-05-13		

Note: The site was flowing, but the head could not be measured without additional equipment.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for SKAGIT County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 98221

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.300 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Wells
Source: Department of Health
Telephone: 360-236-3148
Group A and B well locations.

Water Well Listing
Source: Public Utility District
Telephone: 206-779-7656
A listing of water well locations in Kitsap County.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Listing
Source: Department of Natural Resources
Telephone: 360-902-1445
Locations that represent oil and gas test well sites in Washington State from 1890 to present.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Anacortes, WA 98221

Inquiry Number: 3208173.1s
November 15, 2011

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

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Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

4701 FIDALGO BAY ROAD
ANACORTES, WA 98221

COORDINATES

Latitude (North):	48.484500 - 48° 29' 4.2''
Longitude (West):	122.594900 - 122° 35' 41.6''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	529935.5
UTM Y (Meters):	5370013.0
Elevation:	22 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	48122-D5 ANACORTES SOUTH, WA
Most Recent Revision:	1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2009
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
4701 FIDALGO BAY RD 4701 FIDALGO BAY RD ANACORTES, WA	SPILLS	N/A

EXECUTIVE SUMMARY

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Facility Database

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

LUST ---------- Leaking Underground Storage Tanks Site List
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST ---------- Underground Storage Tank Database
AST ---------- Aboveground Storage Tank Locations
INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

INST CONTROL ---------- Institutional Control Site List

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Cleanup Program Sites
ICR ---------- Independent Cleanup Reports

State and tribal Brownfields sites

BROWNFIELDS ---------- Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
SWTIRE ---------- Solid Waste Tire Facilities
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---------- Clandestine Drug Labs
CSCSL NFA ---------- Confirmed & Contaminated Sites - No Further Action
CDL ---------- Clandestine Drug Lab Contaminated Site List
HIST CDL ---------- List of Sites Contaminated by Clandestine Drug Labs
US HIST CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---------- CERCLA Lien Information
LUCIS ---------- Land Use Control Information System

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System

Other Ascertainable Records

RCRA-NonGen	RCRA - Non Generators
DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
UIC	Underground Injection Wells Listing
MANIFEST	Hazardous Waste Manifest Data
DRYCLEANERS	Drycleaner List
NPDES	Water Quality Permit System Data
AIRS	Washington Emissions Data System
Inactive Drycleaners	Inactive Drycleaners
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
FINANCIAL ASSURANCE	Financial Assurance Information Listing
COAL ASH	Coal Ash Disposal Site Listing
COAL ASH DOE	Sleam-Electric Plan Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent NPL

HSL: The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

A review of the HSL list, as provided by EDR, and dated 08/31/2011 has revealed that there is 1 HSL site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CUSTOM PLYWOOD MILL		***NNW 1/2 - 1 (0.762 mi.)***	***4***	***8***
Facility Type: Hazardous Sites List				

State- and tribal - equivalent CERCLIS

CSCSL: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Ecology's Confirmed & Suspected Contaminated Sites List.

A review of the CSCSL list, as provided by EDR, and dated 07/28/2011 has revealed that there is 1 CSCSL site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CUSTOM PLYWOOD MILL		***NNW 1/2 - 1 (0.762 mi.)***	***4***	***8***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

ALLSITES: Information on facilities and sites of interest to the Department of Ecology.

A review of the ALLSITES list, as provided by EDR, and dated 08/09/2011 has revealed that there are 2 ALLSITES sites within approximately 0.5 miles of the target property.

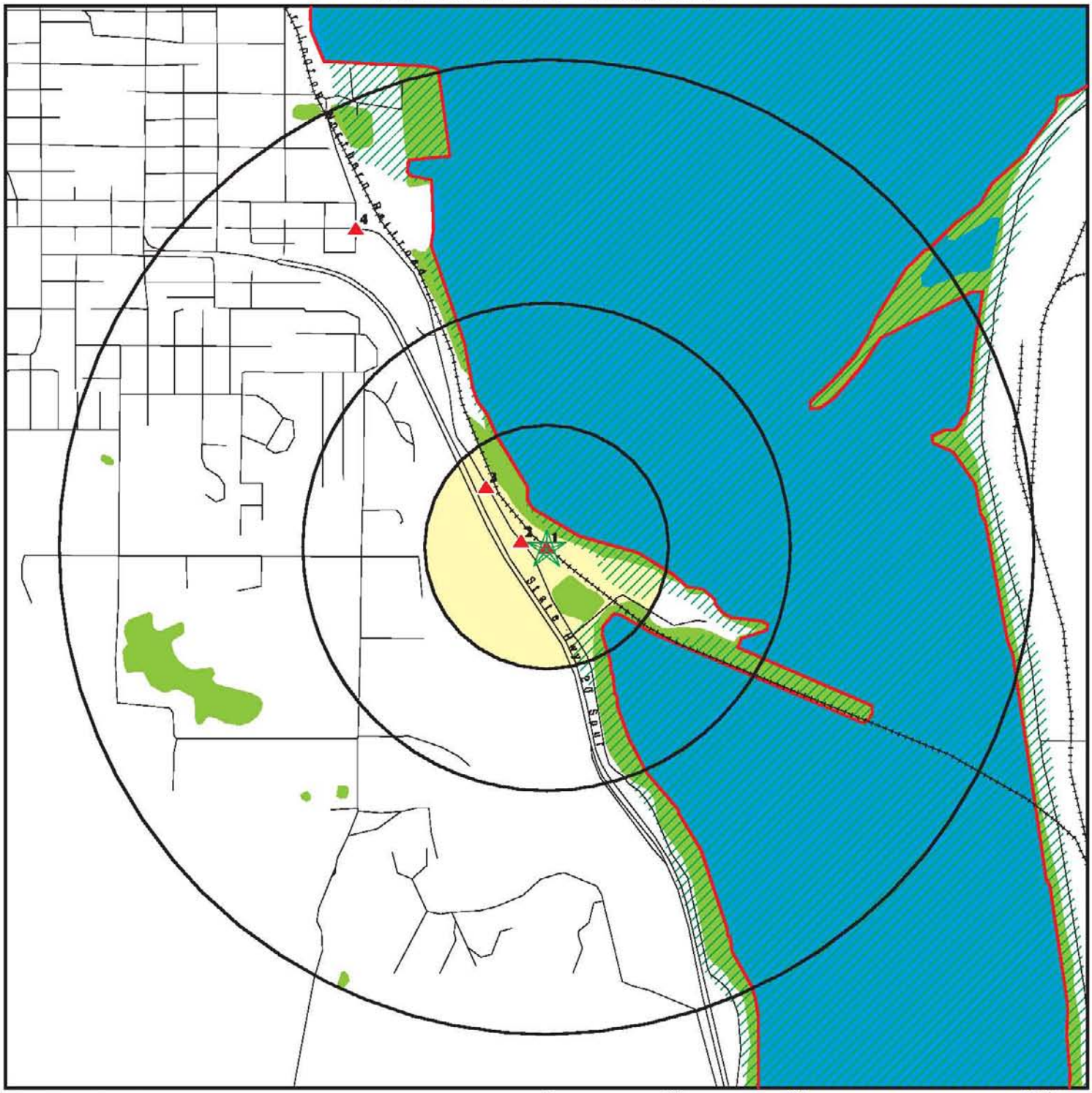
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COVE AT FIDALGO BAY LLC	***4501 FIDALGO BAY RD***	***WNW 0 - 1/8 (0.054 mi.)***	***2***	***7***
SADLER SHORT PLAT	***3804 FIDALGO BAY RD***	***NW 1/8 - 1/4 (0.175 mi.)***	***3***	***7***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 9 records.

Site Name	Database(s)
YATTA TRADING CO LTD	ALLSITES, UST
HAROLDS MARKET	FINDS, ALLSITES
SCIMITAR RIDGE RANCH	ALLSITES, NPDES
PETROLANE ANACORTES	FINDS, ALLSITES
SOUTH FIDALGO BAY ROAD EXT	ALLSITES, NPDES
PM NORTHWEST DUMP	RCRA-NonGen, FINDS, ALLSITES, CSCSL NFA
OLYMPIC PIPE LINE CO ANACORTES STA	RCRA-SQG, FINDS, ALLSITES, MANIFEST, SPILLS
TEXACO	CSCSL, SPILLS
CHEVRON 91038	CSCSL NFA, UST

OVERVIEW MAP - 3208173.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

0 1/4 1/2 1 Miles

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Weaverling Spit ADDRESS: 4701 Fidalgo Bay Road Anacortes WA 98221 LAT/LONG: 48.4845 / 122.5949	CLIENT: Analytical Environmental Serv. CONTACT: David Sawyer INQUIRY #: 3208173.1s DATE: November 15, 2011 7:39 pm

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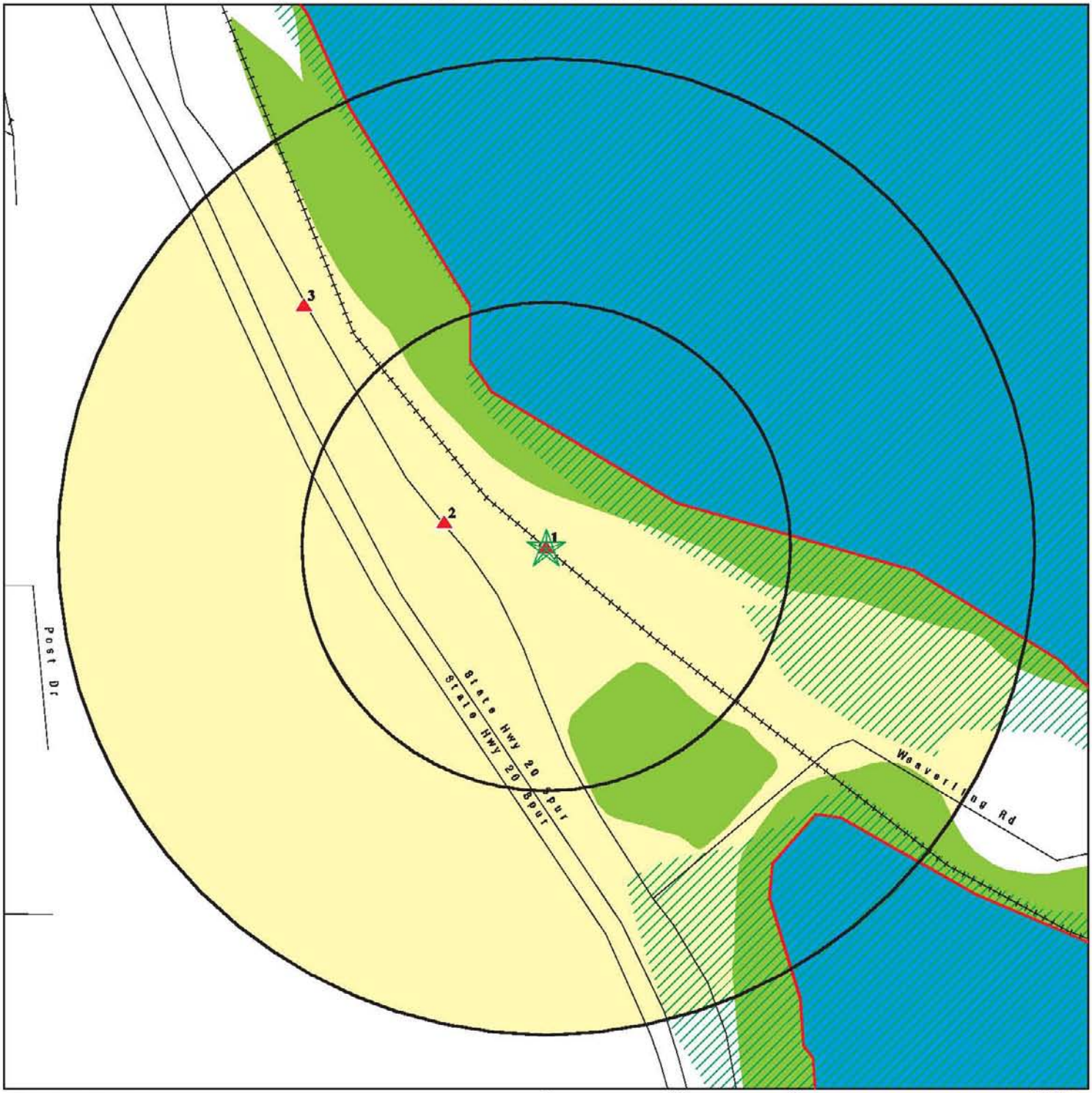
DETAIL MAP - 3208173.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Weaverling Spit	CLIENT: Analytical Environmental Serv.
ADDRESS: 4701 Fidalgo Bay Road Anacortes WA 98221	CONTACT: David Sawyer
LAT/LONG: 48.4845 / 122.5949	INQUIRY #: 3208173.1s DATE: November 15, 2011 7:40 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
HSL		1.000	0	0	0	1	NR	1
State- and tribal - equivalent CERCLIS								
CSCSL		1.000	0	0	0	1	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal registered storage tank lists								
UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL		0.500	0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
ICR		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
SWTIRE		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
ALLSITES		0.500	1	1	0	NR	NR	2
CSCSL NFA		0.500	0	0	0	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
HIST CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
SPILLS	X	TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
UIC		TP	NR	NR	NR	NR	NR	0
MANIFEST		0.250	0	0	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
Inactive Drycleaners		0.250	0	0	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
COAL ASH		0.500	0	0	0	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
Target Property
4701 FIDALGO BAY RD
ANACORTES, WA

Actual:
22 ft.

SPILLS **S108894319**
N/A

SPILLS:
Facility ID: 601661
Medium: Not reported
Material Desc: PETROLEUM - UNKNOWN
Material Qty: Not reported
Material Units: GALLON
Date Received: 10/30/2007 9:39:00 AM
Contact Name: UNKNOWN

2
WNW
< 1/8
0.054 mi.
284 ft.

Relative:
Higher

Actual:
51 ft.

COVE AT FIDALGO BAY LLC
4501 FIDALGO BAY RD
ANACORTES, WA 98221

FINDS **1011279468**
ALLSITES **N/A**

FINDS:

Registry ID: 110036138346

Environmental Interest/Information System
Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

ALLSITES:
Facility Id: 2435872
Latitude: 48.4848560
Longitude: -122.59573
Geographic location identifier (alias facid): 2435872
Facility Name: Cove at Fidalgo Bay LLC
Latitude Decimal Degrees: 48.484856000000001
Longitude Decimal Degrees: -122.59573899999999
Coordinate Point Areal Extent Code: 99
Horizontal Accuracy Code: 99
Coordinate Point Geographic Position Code: 99
Location Verified Code: N

3
NW
1/8-1/4
0.175 mi.
925 ft.

Relative:
Higher

Actual:
70 ft.

SADLER SHORT PLAT
3804 FIDALGO BAY RD
ANACORTES, WA 98221

ALLSITES **S110036193**
NPDES **N/A**

ALLSITES:
Facility Id: 3956
Latitude: 48.4885999
Longitude: -122.599
Geographic location identifier (alias facid): 3956
Facility Name: SADLER SHORT PLAT

SADLER SHORT PLAT (Continued) **S110036193**

Latitude Decimal Degrees:	48.488599999999998
Longitude Decimal Degrees:	-122.599
Coordinate Point Areal Extent Code:	0
Horizontal Accuracy Code:	99
Coordinate Point Geographic Position Code:	0
Location Verified Code:	Not reported
Geographic Location Identifier (Alias Facid):	3956
Interaction (Aka Env Int) Type Code:	CONSTGP
Interaction (Aka Env Int) Description:	Construction SW GP
Interaction Status:	A
Federal Program Indentifier:	WAR007354
Interaction Start Date:	2006-06-19 00:00:00
Interaction End Date:	Not reported
prgm_facil:	SADLER SHORT PLAT
cur_sys_pr:	WATQUAL
cur_sys_nm:	PARIS

NPDES:

Facility Status:	Active
Facility Type:	Construction SW GP
Admin Region:	Headquarters
Latitude:	48.48859999
Longitude:	-122.599
Permit ID:	WAR007354
Permit Version:	2
Permit Status:	Active
Permit SubStatus:	Coverage Issued
Ecology Contact:	Kurt Baumgarten
WRIA:	Lower Skagit-Samish
Permit Expiration Date:	12/31/2015
Effective Date:	01/01/2011

---

4 **CUSTOM PLYWOOD MILL** **CSCSL** **1005120200**
NNW **HSL** **N/A**
1/2-1 **ANACORTES, WA** **ALLSITES**
0.762 mi. **BROWNFIELDS**
4024 ft.

Relative:
Higher

Actual:
35 ft.

CSCSL:

Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Base/Neutral/Acid Organics
Ground Water:	R
Surface Water:	S
Soil:	Not reported
Sediment:	Not reported
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters

CUSTOM PLYWOOD MILL (Continued) **1005120200**

Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Bioassay Benthic Failures
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	Not reported
Sediment:	C
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Halogenated Organics
Ground Water:	C
Surface Water:	S
Soil:	C
Sediment:	Not reported
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Metals Priority Pollutants
Ground Water:	S
Surface Water:	S
Soil:	C
Sediment:	C
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533

CUSTOM PLYWOOD MILL (Continued) **1005120200**

Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Methyl tertiary-butyl ether
Ground Water:	S
Surface Water:	S
Soil:	S
Sediment:	Not reported
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Non-Halogenated Solvents
Ground Water:	S
Surface Water:	S
Soil:	C
Sediment:	Not reported
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Other Deleterious Substances
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	Not reported
Sediment:	C
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Headquarters

Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Pesticides-Unspecified
Ground Water:	S
Surface Water:	S
Soil:	S

CUSTOM PLYWOOD MILL (Continued) **1005120200**

Sediment:	Not reported
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters
Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum Products - unspecified
Ground Water:	S
Surface Water:	R
Soil:	C
Sediment:	C
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters
Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Phenolic Compounds
Ground Water:	S
Surface Water:	S
Soil:	S
Sediment:	C
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters
Facility ID:	2685
Region:	Northwest
Lat/Long:	48.493899999999 / -122.6033099999
Brownfield Status:	Yes
Rank Status:	1
Clean Up Siteid:	4533
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Polychlorinated biPhenyls (PCB)
Ground Water:	S
Surface Water:	Not reported
Soil:	B
Sediment:	S
Air:	S
Bedrock:	Not reported
Responsible Unit:	Headquarters
Facility ID:	2685

CUSTOM PLYWOOD MILL (Continued) **1005120200**

Region: Northwest
Lat/Long: 48.493899999999 / -122.6033099999
Brownfield Status: Yes
Rank Status: 1
Clean Up Siteid: 4533
Site Status: Cleanup Started
PSI?: Yes
Contaminant Name: Polynuclear Aromatic Hydrocarbons
Ground Water: C
Surface Water: S
Soil: B
Sediment: C
Air: S
Bedrock: Not reported
Responsible Unit: Headquarters

HSL:
edr_fstat: WA
edr_fzip: Not reported
edr_fcnty: SKAGIT
edr_zip: Not reported
Facility Type: Hazardous Sites List
Facility Status: Cleanup Started
FSID Number: 2685
Rank: 1
Region: HQ

ALLSITES:
Facility Id: 2685
Latitude: 48.4938999
Longitude: -122.60330
Geographic location identifier (alias facid): 2685
Facility Name: CUSTOM PLYWOOD MILL
Latitude Decimal Degrees: 48.493899999999996
Longitude Decimal Degrees: -122.60330999999999
Coordinate Point Areal Extent Code: 99
Horizontal Accuracy Code: 4
Coordinate Point Geographic Position Code: 99
Location Verified Code: Y

Geographic Location Identifier (Alias Facid): 2685
Interaction (Aka Env Int) Type Code: UST
Interaction (Aka Env Int) Description: Underground Storage Tank
Interaction Status: I
Federal Program Indentifier: 12024
Interaction Start Date: 1999-12-06 00:00:00
Interaction End Date: 2000-05-03 00:00:00
prgm_facil: Not reported
cur_sys_pr: TOXICS
cur_sys_nm: ISIS

Geographic Location Identifier (Alias Facid): 2685
Interaction (Aka Env Int) Type Code: VOLCLNST
Interaction (Aka Env Int) Description: Voluntary Cleanup Sites
Interaction Status: I
Federal Program Indentifier: NW0088

CUSTOM PLYWOOD MILL (Continued) **1005120200**

Interaction Start Date:	2003-09-10 00:00:00
Interaction End Date:	2006-07-18 00:00:00
prgm_facil:	CUSTOM PLYWOOD MILL
cur_sys_pr:	TOXICS
cur_sys_nm:	ISIS
Geographic Location Identifier (Alias Facid):	2685
Interaction (Aka Env Int) Type Code:	VOLCLNST
Interaction (Aka Env Int) Description:	Voluntary Cleanup Sites
Interaction Status:	I
Federal Program Indentifier:	NW1323
Interaction Start Date:	2004-09-10 00:00:00
Interaction End Date:	2007-04-11 00:00:00
prgm_facil:	CUSTOM PLYWOOD MILL
cur_sys_pr:	TOXICS
cur_sys_nm:	ISIS
Geographic Location Identifier (Alias Facid):	2685
Interaction (Aka Env Int) Type Code:	SCS
Interaction (Aka Env Int) Description:	State Cleanup Site
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	1900-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	CUSTOM PLYWOOD MILL
cur_sys_pr:	TOXICS
cur_sys_nm:	ISIS
Geographic Location Identifier (Alias Facid):	2685
Interaction (Aka Env Int) Type Code:	SEDIMENT
Interaction (Aka Env Int) Description:	Sediments
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	1900-01-01 00:00:00
Interaction End Date:	Not reported
prgm_facil:	CUSTOM PLYWOOD MILL
cur_sys_pr:	TOXICS
cur_sys_nm:	ISIS
Geographic Location Identifier (Alias Facid):	2685
Interaction (Aka Env Int) Type Code:	ENFORFNL
Interaction (Aka Env Int) Description:	Enforcement Final
Interaction Status:	A
Federal Program Indentifier:	Not reported
Interaction Start Date:	2007-11-16 00:00:00
Interaction End Date:	Not reported
prgm_facil:	Not reported
cur_sys_pr:	TOXICS
cur_sys_nm:	DMS

BROWNFIELDS:

Facilty ID:	2685
Rank:	1
Cleanup Site Id:	4533
Facility Status:	Cleanup Started
ISIS User Display Name:	Park, Hun Seak

CUSTOM PLYWOOD MILL (Continued) **1005120200**

Latitude:	48.494
Longitude:	-122.602
Is VCP Flag:	Not reported
Is NFA Flag:	Not reported

Count: 9 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ANACORTES	U001778132	YATTA TRADING CO LTD	HWY 20 & SPUR	98221	ALLSITES, UST
ANACORTES	U001122849	CHEVRON 91038	1251 HWY 20	98221	CSCSL NFA, UST
ANACORTES	1007063790	HAROLDS MARKET	1477 HWY 20	98221	FINDS, ALLSITES
ANACORTES	S110625488	SCIMITAR RIDGE RANCH	7535 HWY 20		ALLSITES, NPDES
ANACORTES	1007075112	PETROLANE ANACORTES	S FIDALGO BAY	98221	FINDS, ALLSITES
ANACORTES	S110040153	SOUTH FIDALGO BAY ROAD EXT	S FIDALGO BAY ROAD TO OLD BROO	98221	ALLSITES, NPDES
ANACORTES	1001600528	PM NORTHWEST DUMP	OFF HWY	98221	RCRA-NonGen, FINDS, ALLSITES, CSCSL NFA
ANACORTES	1005906254	OLYMPIC PIPE LINE CO ANACORTES STA	700 N TEXAS RD	98221	RCRA-SQG, FINDS, ALLSITES, MANIFEST, SPILLS
ANACORTES	S105685747	TEXACO	600 S TEXAS RD	98221	CSCSL, SPILLS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/10/2010
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/14/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/09/2011
Date Data Arrived at EDR: 03/15/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 91

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/14/2011
Next Scheduled EDR Contact: 02/27/2012
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 10/03/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Annually

State- and tribal - equivalent NPL

HSL: Hazardous Sites List

The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 08/31/2011
Date Data Arrived at EDR: 09/22/2011
Date Made Active in Reports: 11/10/2011
Number of Days to Update: 49

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 09/13/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

State- and tribal - equivalent CERCLIS

CSCSL: Confirmed and Suspected Contaminated Sites List

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 07/28/2011
Date Data Arrived at EDR: 07/29/2011
Date Made Active in Reports: 09/08/2011
Number of Days to Update: 41

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 10/27/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facility Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 10/11/2011
Date Data Arrived at EDR: 10/11/2011
Date Made Active in Reports: 11/10/2011
Number of Days to Update: 30

Source: Department of Ecology
Telephone: 360-407-6132
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tanks Site List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/23/2011
Date Data Arrived at EDR: 08/25/2011
Date Made Active in Reports: 09/21/2011
Number of Days to Update: 27

Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 08/25/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/31/2011
Date Data Arrived at EDR: 02/01/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 48

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/12/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 32

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/02/2011
Date Data Arrived at EDR: 11/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 7

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2011
Date Data Arrived at EDR: 11/01/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 10

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/16/2011
Date Data Arrived at EDR: 06/02/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 103

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 25

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/24/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 19

Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 08/26/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Locations
A listing of aboveground storage tank locations regulated by the Department of Ecology's Spill Prevention, Preparedness and Response Program.

Date of Government Version: 05/27/2009
Date Data Arrived at EDR: 05/28/2009
Date Made Active in Reports: 06/19/2009
Number of Days to Update: 22

Source: Department of Ecology
Telephone: 360-407-7562
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/12/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 32

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 39

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 25

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/02/2011
Date Data Arrived at EDR: 11/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 7

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2011
Date Data Arrived at EDR: 11/01/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 10

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 07/01/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 18

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2011
Date Data Arrived at EDR: 06/01/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 13

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/17/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Institutional Control Site List

Sites that have institutional controls.

Date of Government Version: 08/17/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 26

Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 08/19/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites

Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 07/22/2011
Date Data Arrived at EDR: 08/02/2011
Date Made Active in Reports: 08/18/2011
Number of Days to Update: 16

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 10/25/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

ICR: Independent Cleanup Reports
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree. This database is no longer updated by the Department of Ecology.

Date of Government Version: 12/01/2002
Date Data Arrived at EDR: 01/03/2003
Date Made Active in Reports: 01/22/2003
Number of Days to Update: 19
Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 08/10/2009
Next Scheduled EDR Contact: 11/09/2009
Data Release Frequency: No Update Planned

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites Listing
A listing of brownfields sites included in the Confirmed & Suspected Sites Listing. Brownfields are abandoned, idle or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination. Brownfields vary in size, location, age, and past use -- they can be anything from a five-hundred acre automobile assembly plant to a small, abandoned corner gas station.

Date of Government Version: 07/28/2011
Date Data Arrived at EDR: 07/29/2011
Date Made Active in Reports: 08/18/2011
Number of Days to Update: 20
Source: Department of Ecology
Telephone: 360-725-4030
Last EDR Contact: 10/27/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/27/2011
Date Data Arrived at EDR: 06/27/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 78
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/28/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWTIRE: Solid Waste Tire Facilities
This study identified sites statewide with unauthorized accumulations of scrap tires.

Date of Government Version: 11/01/2005
Date Data Arrived at EDR: 03/16/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 28
Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 09/15/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/08/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 13
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/07/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Quarterly

ALLSITES: Facility/Site Identification System Listing
Information on facilities and sites of interest to the Department of Ecology.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 36
Source: Department of Ecology
Telephone: 360-407-6423
Last EDR Contact: 11/08/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Quarterly

CSCSL NFA: Confirmed and Contaminated Sites - No Further Action
The data set contains information about sites previously on the Confirmed and Suspected Contaminated Sites list that have received a No Further Action (NFA) determination. Because it is necessary to maintain historical records of sites that have been investigated and cleaned up, sites are not deleted from the database when cleanup activities are completed. Instead, a No Further Action code is entered based upon the type of NFA determination the site received.

Date of Government Version: 07/28/2011
Date Data Arrived at EDR: 07/29/2011
Date Made Active in Reports: 08/18/2011
Number of Days to Update: 20

Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 10/27/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Semi-Annually

CDL: Clandestine Drug Lab Contaminated Site List

Illegal methamphetamine labs use hazardous chemicals that create public health hazards. Chemicals and residues can cause burns, respiratory and neurological damage, and death. Biological hazards associated with intravenous needles, feces, and blood also pose health risks.

Date of Government Version: 02/09/2009
Date Data Arrived at EDR: 03/18/2009
Date Made Active in Reports: 03/24/2009
Number of Days to Update: 6

Source: Department of Health
Telephone: 360-236-3380
Last EDR Contact: 11/15/2011
Next Scheduled EDR Contact: 02/27/2012
Data Release Frequency: Varies

HIST CDL: List of Sites Contaminated by Clandestine Drug Labs

This listing of contaminated sites by Clandestine Drug Labs includes non-remediated properties. The current CDL listing does not. This listing is no longer updated by the state agency.

Date of Government Version: 02/08/2007
Date Data Arrived at EDR: 06/26/2007
Date Made Active in Reports: 07/19/2007
Number of Days to Update: 23

Source: Department of Health
Telephone: 360-236-3381
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/09/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/11/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 10/04/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Annually

SPILLS: Reported Spills

Spills reported to the Spill Prevention, Preparedness and Response Division.

Date of Government Version: 09/23/2011
Date Data Arrived at EDR: 09/27/2011
Date Made Active in Reports: 11/10/2011
Number of Days to Update: 44

Source: Department of Ecology
Telephone: 360-407-6950
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/29/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 94

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/08/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 41

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/31/2011
Date Data Arrived at EDR: 09/14/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 15

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/14/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 99

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 09/08/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 21

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/08/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 94

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/27/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Every 4 Years

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/31/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/07/2011
Date Data Arrived at EDR: 01/21/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/19/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 60

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/13/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (206) 553-1200
Last EDR Contact: 09/13/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/01/2011
Next Scheduled EDR Contact: 12/12/2011
Data Release Frequency: Biennially

UIC: Underground Injection Wells Listing

A listing of underground injection wells.

Date of Government Version: 08/23/2011
Date Data Arrived at EDR: 08/25/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 20

Source: Department of Ecology
Telephone: 360-407-6143
Last EDR Contact: 08/25/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

WA MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/30/2011
Date Made Active in Reports: 07/27/2011
Number of Days to Update: 27

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Annually

DRYCLEANERS: Drycleaner List

A listing of registered drycleaners who registered with the Department of Ecology (using the SIC code of 7215 and 7216) as hazardous waste generators.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/30/2011
Date Made Active in Reports: 07/27/2011
Number of Days to Update: 27

Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

NPDES: Water Quality Permit System Data

A listing of permitted wastewater facilities.

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/03/2011
Date Made Active in Reports: 08/31/2011
Number of Days to Update: 28

Source: Department of Ecology
Telephone: 360-407-6073
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Quarterly

AIRS (EMI): Washington Emissions Data System

Emissions inventory data.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/23/2011
Number of Days to Update: 43

Source: Department of Ecology
Telephone: 360-407-6040
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Annually

INACTIVE DRYCLEANERS: Inactive Drycleaners
A listing of inactive drycleaner facility locations.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/30/2011
Date Made Active in Reports: 07/27/2011
Number of Days to Update: 27
Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Annually

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34
Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54
Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

FINANCIAL ASSURANCE 3: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/19/2007
Number of Days to Update: 44
Source: Department of Ecology
Telephone: 360-407-6136
Last EDR Contact: 08/23/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE 1: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/24/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/21/2011
Number of Days to Update: 26
Source: Department of Ecology
Telephone: 360-586-1060
Last EDR Contact: 08/22/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/23/2011
Date Data Arrived at EDR: 05/26/2011
Date Made Active in Reports: 06/27/2011
Number of Days to Update: 32
Source: Department of Ecology
Telephone: 360-407-6754
Last EDR Contact: 08/22/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Site Listing
A listing of coal ash disposal site locations.

Date of Government Version: 06/29/2009
Date Data Arrived at EDR: 07/02/2009
Date Made Active in Reports: 07/08/2009
Number of Days to Update: 6
Source: Department of Ecology
Telephone: 360-407-6933
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/18/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/16/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/04/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339
Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

COUNTY RECORDS

KING COUNTY:

Abandoned Landfill Study in King County
The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/1985
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE COUNTY:

Abandoned Landfill Study in the City of Seattle
The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/1984
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE/KING COUNTY:

Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project
This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/1986
Date Data Arrived at EDR: 08/18/1995
Date Made Active in Reports: 09/20/1995
Number of Days to Update: 33

Source: Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 08/14/1995
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SNOHOMISH COUNTY:

Solid Waste Sites of Record at Snohomish Health District
Solid waste disposal and/or utilization sites in Snohomish County.

Date of Government Version: 03/08/2011
Date Data Arrived at EDR: 03/31/2011
Date Made Active in Reports: 05/06/2011
Number of Days to Update: 36

Source: Snohomish Health District
Telephone: 206-339-5250
Last EDR Contact: 09/30/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Semi-Annually

TACOMA/PIERCE COUNTY:

Closed Landfill Survey

Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 09/01/2002
Date Data Arrived at EDR: 03/24/2003
Date Made Active in Reports: 05/14/2003
Number of Days to Update: 51

Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Last EDR Contact: 03/19/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 10/28/2011
Next Scheduled EDR Contact: 12/05/2011
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/16/2011
Number of Days to Update: 38

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/08/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/15/2011
Number of Days to Update: 27

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Daycare Center Listing
Source: Department of Social & Health Services
Telephone: 253-383-1735

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WEAVERLING SPIT
4701 FIDALGO BAY ROAD
ANACORTES, WA 98221

TARGET PROPERTY COORDINATES

Latitude (North):	48.48450 - 48° 29' 4.2''
Longitude (West):	122.5949 - 122° 35' 41.6''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	529935.5
UTM Y (Meters):	5370013.0
Elevation:	22 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	48122-D5 ANACORTES SOUTH, WA
Most Recent Revision:	1980

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

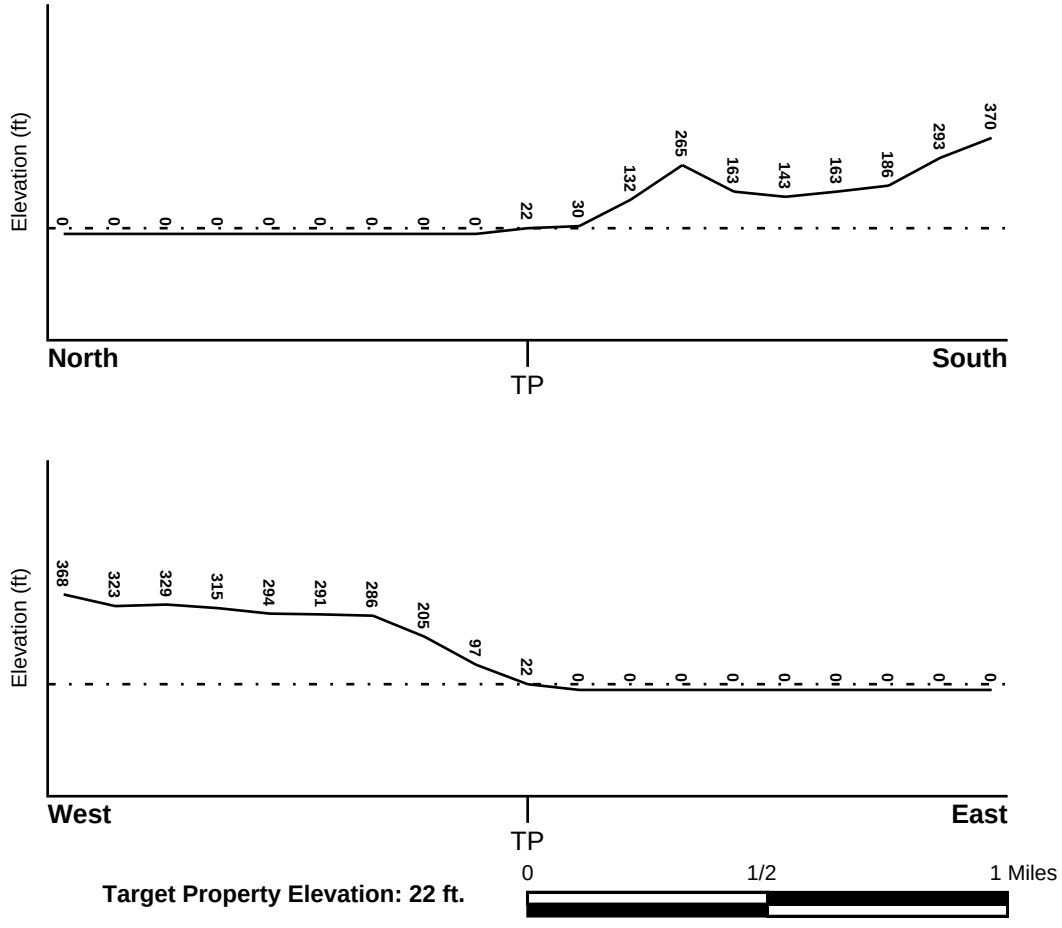
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 22 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SKAGIT, WA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 5300000000C - FEMA Q3 Flood data

Additional Panels in search area: 5301510225C - FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ANACORTES SOUTH	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

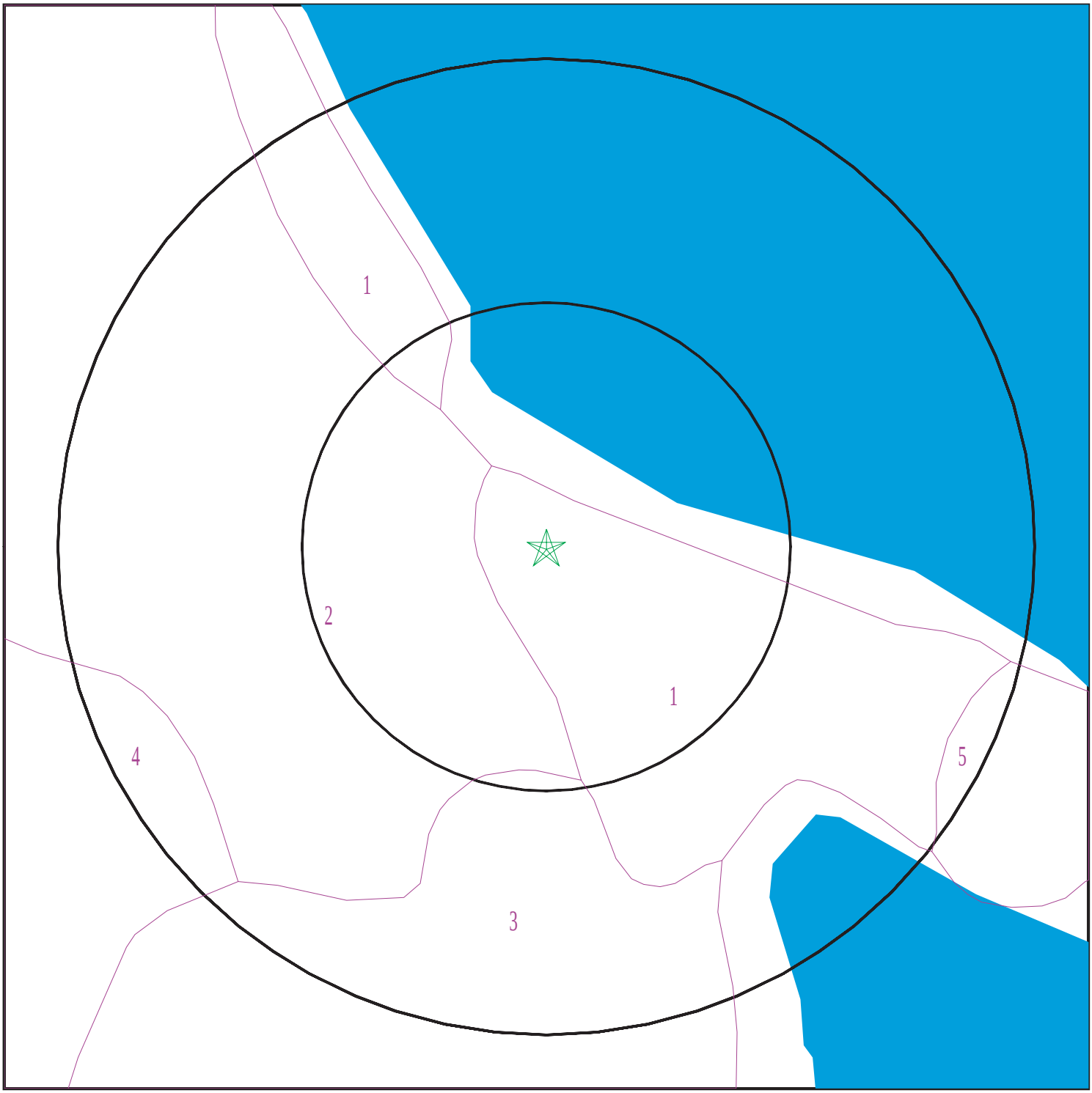
Era:	Mesozoic
System:	Cretaceous
Series:	Upper Mesozoic
Code:	uMze*(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 3208173.1s



SITE NAME:	Weaverling Spit	CLIENT:	Analytical Environmental Serv.
ADDRESS:	4701 Fidalgo Bay Road Anacortes WA 98221	CONTACT:	David Sawyer
		INQUIRY #:	3208173.1s
LAT/LONG:	48.4845 / 122.5949	DATE:	November 15, 2011 7:40 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Xerorthents

Soil Surface Texture: variable

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 122 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	variable	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel. COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel.	Max: 141 Min: 42	Max: 7.3 Min: 5.1
2	7 inches	59 inches	stratified extremely gravelly sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel. COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel.	Max: 141 Min: 42	Max: 7.3 Min: 5.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: Keystone

Soil Surface Texture: loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141	Max: 6.5 Min: 6.1
2	7 inches	14 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141	Max: 6.5 Min: 6.1
3	14 inches	59 inches	sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141	Max: 6.5 Min: 6.1

Soil Map ID: 3

Soil Component Name: Lithic Haploxerolls

Soil Surface Texture: very gravelly loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	very gravelly loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	1 inches	7 inches	very gravelly loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	7 inches	11 inches	unweathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 4

Soil Component Name: Keystone

Soil Surface Texture: loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141	Max: 6.5 Min: 6.1
2	7 inches	14 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141	Max: 6.5 Min: 6.1
3	14 inches	59 inches	sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141	Max: 6.5 Min: 6.1

Soil Map ID: 5

Soil Component Name: Fidalgo

Soil Surface Texture: gravelly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 76 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
2	3 inches	25 inches	very gravelly fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
3	25 inches	29 inches	extremely gravelly loamy sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
4	29 inches	33 inches	unweathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS3260374	1/2 - 1 Mile SW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

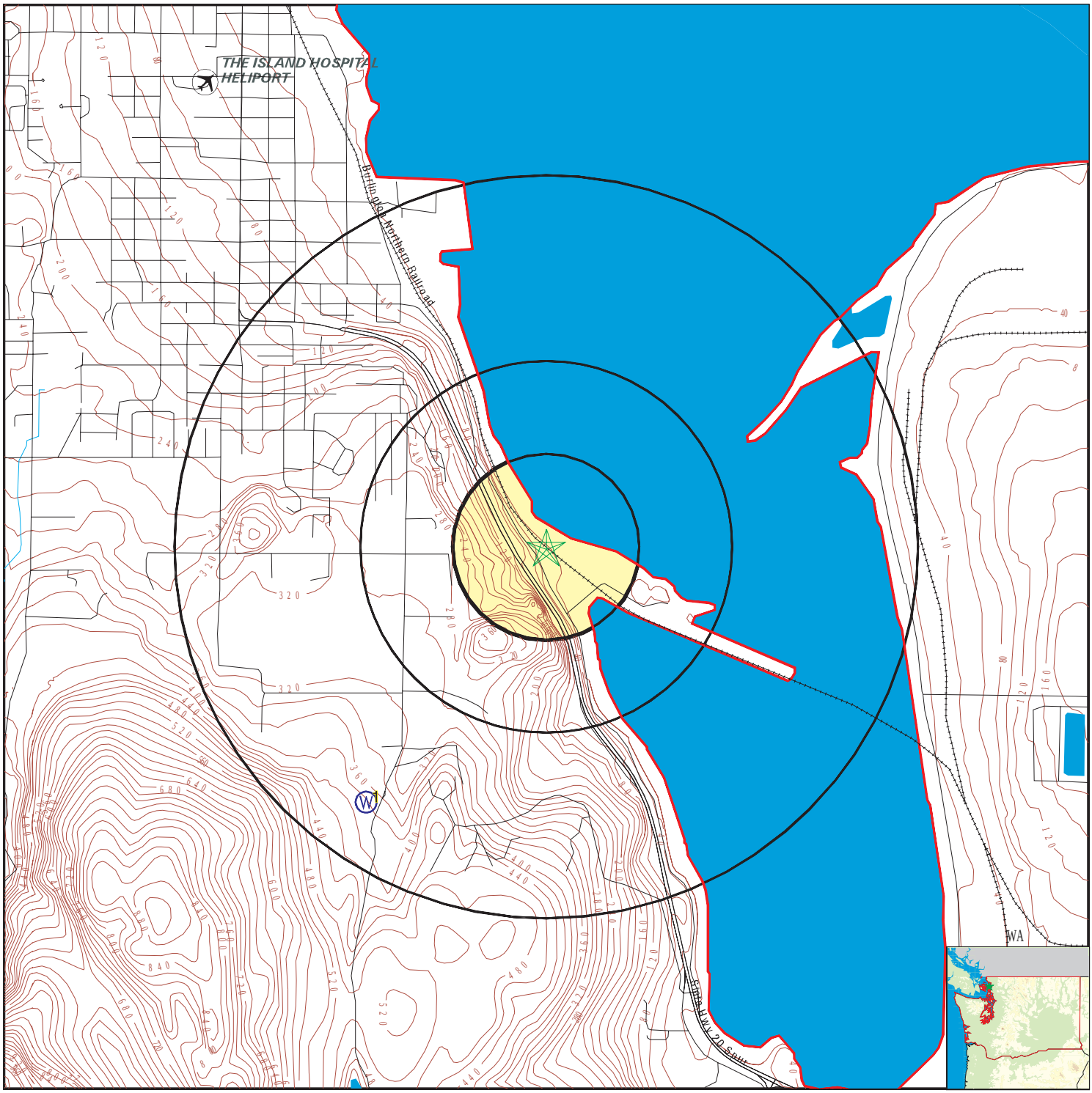
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 3208173.1s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data

N

SITE NAME:	Weaverling Spit	CLIENT:	Analytical Environmental Serv.
ADDRESS:	4701 Fidalgo Bay Road Anacortes WA 98221	CONTACT:	David Sawyer
		INQUIRY #:	3208173.1s
LAT/LONG:	48.4845 / 122.5949	DATE:	November 15, 2011 7:40 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
SW
1/2 - 1 Mile
Higher | **FED USGS** | **USGS3260374**

Agency cd:	USGS	Site no:	482829122361501
Site name:	35N/02E-31L01		
Latitude:	482829	EDR Site id:	USGS3260374
Longitude:	1223615	Dec lat:	48.47454842
Dec lon:	-122.60544853	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	057
Country:	US	Land net:	NE SW S31 T35N R02E W
Location map:	DECEPTION PASS	Map scale:	62500
Altitude:	342		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	20		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Strait of Georgia. Washington. Area = 955 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19720928
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	105	Hole depth:	Not Reported
Source of depth data:	driller		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1972-10-03	Ground water data end date:	1972-10-03
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1972-10-03	60	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for SKAGIT County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 98221

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.300 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Wells
Source: Department of Health
Telephone: 360-236-3148
Group A and B well locations.

Water Well Listing
Source: Public Utility District
Telephone: 206-779-7656
A listing of water well locations in Kitsap County.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Listing
Source: Department of Natural Resources
Telephone: 360-902-1445
Locations that represent oil and gas test well sites in Washington State from 1890 to present.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX H

Economic Impact and Growth Inducing Study

SAMISH INDIAN NATION
TRUST ACQUISITION AND CASINO PROJECT
ECONOMIC IMPACT AND GROWTH INDUCING STUDY

1.0 INTRODUCTION

This study quantifies potential economic impacts of the Samish Indian Nation Trust Acquisition and Casino Project (Proposed Project) associated with output, employment, wages, and tax revenues. For each alternative, economic effects in this analysis are quantified for Skagit County using the Impact Analysis for Planning (IMPLAN) model. The IMPLAN model employs an input-output/social accounting matrix to determine anticipated effects of development projects on the regional economy. IMPLAN analysis was first developed by the U.S. Department of Agriculture Forest Service in the mid-1970s. The current IMPLAN input-output database and model is maintained and sold by the Minnesota IMPLAN Group. The IMPLAN model is commonly used by universities, government agencies, corporations, and private consultants to estimate economic impacts to communities and regions. Because the model is so widely used, the results are considered acceptable in inter-agency analysis. Results of this study are analyzed and discussed in **Sections 4.7**, **4.14**, and **4.15** of the Environmental Impact Statement (EIS).

Each alternative examined would have a different economic impact on Skagit County respective to the alternative. There are two phases of impact: the construction phase and operation phase. The construction phase is a one-time stimulus to the economy, while the operation phase is a reoccurring stimulus to the economy. Construction under Alternatives A through D would occur in 2013, with the first full year of operation in 2014.

1.1 COMPETITIVE GAMING MARKET

Existing regional gaming facilities with the greatest potential to be affected by the project include: Swinomish Northern Lights Casino located approximately 2 miles from the project site, Skagit Valley Casino located approximately 17 miles from the project site, Tulalip Casino located approximately 37 miles from the project site, Angel of the Wind Casino located approximately 30 miles from the project site, Nooksack River Casino located approximately 30 miles from the project site, and Silver Leaf Casino located approximately 38 miles from the project site.

2.0 SOCIOECONOMIC IMPACTS

2.1 ALTERNATIVE A – PREFERRED CASINO PROJECT

Alternative A (Proposed Project) consists of the following components: (1) placing approximately 11.41 acres into Federal trust status; (2) and development of a gaming facility, including ancillary parking facilities. Construction of Alternative A is anticipated to begin in 2013, and the first full year of operation of Class III gaming is anticipated to occur in 2014.

2.1.1 CONSTRUCTION IMPACT

Based on the estimates of construction costs for the proposed development at the project site, the estimated impacts from construction activities, including the costs for general construction and investment in Furniture, Fixtures and Equipment (FF&E), were calculated and are presented in **Table 1**.

TABLE 1
DEVELOPMENT COST BREAKDOWN FOR ALTERNATIVE A

Project Element	Total Cost
Casino Construction Element	$10,836,491
Furniture, Fixtures, and Equipment (excluding gaming equipment)	$3,340,277
Gaming Equipment	$8,350,694
Total Development Budget	**$22,527,462**

Source: Samish Indian Nation, 2011; AES, 2011

In the following sections, results are presented in Aggregated Industrial Sectors (NAICS 2-digit). The direct impacts to the County from Alternative A's construction phase are captured through Sector 23 (Construction) and Sector 42 (Wholesale Trade). Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Though the impacts from construction activities are one-time and non-recurring, they are expected to generate considerable positive effects to Skagit County beyond the construction sector. In order to ensure a conservative analysis, investments in construction activities are anticipated to remain within the County at the same proportion as similar investments have historically remained within the County as calculated by IMPLAN. According to IMPLAN, approximately 55 percent of hard construction activities will be captured by Skagit County, approximately 16 percent of general FF&E spending will be captured by Skagit County, and approximately 6 percent of other manufacturing spending (including gaming equipment) would be captured by Skagit County.

Total Output

Total output generated during the construction phase is detailed in **Table 2**, and is presented in 2011 dollars. This impact represents the entire value of production/sales generated by the project. The value of output includes the costs of the goods and services that go into production, wages, and taxes paid.

TABLE 2
ALTERNATIVE A – CONSTRUCTION PHASE IMPACT ON TOTAL OUTPUT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 4,892	$ 5,621	$ 10,513
21 Mining (AGG)	$ -	$ 2,059	$ 393	$ 2,452
22 Utilities (AGG)	$ -	$ 11,512	$ 17,838	$ 29,350
23 Construction (AGG)	$5,478,626	$ 4,992	$ 16,837	$ 5,500,454
31-33 Manufacturing (AGG)	$ 518,532	$245,310	$ 82,592	$ 846,434
42 Wholesale Trade	$ 106,578	$ 31,716	$ 17,455	$ 155,749
44-45 Retail Trade (AGG)	$ -	$ 24,694	$ 221,973	$ 246,667
48-49 Transportation and Warehousing (AGG)	$ -	$ 47,431	$ 22,854	$ 70,285
51 Information (AGG)	$ -	$ 25,424	$ 21,367	$ 46,792
52 Finance and Insurance (AGG)	$ -	$ 88,474	$ 244,424	$ 332,897
53 Real Estate and Rental (AGG)	$ -	$ 81,392	$ 363,963	$ 445,355
54 Professional – Scientific & Tech Services (AGG)	$ -	$196,558	$ 32,147	$ 228,705
55 Management of Companies (AGG)	$ -	$ 2,145	$ 755	$ 2,900
56 Administrative and Waste Services (AGG)	$ -	$ 27,251	$ 21,543	$ 48,795
61 Educational Services (AGG)	$ -	$ 200	$ 16,020	$ 16,220
62 Health and Social Services (AGG)	$ -	$ 6	$ 261,957	$ 261,963
71 Arts – Entertainment & Recreation (AGG)	$ -	$ 2,249	$ 22,206	$ 24,455
72 Accommodation & Food Services (AGG)	$ -	$ 18,227	$ 112,457	$ 130,684
81 Other Services (AGG)	$ -	$ 48,708	$ 86,012	$ 134,721
92 Government and non NAICS	$ -	$ 18,231	$ 58,511	$ 76,742
Total	**$6,103,736**	**$881,469**	**$1,626,926**	**$ 8,612,131**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Direct impact from investment in construction and related activities, as well as FF&E is estimated at $6.1 million. This would generate indirect outputs from other regional sectors estimated at $0.9 million. The generation of direct and indirect output would result in the creation of jobs and wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption, or induced output, is estimated at $1.6 million. Overall, approximately $8.6 million of economic output would be generated within Skagit County during the construction phase of Alternative A.

Employment

Employment opportunities generated during the construction phase are detailed in **Table 3**. Direct impact in the County from investment in construction and related activities, as well as FF&E, is estimated at 44 positions. This alternative would generate 6 indirect employment positions and 15 induced employment positions from other regional sectors. Overall, approximately 65 positions would be generated within Skagit County during the construction phase of Alternative A.

TABLE 3
ALTERNATIVE A – CONSTRUCTION PHASE IMPACT ON EMPLOYMENT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	-	0	0	0
21 Mining (AGG)	-	0	0	0
22 Utilities (AGG)	-	0	0	0
23 Construction (AGG)	40	0	0	40
31-33 Manufacturing (AGG)	3	0	0	4
42 Wholesale Trade	1	0	0	1
44-45 Retail Trade (AGG)	-	0	4	5
48-49 Transportation and Warehousing (AGG)	-	0	0	1
51 Information (AGG)	-	0	0	0
52 Finance and Insurance (AGG)	-	0	1	2
53 Real Estate and Rental (AGG)	-	1	1	1
54 Professional – Scientific & Tech Services (AGG)	-	2	0	2
55 Management of Companies (AGG)	-	0	0	0
56 Administrative and Waste Services (AGG)	-	0	0	1
61 Educational Services (AGG)	-	0	0	0
62 Health and Social Services (AGG)	-	0	3	3
71 Arts – Entertainment & Recreation (AGG)	-	0	0	0
72 Accommodation & Food Services (AGG)	-	0	2	2
81 Other Services (AGG)	-	1	2	2
92 Government and non NAICS	-	0	0	0
Total	**44**	**6**	**15**	**65**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest whole number, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Wages

Wages generated during the construction phase are detailed in **Table 4**. As a result of the jobs generated by Alternative A, direct wages generated to be captured by the County are estimated at $2.3 million. Indirect employment wages from other regional sectors would also be generated, and are estimated at $0.2 million. The generation of direct and indirect wages would cause an increase in consumption for the region. The increase in consumption would result in an additional increase in jobs and therefore an increase in wages, induced impact, estimated at $0.4 million. Overall, approximately $2.9 million in wages would be generated within Skagit County during the construction of Alternative A.

TABLE 4
ALTERNATIVE A – CONSTRUCTION PHASE IMPACT ON WAGES

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 1,518	$ 1,764	$ 3,283
21 Mining (AGG)	$ -	$ 549	$ 97	$ 646
22 Utilities (AGG)	$ -	$ 1,916	$ 3,103	$ 5,019
23 Construction (AGG)	$2,090,343	$ 2,001	$ 5,793	$2,098,137
31-33 Manufacturing (AGG)	$ 132,451	$ 29,239	$ 4,597	$ 166,287
42 Wholesale Trade	$ 40,239	$ 11,974	$ 6,590	$ 58,803
44-45 Retail Trade (AGG)	$ -	$ 11,029	$ 93,613	$ 104,642
48-49 Transportation and Warehousing (AGG)	$ -	$ 15,243	$ 6,864	$ 22,107
51 Information (AGG)	$ -	$ 4,916	$ 4,594	$ 9,510
52 Finance and Insurance (AGG)	$ -	$ 15,166	$ 46,499	$ 61,665
53 Real Estate and Rental (AGG)	$ -	$ 5,969	$ 5,469	$ 11,438
54 Professional – Scientific & Tech Services (AGG)	$ -	$ 63,988	$ 10,622	$ 74,609
55 Management of Companies (AGG)	$ -	$ 1,022	$ 360	$ 1,381
56 Administrative and Waste Services (AGG)	$ -	$ 7,689	$ 5,730	$ 13,418
61 Educational Services (AGG)	$ -	$ 86	$ 7,419	$ 7,506
62 Health and Social Services (AGG)	$ -	$ 2	$122,300	$ 122,302
71 Arts – Entertainment & Recreation (AGG)	$ -	$ 776	$ 6,872	$ 7,648
72 Accommodation & Food Services (AGG)	$ -	$ 5,952	$ 36,949	$ 42,902
81 Other Services (AGG)	$ -	$ 18,939	$ 32,145	$ 51,084
92 Government and non NAICS	$ -	$ 6,936	$ 19,199	$ 26,135
Total	**$2,263,032**	**$204,908**	**$420,580**	**$2,888,520**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Tax Revenue Impact

The construction of Alternative A would generate substantial tax revenues to federal, state, and local governments (**Table 5**). Total tax revenue during the construction phase is estimated at $312,639. Local government is estimated to receive total tax revenue of $140,705. The majority of local government taxes are derived from indirect business taxes, which includes increased sales tax revenue.

TABLE 5
ALTERNATIVE A – CONSTRUCTION PHASE IMPACT ON OVERALL TAX REVENUES

		Employee Compensation	Proprietary Income	Indirect Business Taxes	Household Expenditures	Corporations	Total
Federal Government NonDefense	Social Ins Tax- Employee Contribution	$ 43,034	$ 11,039				$ 54,073
	Social Ins Tax- Employer Contribution	$ 42,302					$ 42,302
	Indirect Bus Tax: Excise Taxes			$ 6,559			$ 6,559
	Indirect Bus Tax: Custom Duty			$ 2,122			$ 2,122
	Indirect Bus Tax: Fed NonTaxes			$ 5,631			$ 5,631
	Corporate Profits Tax					$ 19,432	$ 19,432
	Personal Tax: Income Tax				$ 41,814		$ 41,814
Subtotal		$ 85,337	$ 11,039	$ 14,312	$ 41,814	$ 19,432	$171,934
State/Local Government NonEducation	Dividends					$ 8,613	$ 8,613
	Social Ins Tax- Employee Contribution	$ 294					$ 294
	Social Ins Tax- Employer Contribution	$ 729					$ 729
	Indirect Bus Tax: Sales Tax			$ 74,735			$ 74,735
	Indirect Bus Tax: Property Tax			$ 35,894			$ 35,894
	Indirect Bus Tax: Motor Vehicle Lic			$ 969			$ 969
	Indirect Bus Tax: Severance Tax			$ 157			$ 157
	Indirect Bus Tax: Other Taxes			$ 9,643			$ 9,643
	Indirect Bus Tax: S/L NonTaxes			$ 5,092			$ 5,092
	Corporate Profits Tax						$ -
	Personal Tax: Income Tax						$ -
	Personal Tax: NonTaxes (Fines-Fees				$ 3,153		$ 3,153
	Personal Tax: Motor Vehicle License				$ 836		$ 836
	Personal Tax: Property Taxes				$ 322		$ 322
	Personal Tax: Other Tax (Fish/Hunt)				$ 267		$ 267
Subtotal		$ 1,023	$ -	$ 126,491	$ 4,578	$ 8,613	$ 140,705
Grand Total		$ 86,360	$ 11,039	$ 140,803	$ 46,392	$ 28,045	$ 312,639

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown may not add up to equal the number given in the Total. The tax revenues indicated in the table include indirect and induced taxes only. Due to the project's unique circumstances, including the proposed location on trust land, direct tax revenues generated during the project's construction phase were not quantifiable. As such, actual tax revenues generated by the project may be greater than those indicated above as direct personal income tax has not been included in the totals.

2.1.2 OPERATION IMPACT

The estimated economic impact from operation of Alternative A was calculated based on revenue projections provided by the Tribe (2011).

Projected Revenue

Under Alternative A, the Tribe would sign a compact with the state allowing the Tribe to construct a gaming facility. The Proposed Project would include the development of 13,200 square feet of gaming

floor and 8,750 square feet of restaurant and beverage facilities. Revenue projections under Alternative A are provided in **Table 6**.

TABLE 6
ANNUAL REVENUE BREAKDOWN FOR ALTERNATIVE A

Project Element	2014 Revenue
Casino Gaming Revenue	$41,753,470
Non-Gaming Operations Revenue	
Food & Beverage	$75,741
Total Revenue	**$41,829,211**

Source: Samish Indian Nation, 2011; AES, 2011
Note: Actual revenues collected by the Tribe would be less than the amount shown.

The projected revenue for the Samish Tribe Preferred Casino Project is $41.8 million. In the following sections, the direct impact from the project is captured in NAICS Sector 71 (Arts – Entertainment and Recreation), Sector 72 (Accommodation and Food Services). Operation impacts are anticipated to recur annually beginning with the first full year of operation, which is anticipated to be 2014 under Alternative A.

Substitution Effects

Existing regional gaming facilities with the greatest potential to be affected by the project include: Swinomish Northern Lights Casino located approximately 2 miles from the project site, Skagit Valley Casino located approximately 17 miles from the project site, Tulalip Casino located approximately 37 miles from the project site, Angel of the Wind Casino located approximately 30 miles from the project site, Nooksack River Casino located approximately 30 miles from the project site, and Silver Leaf Casino located approximately 38 miles from the project site. Whenever a new casino opens in a market area, a certain amount of market "cannibalization" is to be expected. As estimated by the Tribe, the proposed project could potentially capture approximately 11 percent of the tribal gaming market, or $31.2 million in annual revenues originating from within 90 minutes of the subject site (Samish Indian Nation, 2011). Anticipated substitution effects are likely to diminish after the first year of the project's operation once local residents experience the casino and return to more typical spending patterns. Despite existing competition in the vicinity of the proposed project, the gaming market is sufficient to warrant an additional gaming venue in the region as conservative forecasts project 2.8 percent to 5.7 percent market growth in the coming years (Samish Indian Nation, 2011). As such, it is anticipated that all competing casinos would continue to generate significantly positive cash flows.

According to a 2000 Harvard University study, worst-case non-gaming substitution effects occurring in rural environments as a result of Native American casinos have shown on average a nine percent decrease in earnings at local restaurants and bars and an increase in earnings in other commercial sectors.[1]

[1] Taylor, Jonathan B., Matthew B. Krepps, and Patrick Wang, 2000. *The National Evidence on the Socioeconomic Impacts of American Indian Gaming on Non-Indian Communities*. April 2000. Available online at: http://www.hks.harvard.edu/hpaied/docs/PRS00-1.pdf

According to official U.S. Census Bureau definitions, rural areas comprise open country and settlements with fewer than 2,500 residents.[2] In 2010, the City of Anacortes had a population of approximately 15,778 people,[3] which is higher than the U.S. Census Bureau's definition of a rural community. Thus, worst case effects as described in the Harvard study would not apply to the Project site. Therefore, it may be inferred that if substitution occurs it would be at some percentage lower than nine percent. Additionally, potential non-gaming substitution effects would be counteracted by the local economic activity generated by casino patrons other than local residents. Specifically, as the casino would draw non-residents to the area, the associated increase in new visitor demand for off-site entertainment venues, restaurants, and bars would make up for some area residents choosing to visit Alternative A rather than other local establishments. Thus, it is not anticipated that significant quantifiable non-gaming substitution effects would occur.

Total Output

Total annual output generated during the operation phase is detailed in **Table 7**, and is presented in 2011 dollars. The output impact represents the entire value of production/sales generated by the project. The output impact value includes the costs of the goods and services that go into production, wages, and taxes paid. New direct investment in the gaming industry and food and beverage consumption at the site as a result of Alternative A is estimated to be $24.2 million annually. This would generate indirect outputs from other regional sectors in the County estimated at $4.0 million annually. The generation of direct and indirect output would result in the creation of jobs and wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption, or induced output, is estimated at $4.7 million. Overall, approximately $32.9 million of economic output would be generated within the County annually during the buildout operational phase of Alternative A.

[2] Measuring Rurality: What is Rural? United States Department of Agriculture. Economic Research Service. Available online at: http://www.ers.usda.gov/Briefing/Rurality/WhatIsRural/. March 22, 2007.
[3] U.S. Census Bureau. Anacortes, Washington. 2010 American Community Survey 1-Year Estimates. Available online at: http://quickfacts.census.gov/qfd/states/53/5301990.html

TABLE 7
ALTERNATIVE A – OPERATION PHASE IMPACT ON TOTAL OUTPUT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 9,294	$ 16,409	$ 25,702
21 Mining (AGG)	$ -	$ 788	$ 1,146	$ 1,934
22 Utilities (AGG)	$ -	$ 162,702	$ 52,072	$ 214,774
23 Construction (AGG)	$ -	$ 51,270	$ 49,140	$ 100,410
31-33 Manufacturing (AGG)	$ -	$ 325,858	$ 241,090	$ 566,948
42 Wholesale Trade	$ -	$ 33,252	$ 50,954	$ 84,206
44-45 Retail Trade (AGG)	$ -	$ 21,986	$ 647,846	$ 669,832
48-49 Transportation and Warehousing (AGG)	$ -	$ 136,869	$ 66,704	$ 203,573
51 Information (AGG)	$ -	$ 370,157	$ 62,371	$ 432,528
52 Finance and Insurance (AGG)	$ -	$ 816,417	$ 713,421	$ 1,529,838
53 Real Estate and Rental (AGG)	$ -	$ 251,226	$1,062,281	$ 1,313,507
54 Professional – Scientific & Tech Services (AGG)	$ -	$ 634,166	$ 93,832	$ 727,998
55 Management of Companies (AGG)	$ -	$ 37,763	$ 2,204	$ 39,967
56 Administrative and Waste Services (AGG)	$ -	$ 299,815	$ 62,881	$ 362,696
61 Educational Services (AGG)	$ -	$ 1,367	$ 46,754	$ 48,120
62 Health and Social Services (AGG)	$ -	$ 834	$ 764,626	$ 765,461
71 Arts – Entertainment & Recreation (AGG)	$ 24,133,654	$ 57,852	$ 64,811	$ 24,256,317
72 Accommodation & Food Services (AGG)	$ 62,117	$ 183,918	$ 328,243	$ 574,279
81 Other Services (AGG)	$ -	$ 245,338	$ 251,044	$ 496,382
92 Government and non NAICS	$ -	$ 360,580	$ 170,793	$ 531,373
Total	**$ 24,195,771**	**$4,001,453**	**$4,748,621**	**$ 32,945,845**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Employment

Employment opportunities generated during the operation phase are detailed in **Table 8**. The potential for Alternative A to result in growth-inducing impacts, including the potential for out-of-area employees to relocate to Skagit County, is analyzed in **Section 5.0** of this study.

Under Alternative A, a total of approximately 268 direct employment opportunities would be anticipated to be generated at the project site. Alternative A would generate an estimated 35 indirect employment positions from other regional sectors within the County. The generation of direct and indirect output would result in the creation of wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption would result in an additional increase in employment opportunities, induced impact, estimated at 44 positions. Overall, approximately 347 new job opportunities would be captured within the County during the operational phase of Alternative A.

TABLE 8
ALTERNATIVE A – OPERATION PHASE IMPACT ON EMPLOYMENT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	-	0	0	0
21 Mining (AGG)	-	0	0	0
22 Utilities (AGG)	-	0	0	0
23 Construction (AGG)	-	0	0	1
31-33 Manufacturing (AGG)	-	1	0	1
42 Wholesale Trade	-	0	0	1
44-45 Retail Trade (AGG)	-	0	12	13
48-49 Transportation and Warehousing (AGG)	-	1	0	2
51 Information (AGG)	-	2	0	2
52 Finance and Insurance (AGG)	-	3	4	7
53 Real Estate and Rental (AGG)	-	2	3	5
54 Professional – Scientific & Tech Services (AGG)	-	7	1	8
55 Management of Companies (AGG)	-	0	0	0
56 Administrative and Waste Services (AGG)	-	5	1	6
61 Educational Services (AGG)	-	0	1	1
62 Health and Social Services (AGG)	-	0	9	9
71 Arts – Entertainment & Recreation (AGG)	267	2	1	270
72 Accommodation & Food Services (AGG)	1	3	6	10
81 Other Services (AGG)	-	4	4	8
92 Government and non NAICS	-	2	1	3
Total	**268**	**35**	**44**	**347**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest whole number, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Wages

Wages generated during the operation phase are detailed in **Table 9**. As a result of the jobs generated by Alternative A, direct wages generated are estimated at $6.2 million. Indirect employment wages from other regional sectors would also be generated, and are estimated at $1.0 million. The generation of direct and indirect wages would cause an increase in consumption for the region. The increase in consumption would result in an additional increase in jobs and therefore an increase in wages, induced impact, estimated at $1.2 million. Overall, approximately $8.4 million in wages would be generated annually within the County during the operation phase of Alternative A.

TABLE 9
ALTERNATIVE A – OPERATION PHASE IMPACT ON WAGES

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 3,919	$ 5,151	$ 9,070
21 Mining (AGG)	$ -	$ 181	$ 283	$ 464
22 Utilities (AGG)	$ -	$ 29,180	$ 9,059	$ 38,239
23 Construction (AGG)	$ -	$ 20,615	$ 16,908	$ 37,523
31-33 Manufacturing (AGG)	$ -	$ 25,258	$ 13,419	$ 38,677
42 Wholesale Trade	$ -	$ 12,554	$ 19,238	$ 31,792
44-45 Retail Trade (AGG)	$ -	$ 9,819	$ 273,217	$ 283,036
48-49 Transportation and Warehousing (AGG)	$ -	$ 47,337	$ 20,032	$ 67,369
51 Information (AGG)	$ -	$ 83,942	$ 13,409	$ 97,352
52 Finance and Insurance (AGG)	$ -	$ 147,445	$ 135,720	$ 283,165
53 Real Estate and Rental (AGG)	$ -	$ 14,584	$ 15,966	$ 30,550
54 Professional – Scientific & Tech Services (AGG)	$ -	$ 202,371	$ 31,003	$ 233,374
55 Management of Companies (AGG)	$ -	$ 17,983	$ 1,049	$ 19,033
56 Administrative and Waste Services (AGG)	$ -	$ 77,999	$ 16,724	$ 94,722
61 Educational Services (AGG)	$ -	$ 590	$ 21,653	$ 22,243
62 Health and Social Services (AGG)	$ -	$ 303	$ 356,980	$ 357,282
71 Arts – Entertainment & Recreation (AGG)	$ 6,153,803	$ 10,629	$ 20,056	$ 6,184,488
72 Accommodation & Food Services (AGG)	$ 20,475	$ 60,292	$ 107,849	$ 188,616
81 Other Services (AGG)	$ -	$ 91,524	$ 93,821	$ 185,345
92 Government and non NAICS	$ -	$ 184,189	$ 56,042	$ 240,231
Total	**$ 6,174,277**	**$ 1,040,714**	**$1,227,579**	**$ 8,442,570**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Tax Revenue Impact

There is a common misconception that Native American gaming facilities do not generate fiscal benefits beyond tribal governments. Tribes, as sovereign governments, do not pay corporate income or business and operations taxes on revenue or property taxes on tribal land; tribal members that both live and work on a Reservation situated in a state with state income tax do not pay state income taxes; and state and/or local sales/excise taxes are levied on purchases by tribal members on reservations. However, taxes are paid in all other circumstances, including purchases made by non-tribal members, income taxes paid by non-tribal members or members that live off of the Reservation, and all indirect and induced activity generated during operation. As such, federal, state, and local governments typically experience substantial fiscal benefits from tribal business operations, including casinos.

The Project site is located on Skagit County tax parcels P19917, P19919, and P19920. According to the Skagit County Assessor's Office, the total 2011 annual property tax for the parcels was $20,192.02. Alternative A would result in the entire area of the parcels at the Project site to be transferred into trust

status for the Tribe. Therefore, the entire taxable value of the parcels, or approximately $20,192.02 in annual property tax, would be lost. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative A. With the anticipated increase in taxes resulting from the operation of Alternative A, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

The operation of Alternative A would generate substantial tax revenues to federal, state, and local governments (**Table 10**). Total annual tax revenue during the operation phase is estimated at $767,606. Local government is estimated to receive total tax revenue of $458,138. The majority of local government taxes are derived from indirect business taxes, including increased sales tax revenue.

TABLE 10
ALTERNATIVE A – OPERATION PHASE IMPACT ON OVERALL TAX REVENUES

		Employee Compensation	Proprietary Income	Indirect Business Taxes	Household Expenditures	Corporations	Total
Federal Government NonDefense	Social Ins Tax-Employee Contribution	$ 156,060	$ 37,456				$193,516
	Social Ins Tax-Employer Contribution	$ 153,407					$153,407
	Indirect Bus Tax: Excise Taxes			$ 21,120			$ 21,120
	Indirect Bus Tax: Custom Duty			$ 6,833			$ 6,833
	Indirect Bus Tax: Fed NonTaxes			$ 18,132			$ 18,132
	Corporate Profits Tax					$ 69,425	$ 69,425
	Personal Tax: Income Tax				$ 149,397		$149,397
Subtotal		**$ 309,468**	**$ 37,456**	**$ 46,084**	**$ 149,397**	**$ 69,425**	**$611,830**
State/Local Government NonEducation	Dividends					$ 30,772	$ 30,772
	Social Ins Tax-Employee Contribution	$ 1,064					$ 1,064
	Social Ins Tax-Employer Contribution	$ 2,644					$ 2,644
	Indirect Bus Tax: Sales Tax			$240,649			$240,649
	Indirect Bus Tax: Property Tax			$115,579			$115,579
	Indirect Bus Tax: Motor Vehicle Lic			$ 3,121			$ 3,121
	Indirect Bus Tax: Severance Tax			$ 505			$ 505
	Indirect Bus Tax: Other Taxes			$ 31,050			$ 31,050
	Indirect Bus Tax: S/L NonTaxes			$ 16,397			$ 16,397
	Corporate Profits Tax						$ -
	Personal Tax: Income Tax						$ -
	Personal Tax: NonTaxes (Fines- Fees				$ 11,264		$ 11,264
	Personal Tax: Motor Vehicle License				$ 2,987		$ 2,987
	Personal Tax: Property Taxes				$ 1,152		$ 1,152
	Personal Tax: Other Tax (Fish/Hunt)				$ 954		$ 954
Subtotal		**$ 3,709**	**$ -**	**$407,300**	**$ 16,357**	**$ 30,772**	**$458,138**
Grand Total		**$313,177**	**$ 37,456**	**$453,384**	**$165,754**	**$100,197**	**$767,606**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown may not add up to equal the number given in the Total. The tax revenues indicated in the table include indirect and induced taxes only. Due to the project's unique circumstances, including the proposed location on trust land, direct tax revenues generated during the project's operation phase were not quantifiable. As such, actual tax revenues generated by the project may be greater than those indicated above as direct personal income tax has not been included in the totals.

2.2 ALTERNATIVE B – REDUCED INTENSITY

Alternative B, the Reduced Intensity Alternative, consists of development of a reduced size casino structure on the Thompson Road Site. Alternative B is similar to Alternatives A in most aspects, entailing the placement of the property into trust and the subsequent development of a gaming facility. Operation of the casino, project construction, water supply, wastewater disposal, and site drainage would be essentially similar to Alternatives A however at a smaller size. Construction of Alternative B is anticipated to begin in 2013, and operation of Class III gaming is anticipated to begin in 2014.

2.2.1 CONSTRUCTION IMPACT

Based on the estimates of construction costs for the proposed development at the Project site, the estimated impacts from construction activities, including the costs for general construction and investment in Furniture, Fixtures and Equipment (FF&E), were calculated and are presented in **Table 11**.

TABLE 11
DEVELOPMENT COST BREAKDOWN FOR ALTERNATIVE B

Project Element	Total Cost
Casino Construction Element	$7,238,596
Furniture, Fixtures, and Equipment (excluding gaming equipment)	$2,231,250
Gaming Equipment	$5,578,125
Total Development Budget	$15,047,971

Source: Samish Indian Nation, 2011; AES, 2011

In the following sections, results are presented in Aggregated Industrial Sectors (NAICS 2-digit). The direct impacts to the County from Alternative B's construction phase are captured through Sector 23 (Construction) and Sector 42 (Wholesale Trade). Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Though the impacts from construction activities are one-time, non-recurring, they are expected to generate considerable positive effects to Skagit County beyond the construction sector. In order to ensure a conservative analysis, investments in construction activities are anticipated to remain within Skagit County at the same proportion as similar investments have historically remained within the County as calculated by IMPLAN.

Total Output

Total output generated during the construction phase is detailed in **Table 12**, and is presented in 2011 dollars. The output impact represents the entire value of production/sales generated by the project. The output impact value includes the costs of the goods and services that go into production, wages, and taxes paid. Direct impact from investment in construction and related activities, as well as FF&E, is estimated at $4.1 million. This would generate indirect outputs from other regional sectors estimated at $0.6 million. The generation of direct and indirect output would result in the creation of jobs and wages. The

generation of employment wages would result in an increase in consumption for the region. The increase in consumption, or induced output, is estimated at $1.1 million. Overall, approximately $5.8 million of economic output would be generated within the County during the construction phase of Alternative B.

TABLE 12
ALTERNATIVE B – CONSTRUCTION PHASE IMPACT ON TOTAL OUTPUT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 3,268	$ 3,896	$ 7,164
21 Mining (AGG)	$ -	$ 1,375	$ 272	$ 1,648
22 Utilities (AGG)	$ -	$ 7,693	$ 12,364	$ 20,056
23 Construction (AGG)	$3,659,631	$ 3,336	$ 11,670	$ 3,674,637
31-33 Manufacturing (AGG)	$ 346,371	$163,881	$ 57,245	$ 567,497
42 Wholesale Trade	$ 72,339	$ 21,194	$ 12,098	$ 105,631
44-45 Retail Trade (AGG)	$ -	$ 16,497	$ 153,851	$ 170,348
48-49 Transportation and Warehousing (AGG)	$ -	$ 31,713	$ 15,841	$ 47,553
51 Information (AGG)	$ -	$ 16,998	$ 14,810	$ 31,807
52 Finance and Insurance (AGG)	$ -	$ 59,133	$ 169,411	$ 228,544
53 Real Estate and Rental (AGG)	$ -	$ 54,390	$ 252,265	$ 306,655
54 Professional – Scientific & Tech Services (AGG)	$ -	$131,318	$ 22,281	$ 153,599
55 Management of Companies (AGG)	$ -	$ 1,435	$ 523	$ 1,958
56 Administrative and Waste Services (AGG)	$ -	$ 18,221	$ 14,932	$ 33,152
61 Educational Services (AGG)	$ -	$ 134	$ 11,103	$ 11,237
62 Health and Social Services (AGG)	$ -	$ 4	$ 181,564	$ 181,568
71 Arts – Entertainment & Recreation (AGG)	$ -	$ 1,503	$ 15,391	$ 16,894
72 Accommodation & Food Services (AGG)	$ -	$ 12,180	$ 77,944	$ 90,124
81 Other Services (AGG)	$ -	$ 32,544	$ 59,615	$ 92,160
92 Government and non NAICS	$ -	$ 12,191	$ 40,554	$ 52,745
Total	**$4,078,341**	**$589,006**	**$1,127,630**	**$ 5,794,977**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Employment

Employment opportunities generated during the construction phase are detailed in **Table 13**. The direct employment impact during construction of Alternative B is estimated at 32 positions. This alternative would generate 4 indirect employment positions and 10 induced employment positions from other regional sectors. The generation of direct and indirect output would result in the creation of wages.

Overall, approximately 46 job opportunities would be generated within the County during the construction phase of Alternative B.

TABLE 13
ALTERNATIVE B – CONSTRUCTION PHASE IMPACT ON EMPLOYMENT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	-	0	0	0
21 Mining (AGG)	-	0	0	0
22 Utilities (AGG)	-	0	0	0
23 Construction (AGG)	29	0	0	29
31-33 Manufacturing (AGG)	2	0	0	2
42 Wholesale Trade	0	0	0	1
44-45 Retail Trade (AGG)	-	0	3	3
48-49 Transportation and Warehousing (AGG)	-	0	0	0
51 Information (AGG)	-	0	0	0
52 Finance and Insurance (AGG)	-	0	1	1
53 Real Estate and Rental (AGG)	-	0	1	1
54 Professional – Scientific & Tech Services (AGG)	-	1	0	2
55 Management of Companies (AGG)	-	0	0	0
56 Administrative and Waste Services (AGG)	-	0	0	1
61 Educational Services (AGG)	-	0	0	0
62 Health and Social Services (AGG)	-	0	2	2
71 Arts – Entertainment & Recreation (AGG)	-	0	0	0
72 Accommodation & Food Services (AGG)	-	0	1	2
81 Other Services (AGG)	-	0	1	1
92 Government and non NAICS	-	0	0	0
Total	**32**	**4**	**10**	**46**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest whole number, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Wages

Wages generated during the construction phase are detailed in **Table 14**. As a result of the jobs generated by Alternative B, direct wages generated are estimated at $1.6 million. Indirect employment wages from other regional sectors would also be generated, and are estimated at $0.1 million. The generation of direct and indirect wages would an increase in consumption for the region. The increase in consumption would result in an additional increase in jobs and therefore an increase in wages, induced impact, estimated at $0.3 million. Overall, approximately $2.0 million in wages would be generated within Skagit County during the construction phase of Alternative B.

TABLE 14
ALTERNATIVE B – CONSTRUCTION PHASE IMPACT ON WAGES

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 1,014	$ 1,223	$ 2,237
21 Mining (AGG)	$ -	$ 367	$ 67	$ 434
22 Utilities (AGG)	$ -	$ 1,280	$ 2,151	$ 3,431
23 Construction (AGG)	$1,458,927	$ 1,337	$ 4,015	$1,464,279
31-33 Manufacturing (AGG)	$ 86,773	$ 19,532	$ 3,186	$ 109,491
42 Wholesale Trade	$ 27,867	$ 8,002	$ 4,568	$ 40,436
44-45 Retail Trade (AGG)	$ -	$ 7,368	$ 64,884	$ 72,251
48-49 Transportation and Warehousing (AGG)	$ -	$ 10,193	$ 4,757	$ 14,950
51 Information (AGG)	$ -	$ 3,287	$ 3,184	$ 6,471
52 Finance and Insurance (AGG)	$ -	$ 10,137	$ 32,229	$ 42,366
53 Real Estate and Rental (AGG)	$ -	$ 3,988	$ 3,791	$ 7,779
54 Professional – Scientific & Tech Services (AGG)	$ -	$ 42,749	$ 7,362	$ 50,111
55 Management of Companies (AGG)	$ -	$ 683	$ 249	$ 932
56 Administrative and Waste Services (AGG)	$ -	$ 5,141	$ 3,971	$ 9,112
61 Educational Services (AGG)	$ -	$ 58	$ 5,142	$ 5,200
62 Health and Social Services (AGG)	$ -	$ 1	$ 84,766	$ 84,768
71 Arts – Entertainment & Recreation (AGG)	$ -	$ 519	$ 4,763	$ 5,281
72 Accommodation & Food Services (AGG)	$ -	$ 3,977	$ 25,610	$ 29,587
81 Other Services (AGG)	$ -	$ 12,654	$ 22,280	$ 34,934
92 Government and non NAICS	$ -	$ 4,640	$ 13,307	$ 17,947
Total	**$1,573,567**	**$136,927**	**$291,506**	**$2,002,000**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Tax Revenue Impact

The construction of Alternative B would generate substantial tax revenues to federal, state, and local governments (**Table 15**). Total tax revenue during the construction phase is estimated at $214,557. Local government is estimated to receive total tax revenue of $96,753. The majority of local government taxes are derived from indirect business taxes, including increased sales tax.

TABLE 15
ALTERNATIVE B – CONSTRUCTION PHASE IMPACT ON OVERALL TAX REVENUES

		Employee Compensation	Proprietary Income	Indirect Business Taxes	Household Expenditures	Corporations	Total
Federal Government NonDefense	Social Ins Tax- Employee Contribution	$ 29,476	$ 7,538				$ 37,014
	Social Ins Tax- Employer Contribution	$ 28,976					$ 28,976
	Indirect Bus Tax: Excise Taxes			$ 4,511			$ 4,511
	Indirect Bus Tax: Custom Duty			$ 1,459			$ 1,459
	Indirect Bus Tax: Fed NonTaxes			$ 3,873			$ 3,873
	Corporate Profits Tax					$ 13,349	$ 13,349
	Personal Tax: Income Tax				$ 28,621		$ 28,621
Subtotal		**$ 58,452**	**$ 7,538**	**$ 9,844**	**$ 28,621**	**$ 13,349**	**$117,804**
State/Local Government NonEducation	Dividends					$ 5,917	$ 5,917
	Social Ins Tax- Employee Contribution	$ 201	$ -				$ 201
	Social Ins Tax- Employer Contribution	$ 500					$ 500
	Indirect Bus Tax: Sales Tax			$ 51,404			$ 51,404
	Indirect Bus Tax: Property Tax			$ 24,688			$ 24,688
	Indirect Bus Tax: Motor Vehicle Lic			$ 667			$ 667
	Indirect Bus Tax: Severance Tax			$ 108			$ 108
	Indirect Bus Tax: Other Taxes			$ 6,633			$ 6,633
	Indirect Bus Tax: S/L NonTaxes			$ 3,502			$ 3,502
	Corporate Profits Tax					$ -	$ -
	Personal Tax: Income Tax				$ -		$ -
	Personal Tax: NonTaxes (Fines-Fees				$ 2,158		$ 2,158
	Personal Tax: Motor Vehicle License				$ 572		$ 572
	Personal Tax: Property Taxes				$ 221		$ 221
	Personal Tax: Other Tax (Fish/Hunt)				$ 183		$ 183
Subtotal		**$ 700**	**$ -**	**$ 87,002**	**$ 3,134**	**$ 5,917**	**$ 96,753**
Grand Total		**$ 59,152**	**$ 7,538**	**$ 96,846**	**$ 31,755**	**$ 19,266**	**$214,557**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown may not add up to equal the number given in the Total. The tax revenues indicated in the table include indirect and induced taxes only. Due to the project's unique circumstances, including the proposed location on trust land, direct tax revenues generated during the project's construction phase were not quantifiable. As such, actual tax revenues generated by the project may be greater than those indicated above as direct personal income tax has not been included in the totals.

2.2.2 OPERATION IMPACT

The estimated economic impact from operation of Alternative B was calculated based on revenue projections provided by the Tribe (2011).

Projected Revenue

Alternative B entails a reduced intensity casino on the Thompson Road Site. Alternative B would occupy the central and western portion of the project site described under Alternative A. Alternative B plans call

for 9,000 square feet of gaming floor and 5,520 square feet of restaurant and lounge areas. Revenue projections under Alternative B are provided in **Table 16**.

TABLE 16
ANNUAL REVENUE BREAKDOWN FOR ALTERNATIVE B

Project Element	2014 Revenue
Casino Gaming Revenue	$27,890,625
Non-Gaming Operations Revenue	
Food & Beverage	$50,593
Total Revenue	**$27,941,218**

Source: Samish Indian Nation, 2011; AES, 2011
Note: Actual revenues collected by the Tribe would be less than the amount shown.

The projected revenue for Alternative B is $27.9 million in the first full year of operation. In the following sections, the direct impact from the project is captured in NAICS Sector 71 (Arts – Entertainment and Recreation) and Sector 72 (Accommodation and Food Services). Operation impacts are anticipated to recur annually beginning with the first full year of operation, which is anticipated to be 2014 under Alternative B.

Substitution Effects

As noted under Alternative A, whenever a new casino opens in a market area, a certain amount of market cannibalization is to be expected. As estimated by the Tribe, the project could potentially capture approximately 11 percent of the tribal gaming market, or $31.2 million in annual revenues originating from within 90 minutes of the subject site (Samish Indian Nation, 2011). Anticipated substitution effects are likely to diminish after the first year of the project's operation once local residents experience the casino and return to more typical spending patterns. Despite existing competition in the vicinity of the project, the gaming market is sufficient to warrant an additional gaming venue in the region as conservative forecasts project 2.8 percent to 5.7 percent market growth in the coming years (Samish Indian Nation, 2011). As is the case with Alternative A, it is likely that all competing casinos would continue to generate significantly positive cash flows.

For reasons as described under Alternative A, Alternative B would have limited potential for non-gaming substitution effects to occur. Additionally, if non-gaming substitution were to occur, some of the effects would be counteracted by the local economic activity generated by casino patrons within the local environment. Specifically, as the casino would draw non-residents to the area, the associated increase in new visitor demand for off-site entertainment venues, restaurants, and bars would make up for some area residents choosing to visit Alternative B rather than other local establishments. Given the current population of Skagit County as well as the reduced size and scope compared with Alternative A, it is not anticipated that significant quantifiable non-gaming substitution effects would occur under Alternative B.

Total Output

Total annual output generated during the operation phase is detailed in **Table 17**, and is presented in 2011 dollars. The output impact represents the entire value of production/sales generated by the project. The output impact value includes the costs of the goods and services that go into production, wages, and taxes paid. New direct investment in the gaming industry, food and beverage consumption, and retail at the site as a result of Alternative B is estimated at $16.2 million. This would generate indirect outputs from other regional sectors estimated at $2.7 million. The generation of direct and indirect output would result in the creation of jobs and wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption, or induced output, is estimated at $3.2 million. Overall, approximately $22.0 million of new economic output would be generated within the County annually during the operation phase of Alternative B.

TABLE 17
ALTERNATIVE B – OPERATION PHASE IMPACT ON TOTAL OUTPUT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 6,208	$ 10,961	$ 17,169
21 Mining (AGG)	$ -	$ 526	$ 766	$ 1,292
22 Utilities (AGG)	$ -	$ 108,682	$ 34,783	$ 143,465
23 Construction (AGG)	$ -	$ 34,247	$ 32,825	$ 67,072
31-33 Manufacturing (AGG)	$ -	$ 217,668	$ 161,044	$ 378,712
42 Wholesale Trade	$ -	$ 22,212	$ 34,036	$ 56,248
44-45 Retail Trade (AGG)	$ -	$ 14,686	$ 432,750	$ 447,436
48-49 Transportation and Warehousing (AGG)	$ -	$ 91,426	$ 44,557	$ 135,983
51 Information (AGG)	$ -	$ 247,259	$ 41,663	$ 288,922
52 Finance and Insurance (AGG)	$ -	$ 545,353	$ 476,553	$ 1,021,907
53 Real Estate and Rental (AGG)	$ -	$ 167,815	$ 709,586	$ 877,401
54 Professional – Scientific & Tech Services (AGG)	$ -	$ 423,612	$ 62,678	$ 486,290
55 Management of Companies (AGG)	$ -	$ 25,225	$ 1,472	$ 26,697
56 Administrative and Waste Services (AGG)	$ -	$ 200,272	$ 42,003	$ 242,275
61 Educational Services (AGG)	$ -	$ 913	$ 31,231	$ 32,144
62 Health and Social Services (AGG)	$ -	$ 557	$ 510,758	$ 511,315
71 Arts – Entertainment & Recreation (AGG)	$16,120,880	$ 38,643	$ 43,293	$16,202,816
72 Accommodation & Food Services (AGG)	$ 41,493	$ 122,854	$ 219,261	$ 383,608
81 Other Services (AGG)	$ -	$ 163,882	$ 167,693	$ 331,575
92 Government and non NAICS	$ -	$ 240,862	$ 114,087	$ 354,949
Total	**$16,162,373**	**$2,672,903**	**$3,172,000**	**$22,007,275**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Employment

Employment opportunities generated during the operation phase are detailed in **Table 18**. The potential for Alternative B to result in growth-inducing impacts, including the potential for out-of-area employees to relocate to the Anacortes area of Skagit County, is analyzed in **Section 5.0** of this study.

Alternative B would be anticipated to result in approximately 179 direct jobs within gaming and food and beverage sectors. Alternative B would generate indirect employment positions from other regional sectors within the County estimated at 23 positions. The generation of direct and indirect output would result in the creation of wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption would result in an additional increase in employment opportunities, induced impact, estimated at 29 positions. Overall, approximately 232 new job opportunities would be captured within Skagit County during the operation phase of Alternative B.

TABLE 18
ALTERNATIVE B – OPERATION PHASE IMPACT ON EMPLOYMENT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	-	0	0	0
21 Mining (AGG)	-	0	0	0
22 Utilities (AGG)	-	0	0	0
23 Construction (AGG)	-	0	0	1
31-33 Manufacturing (AGG)	-	0	0	1
42 Wholesale Trade	-	0	0	0
44-45 Retail Trade (AGG)	-	0	8	8
48-49 Transportation and Warehousing (AGG)	-	1	0	1
51 Information (AGG)	-	1	0	1
52 Finance and Insurance (AGG)	-	2	2	5
53 Real Estate and Rental (AGG)	-	2	2	3
54 Professional – Scientific & Tech Services (AGG)	-	5	1	6
55 Management of Companies (AGG)	-	0	0	0
56 Administrative and Waste Services (AGG)	-	3	1	4
61 Educational Services (AGG)	-	0	1	1
62 Health and Social Services (AGG)	-	0	6	6
71 Arts – Entertainment & Recreation (AGG)	178	1	1	180
72 Accommodation & Food Services (AGG)	1	2	4	6
81 Other Services (AGG)	-	2	3	5
92 Government and non NAICS	-	2	1	2
Total	**179**	**23**	**29**	**232**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest whole number, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Wages

Wages generated during the operation phase are detailed in **Table 19**. As a result of the jobs generated by Alternative B, direct wages generated are estimated at $4.1 million. Indirect employment wages from other regional sectors would also be generated, and are estimated at $0.7 million. The generation of direct and indirect wages would an increase in consumption for the region. The increase in consumption would result in an additional increase in jobs and therefore an increase in wages, induced impact, estimated at $0.8 million. Overall, approximately $5.6 million in new wages would be generated annually within the County during the operation phase of Alternative B.

TABLE 19
ALTERNATIVE B – OPERATION PHASE IMPACT ON WAGES

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 2,618	$ 3,440	$ 6,059
21 Mining (AGG)	$ -	$ 121	$ 189	$ 310
22 Utilities (AGG)	$ -	$ 19,492	$ 6,051	$ 25,543
23 Construction (AGG)	$ -	$ 13,771	$ 11,294	$ 25,065
31-33 Manufacturing (AGG)	$ -	$ 16,872	$ 8,964	$ 25,836
42 Wholesale Trade	$ -	$ 8,386	$ 12,850	$ 21,237
44-45 Retail Trade (AGG)	$ -	$ 6,559	$182,504	$ 189,063
48-49 Transportation and Warehousing (AGG)	$ -	$ 31,620	$ 13,381	$ 45,001
51 Information (AGG)	$ -	$ 56,072	$ 8,957	$ 65,029
52 Finance and Insurance (AGG)	$ -	$ 98,491	$ 90,659	$ 189,150
53 Real Estate and Rental (AGG)	$ -	$ 9,742	$ 10,665	$ 20,407
54 Professional – Scientific & Tech Services (AGG)	$ -	$135,181	$ 20,709	$ 155,890
55 Management of Companies (AGG)	$ -	$ 12,012	$ 701	$ 12,713
56 Administrative and Waste Services (AGG)	$ -	$ 52,102	$ 11,171	$ 63,273
61 Educational Services (AGG)	$ -	$ 394	$ 14,464	$ 14,858
62 Health and Social Services (AGG)	$ -	$ 202	$238,456	$ 238,659
71 Arts – Entertainment & Recreation (AGG)	$4,110,638	$ 7,100	$ 13,397	$4,131,135
72 Accommodation & Food Services (AGG)	$ 13,677	$ 40,274	$ 72,041	$ 125,992
81 Other Services (AGG)	$ -	$ 61,137	$ 62,671	$ 123,807
92 Government and non NAICS	$ -	$123,035	$ 37,435	$ 160,470
Total	**$4,124,315**	**$695,179**	**$820,002**	**$5,639,496**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Tax Revenue Impact

For reasons described under Alternative A, the operation of Alternative B would generate substantial tax revenues to federal, state, and local governments (**Table 20**). As described under Alternative A, the Project site is located on Skagit County tax parcels P19917, P19919, and P19920. According to the Skagit County Assessor's Office, the total 2011 annual property tax for the parcels was $20,192.02. Alternative B would result in the entire area of the parcels at the Project site to be transferred into trust status for the Tribe. Therefore, the entire taxable value of the parcels, or approximately $20,192.02 in annual property tax, would be lost. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative B; however, this impact would be to a lesser extent than Alternative A since Alternative B is reduced in size and scope. With the anticipated increase in taxes resulting from the operation of Alternative B, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

As detailed in **Table 20** below, total annual tax revenue generated during the operation phase is estimated at $714,720. Local government is estimated to receive total tax revenue of $306,028. The majority of local government taxes are derived from indirect business taxes, including increased sales tax revenue.

TABLE 20
ALTERNATIVE B – OPERATION PHASE IMPACT ON OVERAL TAX REVENUES

		Employee Compensation	Proprietary Income	Indirect Business Taxes	Household Expenditures	Corporations	Total
Federal Government NonDefense	Social Ins Tax- Employee Contribution	$ 104,246	$ 25,019				$129,265
	Social Ins Tax- Employer Contribution	$ 102,474					$102,474
	Indirect Bus Tax: Excise Taxes			$ 14,107			$ 14,107
	Indirect Bus Tax: Custom Duty			$ 4,565			$ 4,565
	Indirect Bus Tax: Fed NonTaxes			$ 12,112			$ 12,112
	Corporate Profits Tax					$ 46,375	$ 46,375
	Personal Tax: Income Tax				$ 99,795		$ 99,795
Subtotal		**$ 206,719**	**$ 25,019**	**$ 30,784**	**$ 99,795**	**$ 46,375**	**$408,692**
State/Local Government NonEducation	Dividends					$ 20,555	$ 20,555
	Social Ins Tax- Employee Contribution	$ 711					$ 711
	Social Ins Tax- Employer Contribution	$ 1,766					$ 1,766
	Indirect Bus Tax: Sales Tax			$160,749			$160,749
	Indirect Bus Tax: Property Tax			$ 77,205			$ 77,205
	Indirect Bus Tax: Motor Vehicle Lic			$ 2,085			$ 2,085
	Indirect Bus Tax: Severance Tax			$ 337			$ 337
	Indirect Bus Tax: Other Taxes			$ 20,740			$ 20,740
	Indirect Bus Tax: S/L NonTaxes			$ 10,953			$ 10,953
	Corporate Profits Tax						$ -
	Personal Tax: Income Tax						$ -
	Personal Tax: NonTaxes (Fines-Fees				$ 7,524		$ 7,524
	Personal Tax: Motor Vehicle License				$ 1,996		$ 1,996
	Personal Tax: Property Taxes				$ 770		$ 770
	Personal Tax: Other Tax (Fish/Hunt)				$ 638		$ 638
Subtotal		**$ 2,477**	**$ -**	**$272,070**	**$ 10,926**	**$ 20,555**	**$306,028**
Grand Total		**$209,196**	**$ 25,019**	**$302,854**	**$110,721**	**$ 66,930**	**$714,720**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown may not add up to equal the number given in the Total. The tax revenues indicated in the table include indirect and induced taxes only. Due to the project's unique circumstances, including the proposed location on trust land, direct tax revenues generated during the project's operation phase were not quantifiable. As such, actual tax revenues generated by the project may be greater than those indicated above as direct personal income tax has not been included in the totals.

2.3 ALTERNATIVE C – RETAIL CENTER

Alternative C is a non-gaming alternative located on the Thompson Road Site. Alternative C consists of three separate free standing structures with proposed uses such as retail and accessory commercial uses. Construction of Alternative C would be anticipated to begin in 2013, and the first full year of operation of the project would be anticipated to occur in 2014.

2.3.1 CONSTRUCTION IMPACT

Based on the estimates of construction costs for the proposed development under Alternative A, the estimated impacts from construction activities, which include the costs for general construction, and investment in equipment were calculated for Alternative C and are presented in **Table 21**.

TABLE 21
DEVELOPMENT COST BREAKDOWN FOR ALTERNATIVE C

Project Element	Total Cost
Retail Construction Element	$30,864,850
Furniture, Fixtures, and Equipment	$9,513,886
Total Development Budget	**$40,378,736**

Source: Samish Indian Nation, 2011; AES, 2011

In the following sections, the direct impacts to the County from Alternative B's construction phase are captured through Sector 23 (Construction) and Sector 42 (Wholesale Trade). Results are presented in Aggregated Industrial Sectors (NAICS 2-digit). Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Though the impacts from construction activities are one-time, non-recurring, they are expected to generate considerable positive effects to the County beyond the construction sector. In order to ensure a conservative analysis, investments in construction activities are anticipated to remain within the County at the same proportion as similar investments have historically remained within Skagit County as calculated by IMPLAN.

Total Output

Total output generated during the construction phase is detailed in **Table 22**, and is presented in 2011 dollars. The output impact represents the entire value of production/sales generated by the project. The output impact value includes the costs of the goods and services that go into production, wages, and taxes paid. Direct impact from investment in construction and related activities is estimated at $15.9 million. This would generate indirect outputs from other regional sectors estimated at $2.4 million. The generation of direct and indirect output would result in the creation of jobs and wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption, or induced output, is estimated at $4.4 million. Overall, approximately $22.7 million of economic output would be generated within Skagit County during the construction phase of Alternative C.

TABLE 22
ALTERNATIVE C – CONSTRUCTION PHASE IMPACT ON TOTAL OUTPUT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 10,198	$ 15,166	$ 25,364
21 Mining (AGG)	$ -	$ 5,840	$ 1,060	$ 6,900
22 Utilities (AGG)	$ -	$ 28,523	$ 48,121	$ 76,644
23 Construction (AGG)	$15,604,402	$ 12,665	$ 45,455	$15,662,522
31-33 Manufacturing (AGG)	$ -	$ 677,679	$ 222,834	$ 900,514
42 Wholesale Trade	$ 303,558	$ 80,763	$ 47,089	$ 431,411
44-45 Retail Trade (AGG)	$ -	$ 69,754	$ 599,299	$ 669,053
48-49 Transportation and Warehousing (AGG)	$ -	$ 118,964	$ 61,697	$ 180,662
51 Information (AGG)	$ -	$ 65,990	$ 57,659	$ 123,649
52 Finance and Insurance (AGG)	$ -	$ 234,333	$ 659,722	$ 894,055
53 Real Estate and Rental (AGG)	$ -	$ 213,326	$ 982,565	$ 1,195,891
54 Professional – Scientific & Tech Services (AGG)	$ -	$ 544,313	$ 86,757	$ 631,070
55 Management of Companies (AGG)	$ -	$ 4,416	$ 2,038	$ 6,453
56 Administrative and Waste Services (AGG)	$ -	$ 69,081	$ 58,148	$ 127,229
61 Educational Services (AGG)	$ -	$ 541	$ 43,254	$ 43,796
62 Health and Social Services (AGG)	$ -	$ 15	$ 706,932	$ 706,947
71 Arts – Entertainment & Recreation (AGG)	$ -	$ 6,051	$ 59,952	$ 66,003
72 Accommodation & Food Services (AGG)	$ -	$ 48,445	$ 303,510	$ 351,955
81 Other Services (AGG)	$ -	$ 134,831	$ 232,179	$ 367,010
92 Government and non NAICS	$ -	$ 44,684	$ 157,882	$ 202,567
Total	**$15,907,960**	**$2,370,413**	**$4,391,321**	**$22,669,695**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Employment

Employment opportunities generated during the construction phase is detailed in **Table 23**. Direct impact from Alternative C is estimated at 117 positions. This alternative would generate indirect employment positions from other regional sectors estimated at 17 positions. The generation of direct and indirect output would result in the creation of wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption would result in an additional increase in employment opportunities, induced impact, estimated at 41 positions. Overall, approximately 174 job opportunities would be generated within the County during the construction phase of Alternative C.

TABLE 23
ALTERNATIVE C – CONSTRUCTION PHASE IMPACT ON EMPLOYMENT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	-	0	0	0
21 Mining (AGG)	-	0	0	0
22 Utilities (AGG)	-	0	0	0
23 Construction (AGG)	114	0	0	115
31-33 Manufacturing (AGG)	-	1	0	1
42 Wholesale Trade	2	1	0	3
44-45 Retail Trade (AGG)	-	1	11	13
48-49 Transportation and Warehousing (AGG)	-	1	0	1
51 Information (AGG)	-	0	0	0
52 Finance and Insurance (AGG)	-	1	3	4
53 Real Estate and Rental (AGG)	-	1	2	4
54 Professional – Scientific & Tech Services (AGG)	-	6	1	7
55 Management of Companies (AGG)	-	0	0	0
56 Administrative and Waste Services (AGG)	-	1	1	2
61 Educational Services (AGG)	-	0	1	1
62 Health and Social Services (AGG)	-	0	8	8
71 Arts – Entertainment & Recreation (AGG)	-	0	1	1
72 Accommodation & Food Services (AGG)	-	1	5	6
81 Other Services (AGG)	-	2	4	6
92 Government and non NAICS	-	0	1	1
Total	**117**	**17**	**41**	**174**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest whole number, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Wages

Wages generated during the construction phase is detailed in **Table 24**. As a result of the jobs generated by Alternative C, direct wages generated are estimated at $6.1 million. Indirect employment wages from other regional sectors would also be generated, and are estimated at $0.5 million. The generation of direct and indirect wages would an increase in consumption for the region. The increase in consumption would result in an additional increase in jobs and therefore an increase in wages, induced impact, estimated at $1.1 million. Overall, approximately $7.8 million in wages would be generated within the County during the construction phase of Alternative C.

TABLE 24
ALTERNATIVE C – CONSTRUCTION PHASE IMPACT ON WAGES

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 2,138	$ 4,761	$ 6,899
21 Mining (AGG)	$ -	$ 1,558	$ 262	$ 1,820
22 Utilities (AGG)	$ -	$ 4,748	$ 8,371	$ 13,119
23 Construction (AGG)	$5,953,783	$ 5,079	$ 15,640	$5,974,502
31-33 Manufacturing (AGG)	$ -	$ 79,654	$ 12,404	$ 92,058
42 Wholesale Trade	$ 114,609	$ 30,492	$ 17,779	$ 162,880
44-45 Retail Trade (AGG)	$ -	$ 31,153	$ 252,743	$ 283,896
48-49 Transportation and Warehousing (AGG)	$ -	$ 38,182	$ 18,528	$ 56,710
51 Information (AGG)	$ -	$ 12,636	$ 12,397	$ 25,033
52 Finance and Insurance (AGG)	$ -	$ 39,920	$ 125,508	$ 165,428
53 Real Estate and Rental (AGG)	$ -	$ 15,819	$ 14,755	$ 30,573
54 Professional – Scientific & Tech Services (AGG)	$ -	$177,323	$ 28,666	$ 205,988
55 Management of Companies (AGG)	$ -	$ 2,103	$ 970	$ 3,073
56 Administrative and Waste Services (AGG)	$ -	$ 19,531	$ 15,465	$ 34,996
61 Educational Services (AGG)	$ -	$ 234	$ 20,035	$ 20,269
62 Health and Social Services (AGG)	$ -	$ 6	$ 330,047	$ 330,053
71 Arts – Entertainment & Recreation (AGG)	$ -	$ 2,097	$ 18,553	$ 20,649
72 Accommodation & Food Services (AGG)	$ -	$ 15,831	$ 99,723	$ 115,553
81 Other Services (AGG)	$ -	$ 52,422	$ 86,779	$ 139,201
92 Government and non NAICS	$ -	$ 16,866	$ 51,809	$ 68,675
Total	**$6,068,392**	**$547,790**	**$1,135,193**	**$7,751,375**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Tax Revenue Impact

The construction of Alternative C would generate substantial tax revenues to federal, state, and local governments (**Table 25**). Total tax revenue during the construction phase is estimated at $841,463. State and local governments are anticipated to receive total tax revenue of $462,790. The majority of local government taxes would be derived from indirect business taxes, including increased sales tax revenue.

TABLE 25
ALTERNATIVE C – CONSTRUCTION PHASE IMPACT ON OVERALL TAX REVENUES

		Employee Compensation	Proprietary Income	Indirect Business Taxes	Household Expenditures	Corporations	Total
Federal Government NonDefense	Social Ins Tax- Employee Contribution	$ 115,790	$ 29,835				$145,625
	Social Ins Tax- Employer Contribution	$ 113,823					$113,823
	Indirect Bus Tax: Excise Taxes			$ 17,653			$ 17,653
	Indirect Bus Tax: Custom Duty			$ 5,711			$ 5,711
	Indirect Bus Tax: Fed NonTaxes			$ 15,156			$ 15,156
	Corporate Profits Tax					$ 52,196	$ 52,196
	Personal Tax: Income Tax				$112,624		$112,624
Subtotal		**$ 229,613**	**$ 29,835**	**$ 38,522**	**$112,624**	**$ 52,196**	**$462,790**
State/Local Government NonEducation	Dividends					$ 23,135	$ 23,135
	Social Ins Tax- Employee Contribution	$ 790	$ -				$ 790
	Social Ins Tax- Employer Contribution	$ 1,962					$ 1,962
	Indirect Bus Tax: Sales Tax			$201,155			$201,155
	Indirect Bus Tax: Property Tax			$ 96,611			$ 96,611
	Indirect Bus Tax: Motor Vehicle Lic			$ 2,609			$ 2,609
	Indirect Bus Tax: Severance Tax			$ 422			$ 422
	Indirect Bus Tax: Other Taxes			$ 25,954			$ 25,954
	Indirect Bus Tax: S/L NonTaxes			$ 13,706			$ 13,706
	Corporate Profits Tax					$ -	$ -
	Personal Tax: Income Tax				$ -		$ -
	Personal Tax: NonTaxes (Fines-Fees				$ 8,492		$ 8,492
	Personal Tax: Motor Vehicle License				$ 2,251		$ 2,251
	Personal Tax: Property Taxes				$ 868		$ 868
	Personal Tax: Other Tax (Fish/Hunt)				$ 720		$ 720
Subtotal		**$ 2,752**	**$ -**	**$340,455**	**$ 12,331**	**$ 23,135**	**$378,673**
Grand Total		**$ 232,365**	**$ 29,835**	**$378,977**	**$124,955**	**$ 75,331**	**$841,463**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown may not add up to equal the number given in the Total. The tax revenues indicated in the table include indirect and induced taxes only. Due to the project's unique circumstances, including the proposed location on trust land, direct tax revenues generated during the project's construction phase were not quantifiable. As such, actual tax revenues generated by the project may be greater than those indicated above as direct personal income tax has not been included in the totals.

2.3.2 OPERATION IMPACT

The estimated economic impact from ongoing operations of Alternative C was calculated based on revenue projections provided by the Tribe (2011).

Projected Revenue

Alternative C would consist of development of three structures housing various retail based activities covering the entire Thompson Road Site as described under Alternative A. This alternative contains one large retail building consisting of 120,000 square feet that can be leased to a single major tenant or

subdivided as required. The other buildings would be single story retail structures situated along the western portion of the site. These buildings cumulatively total 17,000 square feet. Revenue projections under Alternative C are provided in **Table 26**.

TABLE 26
ANNUAL REVENUE BREAKDOWN FOR ALTERNATIVE C

Project Element	2014 Revenue
Retail[1]	$38,771,000
Total Revenue	**$38,771,000**

Source: Samish Indian Nation, 2011; AES, 2011
[1]Revenues generated from the retail component of the project are included in the analysis, but are not anticipated to be collected by the Tribe.
Note: After deducting operating expenses, actual revenues collected by the Tribe would be less than the amount shown.

The projected revenue for Alternative C is $38.8 million in the first year of operation. In the following sections, the direct impact from the project is captured in NAICS Sectors 44-45 (Retail Trade). Operation impacts are anticipated to recur annually beginning with the first full year of operation, which is anticipated to be 2014 under Alternative C.

Substitution Effects

For reasons as described under Alternative A, Alternative C would have limited potential for substitution effects to occur. Additionally, if substitution were to occur, some of the effects would be counteracted by the local economic activity generated by patrons of the development within the local environment. Specifically, as the development would draw non-residents to the area, the associated increase in new visitor demand for off-site entertainment venues, restaurants, and bars would make up for some area residents choosing to visit Alternative C rather than other local establishments. Given the current population of the City of Anacortes, it is not anticipated that significant quantifiable substitution effects would occur under Alternative C.

Total Output

Total annual output generated during the operation phase is detailed in **Table 27**, and is presented in 2011 dollars. The output impact represents the entire value of production/sales generated by the project. The output impact value includes the costs of the goods and services that go into production, wages, and taxes paid. New direct investment in the retail industry at the site as a result of Alternative C is estimated at $16.6 million. This would generate indirect outputs from other regional sectors estimated at $1.5 million. The generation of direct and indirect output would result in the creation of jobs and wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption, or induced output, is estimated at $5.4 million. Overall, approximately $23.5 million of economic output would be generated within Skagit County annually during the operation phase of Alternative C.

TABLE 27
ALTERNATIVE C – OPERATION PHASE IMPACT ON TOTAL OUTPUT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 5,697	$ 18,269	$ 23,966
21 Mining (AGG)	$ -	$ 366	$ 1,304	$ 1,670
22 Utilities (AGG)	$ -	$ 39,748	$ 57,563	$ 97,310
23 Construction (AGG)	$ -	$ 21,797	$ 56,890	$ 78,688
31-33 Manufacturing (AGG)	$ -	$ 78,808	$ 268,523	$ 347,331
42 Wholesale Trade	$ -	$ 20,672	$ 56,383	$ 77,055
44-45 Retail Trade (AGG)	$16,564,775	$ 30,316	$ 751,694	$17,346,786
48-49 Transportation and Warehousing (AGG)	$ -	$ 146,513	$ 76,904	$ 223,416
51 Information (AGG)	$ -	$ 125,467	$ 70,108	$ 195,575
52 Finance and Insurance (AGG)	$ -	$ 300,038	$ 813,677	$ 1,113,715
53 Real Estate and Rental (AGG)	$ -	$ 324,152	$1,225,916	$ 1,550,067
54 Professional – Scientific & Tech Services (AGG)	$ -	$ 107,536	$ 106,322	$ 213,858
55 Management of Companies (AGG)	$ -	$ 4,789	$ 2,494	$ 7,284
56 Administrative and Waste Services (AGG)	$ -	$ 108,925	$ 71,750	$ 180,675
61 Educational Services (AGG)	$ -	$ 6,104	$ 54,497	$ 60,601
62 Health and Social Services (AGG)	$ -	$ 23	$ 863,722	$ 863,744
71 Arts – Entertainment & Recreation (AGG)	$ -	$ 7,904	$ 75,090	$ 82,993
72 Accommodation & Food Services (AGG)	$ -	$ 38,391	$ 372,774	$ 411,165
81 Other Services (AGG)	$ -	$ 55,399	$ 288,169	$ 343,568
92 Government and non NAICS	$ -	$ 109,678	$ 191,514	$ 301,193
Total	**$16,564,775**	**$1,532,321**	**$5,423,563**	**$23,520,659**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Employment

Employment opportunities generated during the operation phase are detailed in **Table 28**. Direct impact is estimated at 553 new positions. This alternative would generate indirect employment positions from other regional sectors estimated at 13 new positions. The generation of direct and indirect output would result in the creation of wages. The generation of employment wages would result in an increase in consumption for the region. The increase in consumption would result in an induced impact of 50 positions. Overall, approximately 617 new job opportunities would be generated within the County during the operation phase of Alternative C.

TABLE 28
ALTERNATIVE C – OPERATION PHASE IMPACT ON EMPLOYMENT

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	-	0	0	0
21 Mining (AGG)	-	0	0	0
22 Utilities (AGG)	-	0	0	0
23 Construction (AGG)	-	0	0	1
31-33 Manufacturing (AGG)	-	0	0	0
42 Wholesale Trade	-	0	0	1
44-45 Retail Trade (AGG)	553	1	14	568
48-49 Transportation and Warehousing (AGG)	-	1	1	2
51 Information (AGG)	-	1	0	1
52 Finance and Insurance (AGG)	-	1	4	5
53 Real Estate and Rental (AGG)	-	3	3	6
54 Professional – Scientific & Tech Services (AGG)	-	1	1	3
55 Management of Companies (AGG)	-	0	0	0
56 Administrative and Waste Services (AGG)	-	2	1	3
61 Educational Services (AGG)	-	0	1	1
62 Health and Social Services (AGG)	-	0	10	10
71 Arts – Entertainment & Recreation (AGG)	-	0	1	1
72 Accommodation & Food Services (AGG)	-	1	6	7
81 Other Services (AGG)	-	1	5	6
92 Government and non NAICS	-	1	1	1
Total	**553**	**13**	**50**	**617**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest whole number, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Wages

Wages generated during the operation phase are detailed in **Table 29**. As a result of the jobs generated by Alternative C, direct wages generated are estimated at $4.6 million. Indirect employment wages from other regional sectors would also be generated, and are estimated at $0.3 million. The generation of direct and indirect wages would an increase in consumption for the region. The increase in consumption would result in an additional increase in jobs and therefore an increase in wages, induced impact, estimated at $1.4 million. Overall, approximately $6.3 million in wages would be generated annually within the County during the operation phase of Alternative C.

TABLE 29
ALTERNATIVE C – OPERATION PHASE IMPACT ON WAGES

Aggregated Industrial Sectors (NAICS 2-digit)	Direct	Indirect	Induced	Total
11 Ag. Forestry, Fish & Hunting (AGG)	$ -	$ 3,725	$ 5,762	$ 9,487
21 Mining (AGG)	$ -	$ 89	$ 322	$ 411
22 Utilities (AGG)	$ -	$ 7,689	$ 10,011	$ 17,699
23 Construction (AGG)	$ -	$ 8,668	$ 19,543	$ 28,210
31-33 Manufacturing (AGG)	$ -	$ 5,935	$ 14,982	$ 20,917
42 Wholesale Trade	$ -	$ 7,805	$ 21,288	$ 29,092
44-45 Retail Trade (AGG)	$4,576,989	$ 8,768	$ 317,010	$4,902,768
48-49 Transportation and Warehousing (AGG)	$ -	$ 53,589	$ 23,069	$ 76,658
51 Information (AGG)	$ -	$ 28,197	$ 15,101	$ 43,298
52 Finance and Insurance (AGG)	$ -	$ 56,094	$ 154,959	$ 211,053
53 Real Estate and Rental (AGG)	$ -	$ 17,836	$ 17,635	$ 35,472
54 Professional – Scientific & Tech Services (AGG)	$ -	$ 33,451	$ 35,137	$ 68,588
55 Management of Companies (AGG)	$ -	$ 2,281	$ 1,188	$ 3,468
56 Administrative and Waste Services (AGG)	$ -	$ 30,008	$ 19,069	$ 49,077
61 Educational Services (AGG)	$ -	$ 2,635	$ 25,383	$ 28,019
62 Health and Social Services (AGG)	$ -	$ 9	$ 403,446	$ 403,455
71 Arts – Entertainment & Recreation (AGG)	$ -	$ 2,423	$ 23,223	$ 25,646
72 Accommodation & Food Services (AGG)	$ -	$ 12,201	$ 122,496	$ 134,698
81 Other Services (AGG)	$ -	$ 20,632	$ 108,221	$ 128,853
92 Government and non NAICS	$ -	$ 45,720	$ 63,058	$ 108,778
Total	**$4,576,989**	**$347,754**	**$1,400,904**	**$6,325,647**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown in the Direct, Indirect, and Induced columns may not add up to equal the number given in the Total.

Tax Revenue Impact

For reasons described under Alternative A, the operation of Alternative C would generate substantial tax revenues to federal, state, and local governments (**Table 30**). As described under Alternative A, the Project site is located on Skagit County tax parcels P19917, P19919, and P19920. According to the Skagit County Assessor's Office, the total 2011 annual property tax for the parcels was $20,192.02. Alternative C would result in the entire area of the parcels at the Project site to be transferred into trust status for the Tribe. Therefore, the entire taxable value of the parcels, or approximately $20,192.02 in annual property tax, would be lost. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative C. With the anticipated increase in taxes resulting from the operation of Alternative C, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

Total annual tax revenue during the operation phase is estimated at $935,180. Local government is estimated to receive total tax revenue of $444,824. The majority of local government taxes are derived from indirect business taxes, including increased sales tax revenue.

TABLE 30
ALTERNATIVE C – OPERATION PHASE IMPACT ON OVERALL TAX REVENUES

		Employee Compensation	Proprietary Income	Indirect Business Taxes	Household Expenditures	Corporations	Total
Federal Government NonDefense	Social Ins Tax- Employee Contribution	$ 120,309	$ 28,094				$148,403
	Social Ins Tax- Employer Contribution	$ 118,264					$118,264
	Indirect Bus Tax: Excise Taxes			$ 20,801			$ 20,801
	Indirect Bus Tax: Custom Duty			$ 6,729			$ 6,729
	Indirect Bus Tax: Fed NonTaxes			$ 17,858			$ 17,858
	Corporate Profits Tax					$ 63,807	$ 63,807
	Personal Tax: Income Tax				$114,493		$114,493
Subtotal		**$ 238,573**	**$ 28,094**	**$ 45,389**	**$114,493**	**$ 63,807**	**$490,356**
State/Local Government NonEducation	Dividends					$ 28,282	$ 28,282
	Social Ins Tax- Employee Contribution	$ 821	$ -				$ 821
	Social Ins Tax- Employer Contribution	$ 2,038					$ 2,038
	Indirect Bus Tax: Sales Tax			$237,013			$237,013
	Indirect Bus Tax: Property Tax			$113,833			$113,833
	Indirect Bus Tax: Motor Vehicle Lic			$ 3,074			$ 3,074
	Indirect Bus Tax: Severance Tax			$ 497			$ 497
	Indirect Bus Tax: Other Taxes			$ 30,580			$ 30,580
	Indirect Bus Tax: S/L NonTaxes			$ 16,149			$ 16,149
	Corporate Profits Tax					$ -	$ -
	Personal Tax: Income Tax				$ -		$ -
	Personal Tax: NonTaxes (Fines-Fees				$ 8,633		$ 8,633
	Personal Tax: Motor Vehicle License				$ 2,290		$ 2,290
	Personal Tax: Property Taxes				$ 883		$ 883
	Personal Tax: Other Tax (Fish/Hunt)				$ 731		$ 731
Subtotal		**$ 2,859**	**$ -**	**$401,147**	**$ 12,536**	**$ 28,282**	**$444,824**
Grand Total		**$ 241,432**	**$ 28,094**	**$446,536**	**$127,029**	**$ 92,089**	**$935,180**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.
Note: Though numbers appear to be estimated to the nearest dollar, accuracy is not indicated to that level due to rounding. Due to rounding, numbers shown may not add up to equal the number given in the Total. The tax revenues indicated in the table include indirect and induced taxes only. Due to the project's unique circumstances, including the proposed location on trust land, direct tax revenues generated during the project's operation phase were not quantifiable. As such, actual tax revenues generated by the project may be greater than those indicated above as direct personal income tax has not been included in the totals.

2.4 ALTERNATIVE D – WEAVERLING SPIT SITE

Alternative D consists of the development of the casino facility, as described under Alternative A, on the Weaverling Spit Site, 2.6 miles northwest of the Thompson Road. Alternative D is a located between Tommy Thompson Trail and Fidalgo Bay Road in the City of Anacortes, Skagit County, Washington.

Construction of Alternative D is anticipated to begin in 2013, and operation of Class III gaming is anticipated to occur in 2014.

2.4.1 CONSTRUCTION AND OPERATION IMPACTS

The size and scope of the project under Alternative D would be identical to that described under Alternative A. As such, the construction and operation impacts under Alternative D would be identical to those identified for Alternative A, with the exception of anticipated property tax impacts since Alternative D would be located on a different site.

Property Tax Impact

Alternative D would be located on portions of Skagit County tax parcels P33269, P33271, and P33272. According to the Skagit County Assessor's Office, the total 2011 annual property tax for the entirety of these parcels was $27,496. Alternative D would not result in the entire area of the parcels at the Project site to be transferred into trust status for the Tribe. Therefore, less than the entire taxable value of the parcels would be lost and the fiscal impacts would be less than $27,496. Effects due to the loss of state and federal tax revenues as a result of transferring the land into trust would be offset by increased local, state and federal tax revenues resulting from construction and operation of Alternative D, as described under Alternative A. With the anticipated increase in taxes resulting from the operation of Alternative D, a significant adverse impact to taxes as a result of the loss in property tax revenues would not be anticipated to occur.

2.5 ALTERNATIVE E – NO ACTION/DEVELOPMENT

Under the No Action Alternative, none of the four development alternatives (Alternatives A, B, C and D) considered within the EIS would be implemented. Alternative E assumes that existing uses on the project site would not change in the near term.

Since no development occurs under Alternative E, there are no economic impacts from either the construction or operation phases.

3.0 SUMMARY OF ECONOMIC IMPACTS BY ALTERNATIVE

A summary of economic impacts anticipated to be generated by Alternatives A through E is presented in **Table 31** below.

TABLE 31
ECONOMIC IMPACT SUMMARY BY ALTERNATIVE

	Direct Impact	Total Impact	Direct Impact	Total Impact
Alternative A				
	Construction Phase		**Operational Phase**	
Total Output	**$ 6,103,736**	**$ 8,612,131**	**$ 24,195,771**	**$ 32,945,845**
Employment	**44**	**65**	**268**	**347**
Wages	**$ 2,263,032**	**$ 2,808,520**	**$ 6,174,277**	**$ 8,442,570**
Alternative B				
	Construction Phase		**Operational Phase**	
Total Output	**$ 4,078,341**	**$ 5,794,977**	**$ 16,162,373**	**$ 22,007,275**
Employment	**32**	**46**	**179**	**232**
Wages	**$ 1,573,567**	**$ 2,002,000**	**$ 4,124,315**	**$ 5,639,496**
Alternative C				
	Construction Phase		**Operational Phase**	
Total Output	**$ 15,907,960**	**$ 22,669,695**	**$ 16,564,775**	**$ 23,520,659**
Employment	**117**	**174**	**553**	**617**
Wages	**$ 6,068,392**	**$ 7,751,375**	**$ 4,576,989**	**$ 6,325,647**
Alternative D				
	Construction Phase		**Operational Phase**	
Total Output	**$ 6,103,736**	**$ 8,612,131**	**$ 24,195,771**	**$ 32,945,845**
Employment	**44**	**65**	**268**	**347**
Wages	**$ 2,263,032**	**$ 2,808,520**	**$ 6,174,277**	**$ 8,442,570**
Alternative E				
	Construction Phase		**Operational Phase**	
Total Output	**$ 0**	**$ 0**	**$ 0**	**$ 0**
Employment	**0**	**0**	**0**	**0**
Wages	**$ 0**	**$ 0**	**$ 0**	**$ 0**

Source: AES. Assumptions made by the authors based on I-O/SAM Analysis using IMPLAN data.

4.0 BRIEF EXPLANATION OF THE INPUT-OUTPUT / SOCIAL ACCOUNTING MATRIX MODEL

The IMPLAN model employs an input-output/social accounting matrix to determine anticipated effects of development projects on the regional economy. This type of economic modeling was first developed in the 1930s by W. Leontief, and was later applied by W. Isard in the regional science field. IMPLAN analysis was later developed by the U.S. Department of Agriculture Forest Service in the mid-1970s.

The IMPLAN model makes use of a complex input-output matrix framework. The matrix demonstrates the proportion of inputs that must be purchased in each sector in order to produce one unit of output in another sector. By simulating an increase in demand for one sector, a corresponding increase in demand is triggered from the demand for intermediate goods and services required to produce final goods and services. The increase in final demand is referred to as the "direct effect." The increase in output in response to the initial impact is called the "indirect effect." These two effects are collectively referred to as the "Type 1 multiplier."

Increases to the Type 1 multiplier will trigger a corresponding increase in income for households in the region. This increase in income will result in an increase in household consumption. Increased household consumption is called the "induced effect." Collectively, the direct, indirect, and induced effects are called the "Type 2 multiplier." The Social Accounting Matrix (SAM) is an extension of the input-output framework. The SAM includes non-industrial financial flows with the input-output framework.

The input-output model is based on several assumptions, including:

- Constant Returns to Scale
- No Supply Constraints
- Fixed Commodity Input Structure
- Homogenous Sector Output
- Industry Technology Assumption

Due to the input-output model's assumption of no supply constraints, the IMPLAN model does not account for potential substitution effects within the market.

Input-output/SAM models are often used by governments and economic researchers to estimate the impacts of certain actions and policy choices. They are also used to estimate the impact of large development projects on a given region. The impacts of large-scale development projects occur due to two mechanisms. First, there is a one-time, non-recurring, construction impact to the regional economy. During the construction impact, goods and services are procured by a general contractor, and the business of subcontractors and suppliers for the construction is stimulated. In addition, employment opportunities are generated by the construction of the project, which stimulates local households. Second, there is a recurring operation impact to the regional economy. Once construction is completed, the employer will begin to hire and train employees. The impact can be seen through increased wages paid, and also through substantial inflow of revenue to the project and to the local economy.

Much of the information contained in this report was received from third parties. This report also contains projections of future events based upon certain assumptions. As it is not possible to predict

future outcomes with absolute accuracy, these projections should be treated as estimates of potential future results. Actual results may differ due to unforeseen events.

5.0 GROWTH INDUCING IMPACTS BY ALTERNATIVE

The local region may be impacted by growth in other areas due to a development within Skagit County. Impacts may stimulate an increase in housing costs, additional housing construction, the labor pool, and/or a reduction in the size of unemployment in the region.

5.1 POPULATION

Demographic information for Skagit County, which has the potential to be affected by Alternatives A through D is provided in **Table 32** below.

TABLE 32
SKAGIT COUNTY POPULATION AND HOUSEHOLDS

2010	Total
Population	116,901
Households	43,713
Average Household Size	2.62

Source: U.S. Census Bureau, 2010

Alternatives A through D are anticipated to draw employees predominantly from across Skagit County. Historical labor data for Skagit County obtained from the U.S. Bureau of Labor Statistics was analyzed. In 2010, Skagit County had a labor force of 58,833 people, of which 10.4 percent (6,141 people) of the labor force was unemployed.[4] According to 34 economic forecasters surveyed from around the country by the Federal Reserve Bank of Philadelphia, U.S. unemployment is expected to decrease at a rate slower than it will take for the rest of the economy to recover. In 2010, the U.S. unemployment rate averaged 10.8 percent, which was higher than the unemployment rate in Skagit County of 10.4 percent.[5] According to the Council of Economic Advisers, it is projected that the U.S. will observe an approximate 6.6 percent unemployment rate in 2014.[6] For the purposes of this analysis, it is assumed that the unemployment rate for Skagit County will follow a similar trend to what has been projected for the U.S., and that the County will experience an unemployment rate of 6.2 percent in 2014. The compounded annual growth rate (CAGR) was calculated for employment statistics and is presented in **Table 33** below.

[4] U.S. Bureau of Labor Statistics, 2005-2010. Local Area Unemployment Statistics. Available online at: http://www.bls.gov/lau/
[5] U.S. Census Bureau. ACS 1-year estimates: 2010. Available online at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?fpt=table.
[6] Council of Economic Advisers, 2011. Economic Report of the President: Transmitted to Congress February 2011 together with the Annual Report of the Council of Economic Advisers. United States Government Printing Office. Washington: 2011. Page 51. Available online at: http:// www.whitehouse.gov/sites/default/files/microsites/economic-report-president.pdf

TABLE 33
SKAGIT COUNTY EMPLOYMENT

Year	Civilian Labor Force	Employed	Unemployed	Unemployment Rate
2010	58,833	52,692	6,141	10.4%
2009	58,468	52,559	5,909	10.1%
2008	58,637	55,316	3,321	5.7%
2007	57,456	54,767	2,689	4.7%
2006	56,116	53,232	2,884	5.1%
2005	55,991	52,678	3,313	5.9%
2005-2010 CAGR	**1.0%**	**0.0%**	**13.1%**	

Source: U.S. Bureau of Labor Statistics, 2005-2010.

Based on the CAGR calculated in **Table 33** above, the Skagit County labor force is expected to grow at a rate of 1.0 percent annually. Using the projected 2014 unemployment rate of 6.2 percent for Skagit County, the number of unemployed workers in the labor force has been forecasted. Unemployment is estimated at 3,795 people for Skagit County in 2014 (**Table 34**).

TABLE 34
SKAGIT COUNTY PROJECTED LABOR DATA

Year	Labor Force	Unemployed	Unemployment Rate
2010	58,833	6,141	10.4%
2014	61,210	3,795	6.2%

Source: U.S. Bureau of Labor Statistics, 2005-2010; Council of Economic Advisers, 2010; AES, 2011.

The natural unemployment rate of five percent was then subtracted from the projected unemployment levels to calculate the total amount of labor available in Skagit County at 61,210 people (3,795 – 3,061 = 735) as described in **Table 35**. A rate of five percent was then applied to the amount of labor available to account for members of the labor force who are unqualified for employment, which considers local retirees who may be included in the labor force but are not willing to work and members of the labor force who are incapable of performing the tasks associated with employment (3,795× 5% = 190; 735 – 190 = 545 people available in the Skagit County labor force). These assumptions are based on typical rates in labor markets across the nation.

TABLE 35
SKAGIT COUNTY PROJECTED AVAILABLE LABOR FORCE 2014

Unemployed	3,795
Less Natural Unemployment (5% of Total Labor Force)	(3,061)
Less Unqualified (5% of Unemployed less Natural Unemployment)	(190)
Available Labor Force	**545**

Source: AES, 2011.

5.2 HOUSING MARKET

Skagit County housing market data was obtained through U.S. Census Bureau information from 2005 through 2010. Based on this information, it was determined that the total number of housing units increases annually by approximately 2.0 percent, and the number of vacant units tends to increase annually by approximately 9.8 percent. The projected regional housing stock for 2014, which is anticipated to be the first year of operation under the project, was calculated and is presented in **Table 36**.

TABLE 36
SKAGIT COUNTY REGIONAL HOUSING STOCK[7]

	2010	2014 Projections
Units	51,504	55,915
Occupied Units	44,856	46,236
Vacant Units	6,648	9,679
% Vacant	12.9%	17.4%

Source: U.S. Census Bureau, 2005-2010; AES, 2011.

5.3 POTENTIAL GROWTH INDUCEMENT EFFECTS

As discussed under **Section 5.1** above, there are projected to be approximately 3,795 unemployed persons already residing in the County in 2014, of which approximately 545 people would be available and qualified for work at the project site. There are anticipated to be more than enough people available to fill all employment opportunities generated at the project site; no additional people would be required or anticipated to move to Skagit County to meet the labor demand generated by the project alternatives. There would be no need for the new employees already located within the County to relocate within the area. Therefore, none of the alternatives would be anticipated to result in substantial population growth within the area. As such, all alternatives would have a negligible impact on the regional housing stock. However, as illustrated in **Table 36**, even if there are some employees that elect to relocate within the County, there would be enough vacant homes to support these employees. None of the alternatives would be expected to stimulate regional housing development.

[7] U.S. Census Bureau, 2009. American Community Survey One-year estimates. Available online at: http://factfinder.census.gov/servlet/ADPTable?_bm=y&-geo_id=16000US5367000&-qr_name=ACS_2009_5YR_G00_DP5YR3&-ds_name=ACS_2009_5YR_G00_&-_lang=en&-_sse=on.

APPENDIX I

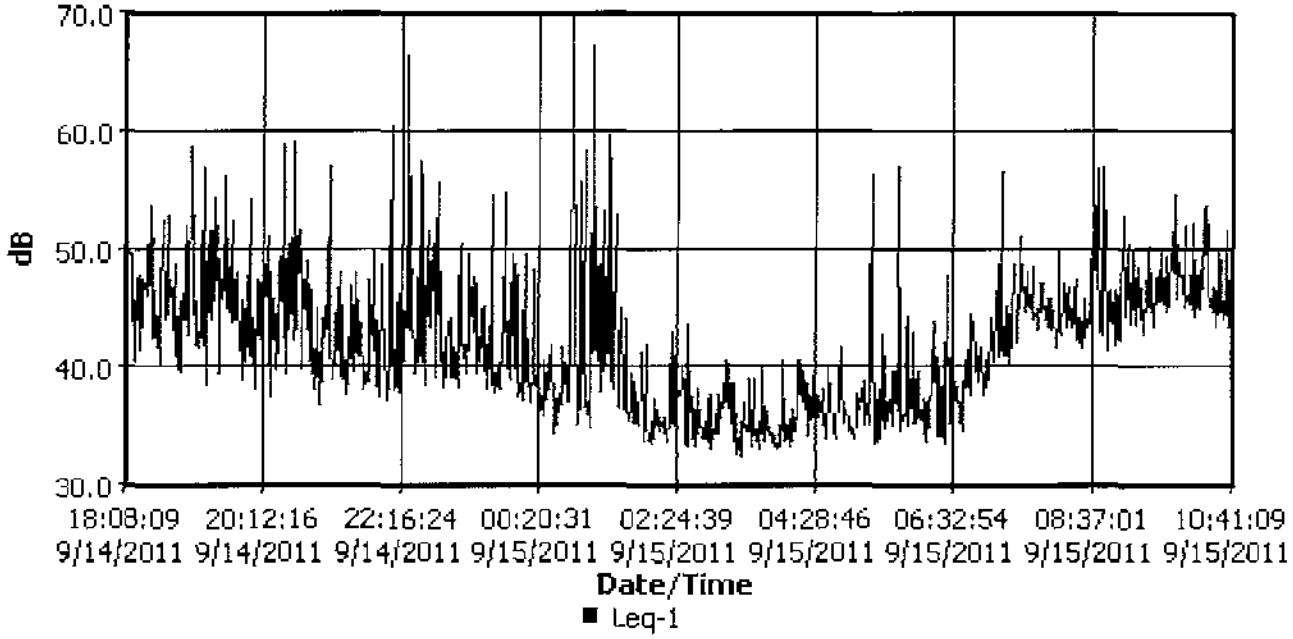
Noise Output Files

Samish Casino 9/15/2011 Site 1

General Data 9/15/2011 Site 1

Description	Meter/Sensor	Value	Description	Meter/Sensor	Value
Criterion Time	1	8 hrs.	Projection Time	1	480 mins.
Response	1	SLOW	Weighting	1	A
Lmax	1	78.4 dB	Lmin	1	31.5 dB
Leq	1	47.7 dB	CNEL	1	55.6 dB
LDN	1	55.3 dB			

Data Chart 9/15/2011 Site 1

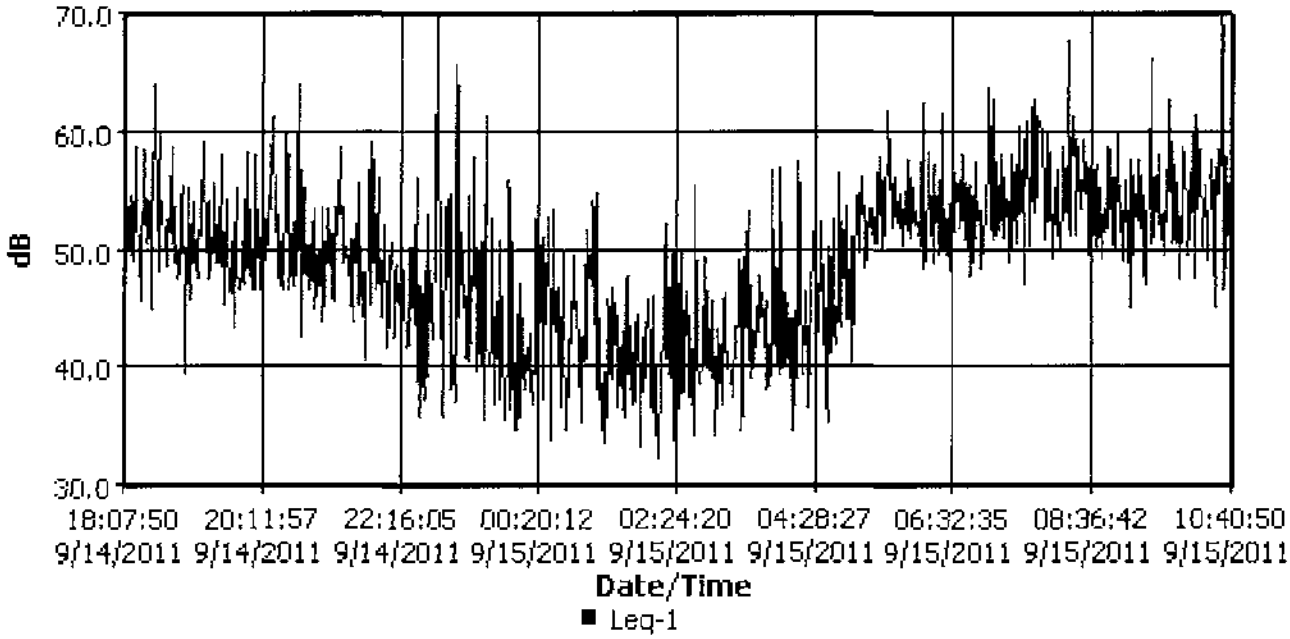


Samish Casino 9/15/2011 Site 2

General Data 9/15/2011 Site 2

Description	Meter/Sensor	Value	Description	Meter/Sensor	Value
Weighting	1	A	Criterion Time	1	8 hrs.
Projection Time	1	480 mins.	Response	1	SLOW
Lmax	1	82.8 dB	Lmin	1	29.9 dB
Leq	1	54.1 dB	CNEL	1	59.5 dB
LDN	1	59.2 dB			

Data Chart 9/15/2011 Site 2

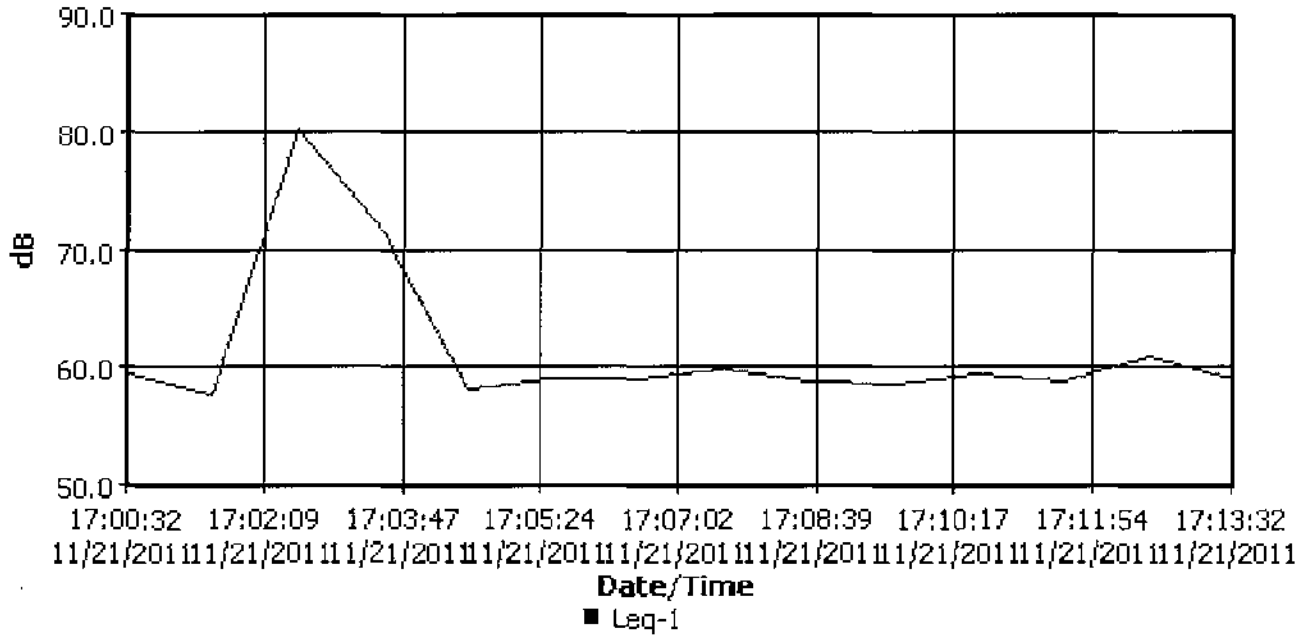


Samish Weaverling Site A

Data Weaverling Site A

Description	Meter/Sensor	Value	Description	Meter/Sensor	Value
Weighting	1	A	Response	1	SLOW
Criterion Time	1	8 hrs.	Lmax	1	90.3 dB
Lmin	1	53.9 dB	Leq	1	69.5 dB
CNEL	1	69.5 dB	LDN	1	69.5 dB

Data Chart Weaverling Site A

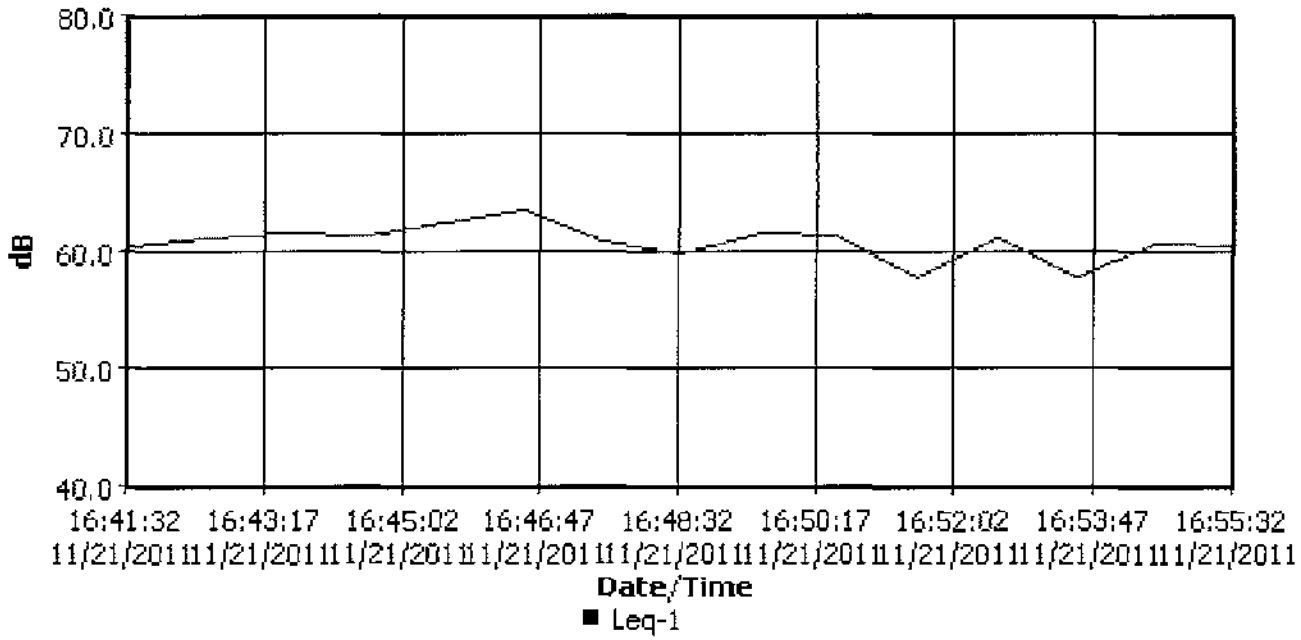


Samish Weaverling Site B

Data Weaverling Site B

Description	Meter/Sensor	Value	Description	Meter/Sensor	Value
Weighting	1	A	Response	1	SLOW
Criterion Time	1	8 hrs.	Lmax	1	69.7 dB
Lmin	1	52.1 dB	Leq	1	60.9 dB
CNEL	1	60.9 dB	LDN	1	60.9 dB

Data Chart Weaverling Site B



APPENDIX J

Biological Resources Data

MARCH'S POINT PRIORITY HABITATS AND SPECIES REPORT

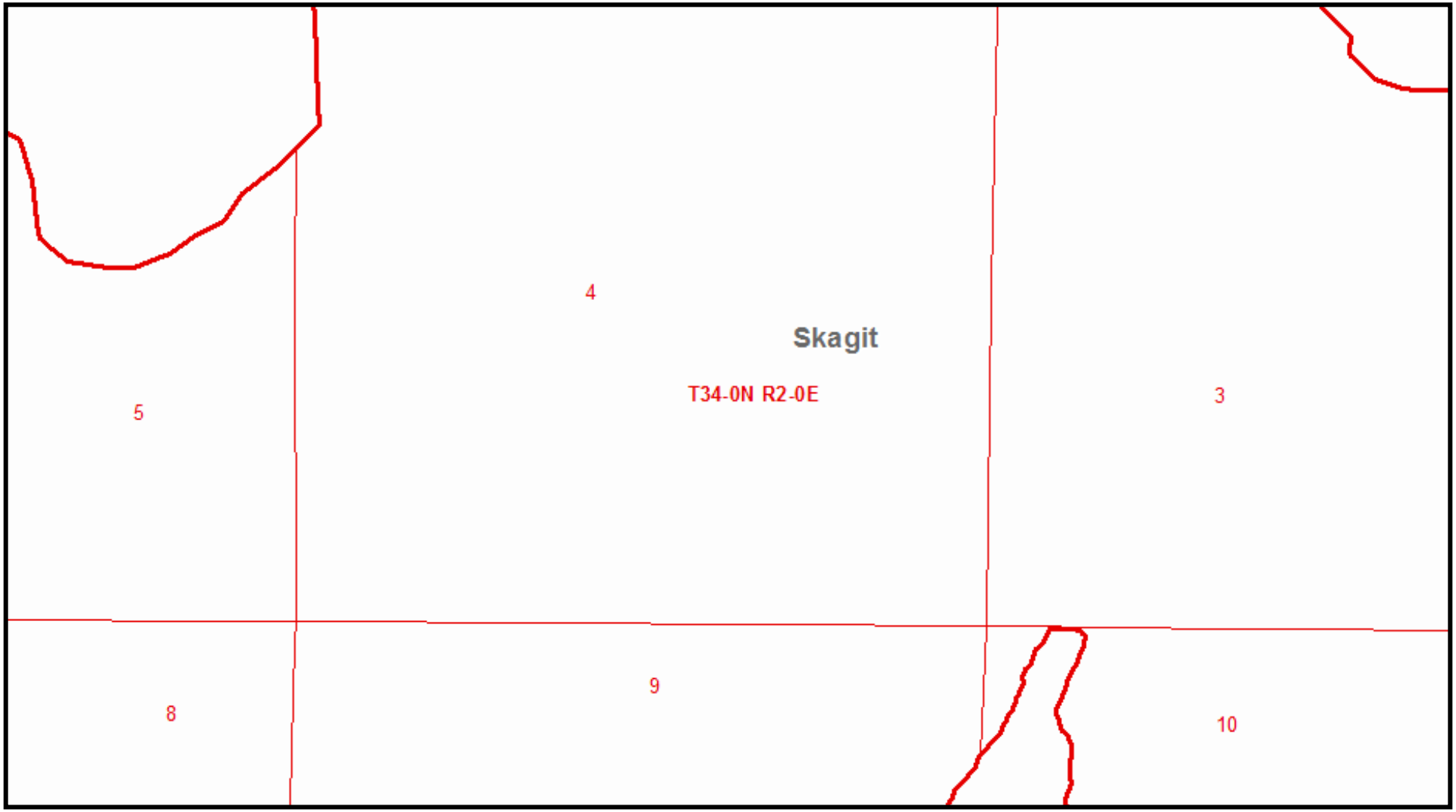
WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
PRIORITY HABITATS AND SPECIES REPORT

SOURCE DATASET: PHSPlusPublic
REPORT DATE: 05/10/2013 9.03 AM

Query ID: P130510090244

Common Name	Site Name	Priority Area	Accuracy	Federal Status	Sensitive Data	Source Entity
Scientific Name	Source Dataset	Occurrence Type		State Status	Resolution	Geometry Type
	Source Record	More Information (URL)		PHS Listing Status		
Notes	Source Date	Mgmt Recommendations				

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necesssary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to vraition caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.



Study Area Diagram

BOUNDING BOX: -13645545,6182259,-13640505,6185019
(web mercator meters)

Query ID: P130510090244

FIDALGO BAY RESORT FLATS PRIORITY HABITATS AND SPECIES REPORT

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
PRIORITY HABITATS AND SPECIES REPORT

SOURCE DATASET: PHSPlusPublic Query ID: P130510090943
REPORT DATE: 05/10/2013 9.10 AM

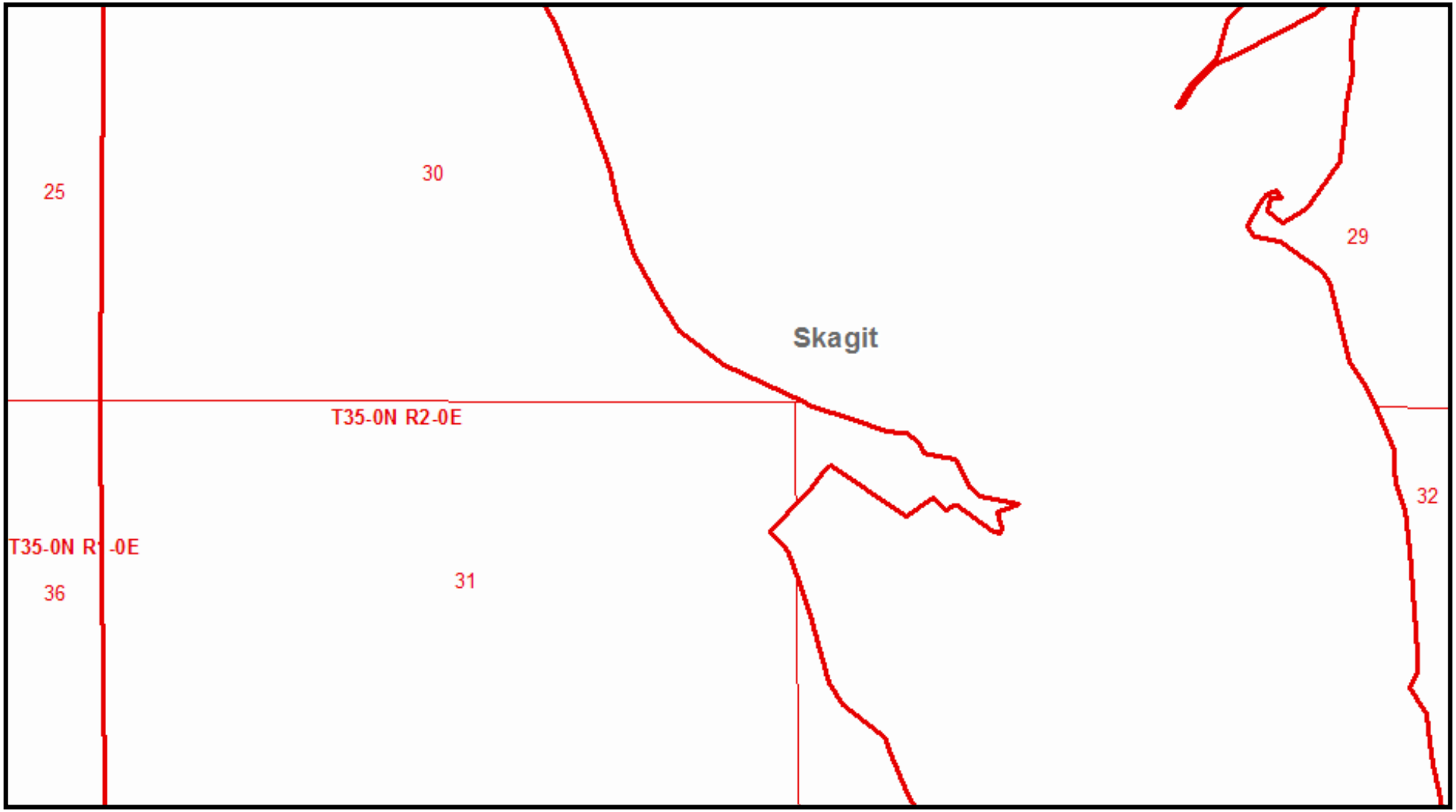
Common Name / Scientific Name / Notes	Site Name / Source Dataset / Source Record / Source Date	Priority Area / Occurrence Type / More Information (URL) / Mgmt Recommendations	Accuracy	Federal Status / State Status / PHS Listing Status	Sensitive Data / Resolution	Source Entity / Geometry Type
ESTUARINE INTERTIDAL	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa.	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
Hardshell Clam	Not Given Shellfish_Summary	Presence Presence N/A	NA	N/A N/A PHS Listed	N AS MAPPED	WDFW Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa.	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
Surf Smelt Hypomesus pretiosus	Station Number: 13 Forage_Fish_Survey 10381 January 04, 1996	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 9 Forage_Fish_Survey 4211 November 16, 1998	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 3 Forage_Fish_Survey 10441 February 21, 1996	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 3 Forage_Fish_Survey 6627 December 16, 1998	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines

Common Name Scientific Name Notes	Site Name Source Dataset Source Record Source Date	Priority Area Occurrence Type More Information (URL) Mgmt Recommendations	Accuracy	Federal Status State Status PHS Listing Status	Sensitive Data Resolution	Source Entity Geometry Type
Surf Smelt Hypomesus pretiosus	Station Number: 10 Forage_Fish_Survey 12781 January 28, 1994	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 7 Forage_Fish_Survey 8028 July 14, 1998	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 6 Forage_Fish_Survey 12930 May 25, 1994	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 10 Forage_Fish_Survey 15210 February 04, 1993	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 14 Forage_Fish_Survey 15283 July 27, 1993	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 2 Forage_Fish_Survey 14488 January 14, 1982	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 13 Forage_Fish_Survey 12125 July 21, 1994	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 14 Forage_Fish_Survey 12716 December 30, 1993	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines

Common Name Scientific Name Notes	Site Name Source Dataset Source Record Source Date	Priority Area Occurrence Type More Information (URL) Mgmt Recommendations	Accuracy	Federal Status State Status PHS Listing Status	Sensitive Data Resolution	Source Entity Geometry Type
Surf Smelt Hypomesus pretiosus	Station Number: 1 Forage_Fish_Survey 14486 January 14, 1982	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 8 Forage_Fish_Survey 12852 March 10, 1994	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 3 Forage_Fish_Survey 13472 March 27, 1997	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 11 Forage_Fish_Survey 15180 June 30, 1993	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 7 Forage_Fish_Survey 11476 June 14, 1996	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 10 Forage_Fish_Survey 12742 January 13, 1994	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 13 Forage_Fish_Survey 15148 May 26, 1993	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines
Surf Smelt Hypomesus pretiosus	Station Number: 8 Forage_Fish_Survey 10539 April 19, 1996	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines

Common Name Scientific Name Notes	Site Name Source Dataset Source Record Source Date	Priority Area Occurrence Type More Information (URL) Mgmt Recommendations	Accuracy	Federal Status State Status PHS Listing Status	Sensitive Data Resolution	Source Entity Geometry Type
Surf Smelt Hypomesus pretiosus	Station Number: 7 Forage_Fish_Survey 5389 May 21, 1999	Breeding Area Breeding area	NA	N/A N/A PHS Listed Species	N AS MAPPED	WDFW Lines

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necesssary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to vraition caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.



Study Area Diagram

BOUNDING BOX: -13649691,6186401,-13644651,6189161
(web mercator meters)

Query ID: P130510090943

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE FEDERAL SPECIES LIST AND TABLE

ANALYTICAL ENVIRONMENTAL SERVICES

1801 7th Street, Suite 100
Sacramento, CA 95811
http://www.analyticalcorp.com
(916) 447-3479 • Fax (916) 447-1665

TELEPHONE NOTES

Project: Samish Indian Nation Fee-to-Trust

Subject: Threatened and Endangered Species

Date: October 19, 2009

By: Kelly Bayne

Contact: USFWS Washington Office

Agencies: USFWS

Phone #: 360-753-9440

Ms. Bayne inquired as to what federal list is sufficient to evaluate for federal listed species. The USFWS stated that the federal USFWS list for Skagit County, Washington was sufficient for analyzing species within the project site

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT; CANDIDATE SPECIES; AND SPECIES OF CONCERN IN SKAGIT COUNTY AS PREPARED BY THE U.S. FISH AND WILDLIFE SERVICE WASHINGTON FISH AND WILDLIFE OFFICE

(Revised August 1, 2011)

LISTED

Bull trout (*Salvelinus confluentus*) – Coastal-Puget Sound DPS
Canada lynx (*Lynx canadensis*)
Gray wolf (*Canis lupus*)
Grizzly bear (*Ursus arctos = U. a. horribilis*)
Marbled murrelet (*Brachyramphus marmoratus*)
Northern spotted owl (*Strix occidentalis caurina*)

Major concerns that should be addressed in your Biological Assessment of project impacts to listed species include:

1. Level of use of the project area by listed species.

2. Effect of the project on listed species' primary food stocks, prey species, and foraging areas in all areas influenced by the project.

3. Impacts from project activities and implementation (e.g., increased noise levels, increased human activity and/or access, loss or degradation of habitat) that may result in disturbance to listed species and/or their avoidance of the project area.

DESIGNATED

Critical habitat for bull trout
Critical habitat for the marbled murrelet
Critical habitat for the northern spotted owl

PROPOSED

Dolly Varden (*Salvelinus malma*) due to similarity of appearance

CANDIDATE

Fisher *(Martes pennanti)* – West Coast DPS
North American wolverine *(Gulo gulo luteus)* – contiguous U.S. DPS
Oregon spotted frog (*Rana pretiosa*) [historic]
Whitebark pine *(Pinus albicaulis*)

SPECIES OF CONCERN

Bald eagle (*Haliaeetus leucocephalus*)
Cascades frog (*Rana cascadae*)
Long-eared myotis (*Myotis evotis*)
Long-legged myotis (*Myotis volans*)
Northern goshawk (*Accipiter gentilis*)
Olive-sided flycatcher (*Contopus cooperi*)
Pacific lamprey (*Lampetra tridentata*)
Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*)
Peregrine falcon (*Falco peregrinus*)
River lamprey (*Lampetra ayresi*)
Tailed frog (*Ascaphus truei*)
Western toad (*Bufo boreas*)
Meconella oregana (white meconella)

REGIONALLY OCCURRING FEDERALLY LISTED SPECIAL STATUS SPECIES

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Fish					
Salvelinus malma Dolly varden	Proposed	Known in the U.S. from Washington and Arkansas (NatureServe, 2011).	Typically anadromous, but many populations are landlocked (Lee et al. 1980). These species migrate to spawning areas between May and December (Page and Burr, 1991). Anadromous individuals occur in coastal seas for 2 to 3 years and in deep runs and pools of creeks and small to large rivers. Some landlocked populations inhabit lakes and tributary streams (NatureServe, 2011).	Contact Agency	No. The project site does not provide habitat for this species.
Salvelinus confluentus Bull trout-Coastal Puget Sound Distinct Population Segment	Threatened/ Critical Habitat	Known from Idaho, Montana, Nevada, Oregon, and Washington (NatureServe, 2011).	Found in streams with riffles and deep pools, undercut banks and lots of large logs and rely on river, lake and ocean habitats that connect to headwater streams for annual spawning and feeding migrations (NatureServe, 2011).	Contact Agency	No. The project site does not provide habitat for this species. See text for discussion of Critical Habitat.
Oncorhynchus (=*Salmo*) *tshawytscha* Chinook salmon Upper Columbia Spring-Run EFH, Snake River Fall-Run EFH, Snake River EFH, and Puget Sound EFH	Endangered or Threatened/ Critical Habitat	From Upper Columbia spring-run ESU, found in all river reaches accessible to Chinook salmon in Columbia River tributaries upstream of the Rock Island Dam and downstream of Chief Joseph Dam in Washington (excluding the Okanogan River), the Columbia River from a straight line connecting the west end of the Clatsop jetty (south jetty, Oregon side) and the west end of the Peacock jetty (north jetty, Washington side) upstream to Chief Joseph Dam in Washington. From fallrun Chinook salmon in the mainstem Snake River ESU, found below Hells Canyon Dam, and in the Tucannon River, Grande Ronde River, Imnaha River, Salmon River, and Clearwater River. From Snake River spring/summer-run ESU, found in mainstem Snake River and the Tucannon River, Grande Ronde River, Imnaha River, and Salmon River subbasins. From Puget Sound ESU,	Spawning: streams with pool and riffle complexes. For successful breeding, require cold water (Moyle, 2002).	Contact Agency	No. The project site does not provide habitat for this species. The project site does not occur within designated Critical Habitat for this species.

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		found in rivers and streams flowing into Puget Sound.			
Amphibians					
Rana pretiosa Oregon spotted frog	Candidate	From southwest British Columbia south through Washington and Oregon (Californiaherps, 2011).	Found in aquatic environments mostly in mixed coniferous forests. Found near cool, quiet, permanent water sources; slow streams that meander through meadows, sluggish streams and rivers, marshes, springs, pools, edges of small lakes, and ponds from near sea level to 5,000 feet (Californiaherps, 2011).	February-October	No. The project site does not provide habitat for this species.
Birds					
Strix occidentalis caurina Northern spotted owl	Threatened/ Critical Habitat	Geographic range extends from British Colombia to northwestern California south to San Francisco. The breeding range includes the Cascade Range, North Coast Ranges, and the Sierra Nevada. Some breeding populations also occur in the Transverse Ranges and Peninsular Ranges NatureServe, 2011).	Resides in mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2,300 meters. Prefers old-growth forests, but use of managed (previously logged) lands is not uncommon. Owls do not appear to use logged habitat until approximately 60 years after logging unless some larger trees or snags remain after logging. Nesting habitat is a tree or snag cavity, or the broken top of a large tree. Requires a nearby, permanent source of water. Foraging habitat consists of any forest habitat with sufficient prey (e.g. flying squirrels, mice, and voles) (NatureServe, 2011).	Year round	No. The project site does not provide habitat for this species. The project site does not occur within designated Critical Habitat for this species.
Brachyramphus marmoratus Marbled murrelet	Threatened/ Critical Habitat	Found from the western Aleutian Islands through coastal southern and southeastern Alaska, British Columbia, Washington, Oregon, and northern central California NatureServe, 2011).	Nests from May through early August in Washington. Outside of the breeding season, found in coastal areas, mainly in salt water within 2 km of shore, including bays and sounds. Nests in trees in terrestrial habitat including alpine, conifer forest, and Tundra (NatureServe, 2011).	Year round	No. The project site does not provide habitat for this species. The project site does not occur within designated Critical Habitat for this species.
Mammals					
Canus lupus Gray wolf	Endangered	Known from Arizona, Colorado, Illinois, Indiana, Iowa, Missouri, New Mexico, North Dakota, Ohio, Oregon, South Dakota, Utah, and Washington (NatureServe, 2011).	Found in temperate forests, mountains, tundra, taiga, and grasslands. Territory ranges from less 100 to 10,000s of square kilometers. Breeds from February to March. Gestates for two months. Pups remain in the den until they are 8 to 10 weeks old (NatureServe, 2011). Young and parents vacate the den when young are about 3 months old (Hoffmeister, 1986).	Year round	No. The project site does not provide habitat for this species.

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Gulo gulo luteus continuous U.S. Distinct Population Segment North American Wolverine	Candidate	Known from montane regions of Idaho, Montana, Washington and Wyoming (NatureServe, 2011).	Inhabit alpine and arctic tundra, boreal and mountain forests, which are primarily coniferous. Limited to mountains in the south, especially large wilderness areas from 400 to 4,300 meters (NatureServe, 2011).	Year round	No. The project site does not provide habitat for this species.
Lynx canadensis Canada lynx	Threatened	Known in the U.S. from Arkansas, Colorado, Idaho, Maine, Mississippi, Montana, Minnesota, North Dakota, New Hampshire, Oregon, Utah, Vermont, Washington, and Wyoming (NatureServe, 2011).	Found in boreal and montane regions dominated by coniferous or mixed forest with thick undergrowth. When inactive or birthing, occupies den typically in hollow tree, under stump, or in thick brush. Den sites tend to be in mature or old growth stands with a high density of logs (Koehler, 1990, Koehler and Brittell, 1990). Primary habitat components in the Pacific Northwest is foraging habitat (15 to 35-year-old lodgepole pine) to support snowshoe hare and provide hunting cover, denning sites (patches of greater than 200-year-old spruce and fir, generally less than 5 acres, and dispersal/travel cover (variable in vegetation composition and structure) (USFWS, 1993). Breeds in late winter-early spring in North America (NatureServe, 2011).	Year round	No. The project site does not provide habitat for this species.
Martes pennanti West Coast Distinct Population Segment Pacific fisher	Candidate	Distributed along the Sierra Nevada, Cascades and Klammath Mountains and in a few areas in the north Coast Ranges.	Found in intermediate to dense mature stands of trees (coniferous forests) and deciduous riparian habitats with a high percent canopy closure. Utilizes cavities in large trees, snags, logs, rock areas, or shelters provided by slash or brush piles.	Year Round	No. The project site does not provide habitat for this species.
Ursus arctos (*Ursus arctos horriblilis*) Grizzly bear	Threatened	Known in the U.S. from Arkansas, Arizona, California, Colorado, Idaho, Kansas, Montana, Minnesota, North Dakota, Nebraska, New Mexico, Nevada, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming (NatureServe, 2011).	Found mostly in arctic tundra, alpine tundra, and subalpine mountain forests. Breeds in late spring and early summer. Young are born in winter. Adults are solitary except when breeding or caring for young (NatureServe, 2011).	Year round	No. The project site does not provide habitat for this species.
Plants					
Castilleja levisecta Golden paintbrush	Threatened	In Washington, occurs in the Puget Trough physiographic province (WNHP, 2010).	Perennial herb that occurs in open grasslands in the Puget Trough. The substrate is generally composed of glacial outwash or depositional material from 10 to 300 feet (WNHP, 2010).	April-July	No. The project site is outside the geographical range for this species.
Meconella oregano White meconella	Species of Concern	In Washington, occurs in the Eastern Cascades, Western Cascades, and Puget	Annual herb that occurs primarily in open grassland, sometimes within a mosaic of	March-April	No. The project site is outside the

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		Trough physiographic Provinces (WNHP, 2010).	forest/grassland on gradual to almost 100 percent slopes. 100 to 450 feet (WNHP, 2010).		geographical range for this species.
Pinus albicaulis Whitebark pine	Candidate	Found in two distinct sections; one following the British Columbia Coast Ranges, the Cascade Range, and the Sierra Nevada, and the other covering the Rocky Mountains from Wyoming to Alberta. In Washington, found in the northeastern Rocky Mountains (Bailey, 1975).	Gymnosperm that occurs in subalpine forest from 7,000 and 12,000 feet (Calflora, 2011).	Year round	No. The project site is outside the elevational range for this species.

Regionally Occurring Federal Species of Concern

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Fish					
Lampetra ayresi River lamprey	Species of Concern	Known to or is believed to occur in Alaska , California , Oregon , and Washington (USFWS, 2011).	Anadromous.	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Lampetra tridentata Pacific lamprey	Species of Concern	North Pacific: Bering Sea coasts of Asia and Alaska southward to the Yuhutu River, Hokkaido, northern Japan and Punta Canoas, central Baja California, Mexico (Page and Burr, 1991).	Spawning adults are found in gravel riffles and runs of clear coastal streams; feeding adults usually in the ocean (Page and Burr, 1991).	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Amphibians					
Ascaphus truei Tailed frog	Species of Concern	Occurs throughout Cascades Mountains of Oregon and Washington and along the north coast of British Columbia, almost to Alaska (Californiaherps, 2011).	Mostly nocturnal, but often seen on creek banks in daylight. Inhabits cold, clear, rocky streams in wet forests. They do not inhabit ponds or lakes. A rocky streambed is necessary for cover for adults, eggs, and larvae (Californiaherps, 2011).	April-October	No. The March's Point site and the Flats site do not provide habitat for this species.
Buf o(=Anaxyrus) boreas Western toad	Species of Concern	Known throughout Washington (Californiaherps, 2011).	Found in marshes, springs, creeks, small lakes, meadows, woodlands, forests, and desert riparian areas (Californiaherps, 2011).	April-October	No. The March's Point site and the Flats site do not provide habitat for this species.
Rana cascadae Cascades frog	Species of Concern	Known throughout the Cascades Mountains of Oregon and Washington, in the Olympic Mountains, and barely into British Columbia, Canada (Californiaherps, 2011).	Inhabits wet mountain areas in open coniferous forests to near timberline, including small streams, small pools in meadows, lakes, bogs, ponds, and marshy areas near streams from 755 feet in Washington to around 9,000 feet (Californiaherps, 2011).	April-October	No. The March's Point site and the Flats site do not provide habitat for this species.
Birds					
Accipiter gentilis Northern goshawk	Species of Concern	Occurs throughout high elevation areas throughout North America. Known from the Sierras and northern California counties.	Found in forested areas with cleared openings for foraging.	All year	No. The March's Point site and the Flats site do not provide habitat for this species.
Contopus cooperi Olive-sided flycatcher	Species of Concern	Breeds from the Canadian border south through Washington (Cornell Lab of Ornithology, 2011).	Breeds in habitat along forest edges and openings, including burns; natural edges of bogs, marshes, and open water; semiopen forest; and harvested forest with some structure retained. Tall, prominent trees and snags, which serve as singing and foraging	April-October	No. The March's Point site and the Flats site do not provide habitat for this species.

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
			perches, and unobstructed air space for foraging, are common features of all nesting habitats (Cornell Lab of Ornithology, 2011).		
Falco peregrinus anatum Peregrine falcon	Species of Concern	Active nesting sites known along the coast north of Santa Barbara and other mountains in northern California (NatureServe 2011).	Breeds mostly in woodland, forest, and coastal habitats near water on high cliffs or banks. Will nest on man-made structures and in the hollows of old trees or open tops of cypress, sycamore or cottonwood trees 50 to 90 feet above the ground (NatureServe 2011).	Year round	No. The March's Point site and the Flats site do not provide habitat for this species.
Haliaeetus leucocephalus Bald eagle	Species of Concern	Known commonly within the northwest (Cornell Lab of Ornithology, 2011).	Breeds in forested areas near large bodies of water. Winters in coastal areas, along large rivers, and large unfrozen lakes (Cornell Lab of Ornithology, 2011).	Year round	The March's Point site does not provide habitat for this species. The Flats site provides a low potential for this species to occur.
Mammals					
Corynorhinus townsendii Townsend's big-eared bat	Species of Concern	In California, permanent residents known from Alameda, Calaveras, Colusa, Fresno, Humboldt, Imperial, Inyo, Kern, Lake, Lassen, Marin, Mariposa, Mendocino, Modoc, Mono, Napa, Placer, Plumas, Riverside, San Benito, San Bernardino, San Diego, San Joaquin, San Luis Obispo, Santa Barbara, Santa Cruz, Shasta, Sierra, Siskiyou, Sonoma, Stanislaus, Tehama, Trinity, Tuolumne, and Yolo counties (NatureServe, 2011).	Uses caves, buildings, and tree cavities for night roosts. Maternity and hibernation colonies typically are in caves and mine tunnels (NatureServe, 2011).	Year round	Yes. The March's Point site and the Flats site provide habitat for this species.
Myotis evotis Long-eared myotis	Species of Concern	In Washington, known from Chelan, Clallam, Douglas, Ferry, Garfield, Grant, King, Kittitas, Lincoln, Mason, Okanogan, Pend Oreille, Pierce, San Juan, Skagit, Skamania, Spokane, Stevens, Whatcom, Whitman, and Yakima counties (NatureServe, 2011).	Found in mixed coniferous forests from sea level to 2,830 meters. Roosts in buildings and hollow trees (NatureServe, 2011).	Year round	Yes. The March's Point site and the Flats site provide habitat for this species.
Myotis volans Long-legged myotis	Species of Concern	In Washington, known from Chelan, Clallam, Columbia, Douglas, Ferry, Garfield, Grant, Grays Harbor, Jefferson, Kittitas, Klickitat, Lincoln, Mason, Okanogan, Pend Oreille, Pierce, San Juan, Skagit, Skamania, Snohomish, Stevens, Thurston, Wahkiakum, Whatcom,	Found in montane coniferous forests. Roosts in snags and in hollow trees (NatureServe, 2011).	Year round	Yes. The March's Point site and the Flats site provide habitat for this species.

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		Whitman, and Yakima counties (NatureServe, 2011).			
Plants					
Meconella oregano White meconella	Species of Concern	In Washington, occurs in the Eastern Cascades, Western Cascades, and Puget Trough physiographic Provinces (WNHP, 2010).	Annual herb that occurs primarily in open grassland, sometimes within a mosaic of forest/grassland on gradual to almost 100 percent slopes. 100 to 450 feet (WNHP, 2010).	March-April	No. The project site is outside the geographical range for this species.

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE STATE SPECIES TABLE

	Species/ Habitats	State Status	Federal Status
Habitats	Biodiversity Areas & Corridors		
	Herbaceous Balds		
	Old-Growth/Mature Forest		
	Oregon White Oak Woodlands		
	Riparian		
	Freshwater Wetlands & Fresh Deepwater		
	Instream		
	Puget Sound Nearshore		
	Caves		
	Cliffs		
	Snags and Logs		
	Talus		
Fishes	Pacific Lamprey		Species of Concern
	River Lamprey	Candidate	Species of Concern
	White Sturgeon		
	Pacific Herring	Candidate	Species of Concern
	Longfin Smelt		
	Surfsmelt		
	Bull Trout/ Dolly Varden	Candidate *	Threatened *
	Chinook Salmon	Candidate	Threatened (Upper Columbia Spring run is Endangered)
	Chum Salmon	Candidate	Threatened
	Coastal Res./ Searun Cutthroat		Species of Concern
	Coho		Threatened – Lower Columbia Species of Concern – Puget Sound
	Kokanee		
	Pink Salmon		
	Rainbow Trout/ Steelhead/ Inland Redband Trout	Candidate **	Threatened **
	Sockeye Salmon	Candidate	Threatened – Ozette Lake Endangered – Snake River
	Pacific Cod	Candidate	Species of Concern
	Pacific Hake	Candidate	Species of Concern
	Walleye Pollock	Candidate	Species of Concern
	Black Rockfish	Candidate	
	Brown Rockfish	Candidate	Species of Concern
	Canary Rockfish	Candidate	Threatened
	China Rockfish	Candidate	
	Copper Rockfish	Candidate	Species of Concern
	Greenstriped Rockfish	Candidate	
	Quillback Rockfish	Candidate	Species of Concern
	Redstripe Rockfish	Candidate	
	Tiger Rockfish	Candidate	
	Yellowtail Rockfish	Candidate	
	Lingcod		
	Pacific Sand Lance		
	English Sole		
	Rock Sole		
Amphibians	Columbia Spotted Frog	Candidate	
	Oregon Spotted Frog	Endangered	Candidate
	Western Toad	Candidate	Species of Concern
	Brandt's Cormorant	Candidate	
	Common Loon	Sensitive	
	Common Murre	Candidate	
	Marbled Murrelet	Threatened	Threatened
	Short-tailed Albatross	Candidate	Endangered
	Western grebe	Candidate	
	W WA nonbreeding concentrations of: Loons, Grebes, Cormorants, Fulmar, Shearwaters, Storm-petrels, Alcids		
	W WA breeding concentrations of: Cormorants, Storm-petrels, Terns, Alcids		
	Great Blue Heron		
	Brant		

**** Important Note ****

These are the species and habitats identified for Skagit County. This list of species and habitats was developed using the distribution maps found in the Priority Habitat and Species (PHS) List (see http://wdfw.wa.gov/conservation/phs/). Species distribution maps depict counties where each priority species is known to occur as well as other counties where habitat primarily associated with the species exists. Two assumptions were made when developing distribution maps for each species:

1) There is a high likelihood a species is present in a county, even if it has not been directly observed, if the habitat with which it is primarily associated exists.

2) Over time, species can naturally change their distribution and move to new counties where usable habitat exists.

Distribution maps in the PHS List were developed using the best information available. As new information becomes available, known distribution for some species may expand or contract. WDFW will periodically review and update the the distribution maps in PHS list.

Birds	Cavity-nesting ducks: Wood Duck, Barrow's Goldeneye, Common Goldeneye, Bufflehead, Hooded Merganser		
	Western Washington nonbreeding concentrations of: Barrow's Goldeneye, Common Goldeneye, Bufflehead		
	Harlequin Duck		
	Snow Goose		
	Trumpeter Swan		
	Tundra Swan		
	Waterfowl Concentrations		
	Bald Eagle	Sensitive	Species of Concern
	Golden Eagle	Candidate	
	Northern Goshawk	Candidate	Species of Concern
	Peregrine Falcon	Sensitive	Species of Concern
	Sooty Grouse		
	W WA nonbreeding concentrations of: Charadriidae, Scolopacidae, Phalaropodidae		
	Band-tailed Pigeon		
	Spotted Owl	Endangered	Threatened
	Vaux's Swift	Candidate	
	Black-backed Woodpecker	Candidate	
	Pileated Woodpecker	Candidate	
	Purple Martin	Candidate	
Mammals	Dall's Porpoise		
	Gray Whale	Sensitive	
	Harbor Seal		
	Orca (Killer Whale)	Endangered	Endangered
	Pacific Harbor Porpoise	Candidate	
	Roosting Concentrations of: Big-brown Bat, Myotis bats, Pallid Bat		
	Townsend's Big-eared Bat	Candidate	Species of Concern
	Keen's Long-eared Bat (formerly Keen's Myotis)	Candidate	
	Cascade Red Fox	Candidate	
	Fisher	Endangered	Candidate
	Grizzly Bear	Endangered	Threatened
	Lynx	Threatened	Threatened
	Marten		
	Wolverine	Candidate	Candidate
	Columbian Black-tailed Deer		
	Mountain Goat		
	Elk		
Invertebrates	Pinto (Northern) Abalone	Candidate	Species of Concern
	Geoduck		
	Butter Clam		
	Native Littleneck Clam		
	Manila Clam		
	Olympia Oyster	Candidate	
	Pacific Oyster		
	Dungeness Crab		
	Pandalid shrimp (Pandalidae)		
	Johnson's Hairstreak	Candidate	
	Valley Silverspot	Candidate	Species of Concern
	Red Urchin		

* Bull Trout only
** Steelhead only

POTENTIALLY OCCURRING STATE LISTED SPECIES TABLE

Regionally Occurring State Listed Special Status Animals

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Fish					
Clupea pallasii Pacific herring	Candidate	Pacific Herring have numerous populations throughout the North Pacific Ocean and adjacent seas. In the western North Pacific, they are found throughout the Western Bering Sea to Kamchatka, in the Sea of Okhotsk, around Hokkaido, Japan, and south and west to the Yellow Sea. In the eastern North Pacific Ocean herring range from Baja California, Mexico, north to the Beaufort Sea, Alaska. Pacific herring are also found in the Russian Arctic from the Chukchi Sea to the White Sea (NMFS, 2013).	Found in coastal areas of the Pacific Ocean from the surface to depths of 1,300 feet (400 meters) (NMFS, 2013).	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Gadus macrocephalus Pacific cod	Candidate	Widely distributed in Alaskan waters. Their range is from southern California north to the Bering Strait (AFSC NOAA, 2010).	Transoceanic species occurring at depths from shoreline to 500 meters. Preferred substrate is soft sediment, from mud and clay to sand (AFSC NOAA, 2010).	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Lampetra ayresi river lamprey	Candidate	Known to or is believed to occur in Alaska , California , Oregon , and Washington (FWS, 2013)	Anadromous.	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Merluccius productus Pacific hake	Candidate	Distribution range is from Sanak Island in the western Gulf of Alaska to Magdalena Bay, Baja California Sur (NOAA, 1990).	Found in euhaline waters at 9-15oC (NOAA, 1990).	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Oncorhynchus (=Salmon) *tshawytscha* Chinook salmon Upper Columbia Spring-Run EFH, Snake River Fall-Run EFH, Snake River EFH, and Puget Sound EFH	Candidate	From Upper Columbia spring-run ESU, found in all river reaches accessible to Chinook salmon in Columbia River tributaries upstream of the Rock Island Dam and downstream of Chief Joseph Dam in Washington (excluding the Okanogan River), the Columbia River from a straight line	Spawning: streams with pool and riffle complexes. For successful breeding, require cold water (Moyle, 2002).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		connecting the west end of the Clatsop jetty (south jetty, Oregon side) and the west end of the Peacock jetty (north jetty, Washington side) upstream to Chief Joseph Dam in Washington. From fallrun Chinook salmon in the mainstem Snake River ESU, found below Hells Canyon Dam, and in the Tucannon River, Grande Ronde River, Imnaha River, Salmon River, and Clearwater River. From Snake River spring/summer-run ESU, found in mainstem Snake River and the Tucannon River, Grande Ronde River, Imnaha River, and Salmon River subbasins. From Puget Sound ESU, found in rivers and streams flowing into Puget Sound.			
Oncorhynchus keta chum salmon	Threatened	Major spawning populations are found only as far south as Tillamook Bay on the northern Oregon coast. Spawning populations are also known from Korea and Japan and into the far north of Russia (NMFS, 2013).	Spawn in the lowermost reaches of rivers and streams, typically within 62 miles (100 km) of the ocean. Spawning sites are often near springs. They migrate almost immediately after hatching to estuarine and ocean waters (NMFS, 2013).	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Oncorhynchus mykiss Rainbow trout/steelhead/inland redband trout	Candidate	In the United States, steelhead trout are found along the entire Pacific Coast (NMFS, 2013).	Found in a wide range of temperature conditions. They do best where dissolved oxygen concentration is at least 7 parts per million. In streams, deep low-velocity pools are important wintering habitats. Spawning habitat consists of gravel substrates free of excessive silt (NMFS, 2013).	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Oncorhynchus nerka sockeye salmon	Candidate	On the Pacific coast, sockeye salmon inhabit riverine, marine, and lake environments from the Klamath River and its tributaries north and west to the Kuskokwim River in western Alaska (NMFS,	Sockeye spend approximately the first half of their life cycle rearing in lakes. The remainder of the life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean (NMFS, 2013).	Consult Agency	No. The March's Point site and the Flats site do not provide habitat for this species.

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		2013).			
Salvelinus confluentus Bull trout-Coastal Puget Sound Distinct Population Segment	Candidate	Known from Idaho, Montana, Nevada, Oregon, and Washington (NatureServe, 2012).	Found in streams with riffles and deep pools, undercut banks and lots of large logs and rely on river, lake and ocean habitats that **connect** to headwater streams for annual spawning and feeding migrations (NatureServe, 2012).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Salvelinus confluentus Bull trout/Dolly varden	Candidate	Known throughout the United States, conterminous, (lower 48 states) (FWS, 2013).	Found in cold water, seldom found in waters where temperatures exceed 59 to 64 degrees (F). Bull trout also require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors (FWS, 2013).	Contact Agency	No. The project site does not provide habitat for this species.
Sebastes auriculatus brown rockfish	Candidate	Range extends from Bahia San Hipolito in southern Baja California to Prince William Sound in the northern Gulf of Alaska. Most often found in central and southern Puget Sound and from southern Baja California to Bodega Bay in northern California (AFSC NOAA, 2013).	Juveniles and subadults commonly live at shallow inshore depths of 120 meters, and can be found as deep as 135 meters. The adults and subadults are commonly found near the sea bottom over both high and low terrain, and sometimes among eelgrass or other vegetation. Pelagic juveniles are at shallower depths of about 36 meters (AFSC NOAA, 2013).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Sebastes caurinus copper rockfish	Candidate	Range between the Gulf of Alaska to Baja California (AFSC, NOAA, 2013)	Inhabits waters up to 183 meters deep. Commonly found at depths of less than 120 meters. (AFSC NOAA, 2013)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Sebastes elongates greenstriped rockfish	Candidate	Range between the Gulf of Alaska to Baja California (AFSC, NOAA, 2013)	Inhabits waters 100 to 250 meters deep. But may be found to depths of 425 meters. (AFSC NOAA, 2013)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Sebastes flavidus yellowtail rockfish	Candidate	Range between the Gulf of Alaska and Southern California (AFSC NOAA, 2013)	Inhabits waters 50 to 250 meters deep and can be found at a maximum depth of 549 meters. (AFSC NOAA, 2013)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Sebastes melanops black rockfish	Candidate	Black rockfish range from Amchitka Island in the Aleutian Islands to southern California (ADFG, 2013)	Occur in the waters above the continental shelf at the surface to depths of 366 m, but usually are found in water shallower than 150 m. Found in rugged, rocky habitat, often above pinnacles and/or in high current locations (ADFG, 2013).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Sebastes meliger quillback rockfish	Candidate	Range between the Gulf of Alaska to Southern California. (AFSC NOAA, 2013)	Inhabits waters 9 to 147 meters deep and can be found at a maximum depth of 274 meters. (AFSC NOAA, 2013)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Sebastes nebulosus China rockfish	Candidate	Range between the Gulf of Alaska to Southern California. (AFSC NOAA, 2013)	Primarily inhabit waters 18 to 92 meters deep (AFSC NOAA, 2013)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Sebastes nigrocinctus tiger rockfish	Candidate	Ranges from the Gulf of Alaska to Southern California (AFSC NOAA, 2013)	Ranges from 55 to 274 meters and can be found at a maximum depth of 274 meters. (AFSC NOAA, 2013)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Sebastes pinniger canary rockfish	Candidate	Range between Punta Colnett, Baja California, and the Western Gulf of Alaska. Most common off the coast of central Oregon (NMFS, 2012)	Primarily inhabit waters 50 to 250 meters deep but may be found to 425 meters (NMFS, 2012).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Sebastes proriger redstripe rockfish	Candidate	Range between the Bering Sea and Baja California (AFSC NOAA, 2013)	Inhabits waters 100 to 300 meters deep and can be found at a maximum depth of 425 meters. (AFSC NOAA, 2013)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Theragra chalcogramma walleye pollock	Candidate	Widely distributed throughout the North Pacific Ocean (AFSC NOAA, 2010).	Found n temperate and subarctic waters (AFSC NOAA, 2010).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Amphibians					
Anaxyrus boreas Western toad	Candidate	Known throughout Washington (Californiaherps, 2013).	Found in marshes, springs, creeks, small lakes, meadows, woodlands, forests, and desert riparian areas (Californiaherps, 2013).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Rana luteiventris Columbia spotted frog	Candidate	Occurs from southeast Alaska south through most of British Columbia and a bit of the Northwest Territories and Alberta, most of eastern Washington and Oregon, the northern half of Nevada, and east into northwest Utah, most of Idaho, the western part of Wyoming, and the western	Found usually in places with strong sun exposure near water with floating vegetation, including beaver ponds, mountaintop wetlands, small lakes, boreal ponds, wet springs, and slow-moving stream edges (Californiaherps, 2013).	Spring-Summer	No. The March's Point site and the Flats site do not provide habitat for this species.

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		half of Montana (Californiaherps, 2013).			
Rana pretiosa Oregon spotted frog	Endangered	From southwest British Columbia south through Washington and Oregon (Californiaherps, 2013).	Found in aquatic environments mostly in mixed coniferous forests. Found near cool, quiet, permanent water sources; slow streams that meander through meadows, sluggish streams and rivers, marshes, springs, pools, edges of small lakes, and ponds from near sea level to 5,000 feet (Californiaherps, 2013).	February-October	No. The March's Point site and the Flats site do not provide habitat for this species.
Birds					
Accipiter gentilis Northern goshawk	Candidate	Occurs throughout high elevation areas throughout North America. Known from the Sierras and northern California counties.	Found in forested areas with cleared openings for foraging.	All year	No. The March's Point site and the Flats site do not provide habitat for this species.
Aechmophorus occidentalis Western grebe	Candidate	Winters along the Pacific Coast (NatureServe, 2012).	Breeds in lakes and ponds across the American West and winters along the Pacific Coast (NatureServe, 2012).	March-September	The March's Point site does not provide habitat for this species. The Flats site provides wintering habitat for this species.
Aquila chrysaetos Golden eagle	Candidate	Known to occur in Alameda, Colusa, Contra Costa, El Dorado*, Fresno, Humboldt, Kern, Lake, Lassen, Los Angele, Madera, Merced, Modoc, Mono, Monterey, Napa, Orange, Riverside, Sacramento, San Bernardino, San Diego, San Joaquin, San Luis Obispo, Santa Clara, Siskiyou, Solano, Stanislaus, Trinity, Tulare, and Ventura counties.	Generally open country, in prairies, arctic, and alpine tundra, open wooded country, and barren areas, especially in hilly or mountainous regions.	February-March	No. The March's Point site and the Flats site do not provide habitat for this species.
Brachyramphus marmoratus Marbled murrelet	Threatened	Found from the western Aleutian Islands through coastal southern and southeastern Alaska, British Columbia, Washington, Oregon, and northern central California NatureServe, 2012).	Nests from May through early August in Washington. Outside of the breeding season, found in coastal areas, mainly in salt water within 2 km of shore, including bays and sounds. Nests in trees in terrestrial habitat including alpine, conifer forest, and Tundra (NatureServe, 2012).	Year round	No. The March's Point site and the Flats site do not provide habitat for this species.
Chaetura vauxi Vaux's swift	Candidate	In Washington, known from western portions of state (west of	Nests in coniferous or mixed forest. Forages in forest openings, especially above streams.	April-September	No. The March's Point

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		the Cascades); also eastern slope of Cascades and forests of northeastern Washington and the Blue Mountains (Cornell Lab of Ornithology, 2013).	Found from 0 to 1,524 meters (Cornell Lab of Ornithology, 2013).		site and the Flats site do not provide habitat for this species.
Dryocopus pileatus Pileated woodpecker	Candidate	in the Pacific Northwest, known from central and (primarily) southern British Columbia, south through Washington (northwestern Cascades and Northeast and Oregon on both sides of the Cascades to central California (south to Santa Cruz and Santa Clara counties (Cornell Lab of Ornithology, 2013).	Found in late successional stages of coniferous or deciduous forest, but also younger forests that have scattered, large, dead trees (Cornell Lab of Ornithology, 2013).	Year round	No. The March's Point site and the Flats site do not provide habitat for this species.
Falco peregrinus anatum Peregrine falcon	Sensitive	Active nesting sites known along the coast north of Santa Barbara and other mountains in northern California (NatureServe 2012).	Breeds mostly in woodland, forest, and coastal habitats near water on high cliffs or banks. Will nest on man-made structures and in the hollows of old trees or open tops of cypress, sycamore or cottonwood trees 50 to 90 feet above the ground (NatureServe 2012).	Year Round	No. The March's Point site and the Flats site do not provide habitat for this species.
Gavia immer Common loon	Sensitive	Breed in northern U.S. and Canada (Cornell Lab of Ornithology, 2013).	Breed on quiet, remote freshwater lakes. In winter, found on lakes, rivers, estuaries, and coastline (Cornell Lab of Ornithology, 2013).	March-September	The March's Point site does not provide habitat for this species. The Flats site provides wintering habitat for this species.
Haliaeetus leucocephalus Bald eagle	Sensitive	Known commonly within the northwest (Cornell Lab of Ornithology, 2013).	Breeds in forested areas near large bodies of water. Winters in coastal areas, along large rivers, and large unfrozen lakes (Cornell Lab of Ornithology, 2013).	Year round	The March's Point site does not provide habitat for this species. The Flats site provides a low potential for this species to occur.
Phalacrocorax penicillatus Brandt's cormorant	Candidate	Found only in marine environments along the Pacific Coast (Cornell Lab of Ornithology, 2013).	Found in inshore coastal waters, especially areas with kelp beds; also large bays and occasionally estuaries or coastal lagoons (Cornell Lab of Ornithology, 2013).	Year round	The March's Point site does not provide habitat for this species. The Flats site provides a low potential for this species to occur.
Phoebastria albatrus	Candidate	Breeds on the Japanese island of	Spends long periods of time at sea, coming to	June-October	No. The March's Point

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Short-tailed albatross		Torishima (a small island 600 km south of Tokyo) and on the Senkaku Islands near Taiwan. Found along the coasts of eastern Russia, South Korea, China, Taiwan, Alaska, the Hawaiian Islands, and Baja California when not breeding (NatureServe, 2012).	land only to breed.		site and the Flats site do not provide habitat for this species.
Picoides arcticus Black-backed woodpecker	Candidate	Breeds from central Alaska and northern Canada to montane areas of California and New England. In Washington,, breeds mainly in eastern. Cascade Mountains and Blue Mountains (Cornell Lab of Ornithology, 2013).	Found in boreal and montane coniferous forests (Cornell Lab of Ornithology, 2013).	Year round	No. The March's Point site and the Flats site do not provide habitat for this species.
Progne subis Purple martin	Candidate	Known from Mendocino, Napa, Sonoma, Lake, Riverside, Sacramento, San Luis Obispo, Placer, Shasta, San Diego and Monterey counties (NatureServe, 2012).	Found in a variety of wooded, low-elevations habitats. Uses valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Also occurs in coniferous habitats, including closed-cone pine-cypress, ponderosa pine, Douglas-fir, and redwood. Inhabits more open areas in winter (NatureServe, 2012).	All Year	No. The March's Point site and the Flats site do not provide habitat for this species.
Strix occidentalis caurina Northern spotted owl	Endangered	Geographic range extends from British Colombia to northwestern California south to San Francisco. The breeding range includes the Cascade Range, North Coast Ranges, and the Sierra Nevada. Some breeding populations also occur in the Transverse Ranges and Peninsular Ranges NatureServe, 2012).	Resides in mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2,300 meters. Prefers old-growth forests, but use of managed (previously logged) lands is not uncommon. Owls do not appear to use logged habitat until approximately 60 years after logging unless some larger trees or snags remain after logging. Nesting habitat is a tree or snag cavity, or the broken top of a large tree. Requires a nearby, permanent source of water. Foraging habitat consists of any forest habitat with sufficient prey (e.g. flying squirrels, mice, and voles) (NatureServe, 2012).	Year round	No. The March's Point site and the Flats site do not provide habitat for this species.
Uria aalge Common murre	Candidate	Low-arctic and boreal waters of the north Atlantic and north Pacific.	Found along the ocean. Nests along rocky cliffs and spends its winter at sea.	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
					this species.
Mammals					
Corynorhinus townsendii Townsend's big eared bat	Species of concern/ Candidate	Western North America from British Columbia to central Mexico, east to western South Dakota and Texas (NatureServe, 2012).	Xeric to mesic habitat including coniferous woodlands, juniper forests, deciduous forests, basins and desert shrublands, with absence only from most extreme deserts and highest elevations. Utilizes caves and abandoned mines (NatureServe 2012).	Contact Agency	The March's Point site and the Flats site provide habitat for this species.
Eschrihctius robustus Grey whale	Sensitive	Distributed along the west coast of North America and the coast of eastern Asia (NMFS, 2013).	Found in shallow coastal waters of the North Pacific Ocean (NMFS, 2013).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Gulo gulo luteus continuous U.S. Distinct Population Segment North American wWolverine	Candidate	Known from montane regions of Idaho, Montana, Washington and Wyoming (NatureServe, 2012).	Inhabit alpine and arctic tundra, boreal and mountain forests, which are primarily coniferous. Limited to mountains in the south, especially large wilderness areas from 400 to 4,300 meters (NatureServe, 2011).	Year round	No. The March's Point site and the Flats site do not provide habitat for this species.
Lynx canadensis Canada lynx	Threatened	Known in the U.S. from Arkansas, Colorado, Idaho, Maine, Mississippi, Montana, Minnesota, North Dakota, New Hampshire, Oregon, Utah, Vermont, Washington, and Wyoming (NatureServe, 2012).	Found in boreal and montane regions dominated by coniferous or mixed forest with thick undergrowth. When inactive or birthing, occupies den typically in hollow tree, under stump, or in thick brush. Den sites tend to be in mature or old growth stands with a high density of logs (Koehler, 1990, Koehler and Brittell, 1990). Primary habitat components in the Pacific Northwest is foraging habitat (15 to 35-year-old lodgepole pine) to support snowshoe hare and provide hunting cover, denning sites (patches of greater than 200-year-old spruce and fir, generally less than 5 acres, and dispersal/travel cover (variable in vegetation composition and structure) (USFWS, 1993). Breeds in late winter-early spring in North America (NatureServe, 2012).	Year round	No. The March's Point site and the Flats site do not provide habitat for this species.
Martes pennanti West Coast Distinct Population Segment Pacific fisher	Endangered	Distributed along the Sierra Nevada, Cascades and Klammath Mountains and in a few areas in the north Coast Ranges.	Found in intermediate to dense mature stands of trees (coniferous forests) and deciduous riparian habitats with a high percent canopy closure. Utilizes cavities in large trees, snags, logs, rock areas, or shelters provided by slash or brush piles.	Year Round	No. The March's Point site and the Flats site do not provide habitat for this species.

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Myotis keenii Keen's long-eared bat (Formerly Keen's Myotis)	Candidate	Coastal regions from southeast Alaska to the Olympic Peninsula and Puget Sound. No roosts in Washington as of 2011 (WDFW, 2011).	Occupies low elevation moist coastal forests of western hemlock, Sitka spruce and other conifers. Roosts in caves, crevices, dead trees, and buildings (WDFW, 2011).	Contact Agency	No. The March's Point site and the Flats site occur outside of the known geographic roosting range for this species.
Orcinus orca Killer whale	Endangered	Found in all parts of the oceans, and in seas from Arctic to Antarctic. (NMFS, 2013)	Most commonly found in cold water including Antarctica, Norway, and Alaska. Also found in temperate, tropical, subtropical and offshore waters.(NMFS 2013)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Phocoena phocoena Harbor porpoise	Candidate	Ranges from Point Barrow on Alaskan coast to Point Conception, California (AFSC NOAA, 2013).	Water less than 100 meters deep, movements influenced by prey availability and ice-free waters. Breeding occurs in summer with births beginning the following May (AFSC NOAA, 2013).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Ursus arctos (*Ursus arctos horriblilis*) Grizzly bear	Endangered	Known in the U.S. from Arkansas, Arizona, California, Colorado, Idaho, Kansas, Montana, Minnesota, North Dakota, Nebraska, New Mexico, Nevada, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming (NatureServe, 2012).	Found mostly in arctic tundra, alpine tundra, and subalpine mountain forests. Breeds in late spring and early summer. Young are born in winter. Adults are solitary except when breeding or caring for young (NatureServe, 2012).	Year round	No. The March's Point site and the Flats site do not provide habitat for this species.
Vulpes vulpes cascadensis Cascade red fox	Candidate	Restricted and endemic to the Cascade Range (NPS, 2012).	Upper mountain forest, subalpine parkland, and alpine meadows (NPS, 2012).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Invertebrates					
Callophrys johnsoni Johnson's hairstreak	Candidate	Historically southern British Columbia, Washington, Oregon, western Idaho, central California (Xerces.org)	Late successional old growth forests which support host plant, conifer mistletoe in elevations from sea level to 6,000 feet. (Xerces.org)	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Haliotis kamtschatkana Pinto (Northern) Abalone	Candidate	Distributed from Sitka , Alaska to Point Conception, California (NMFS, 2007).	Found in the low intertidal zone to a depth of nine meters, but can be found at depths of 100 meters. Broadcast spawn from April to June (NMFS, 2007).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.
Ostrea conchaphila	Candidate	Historically Willapa Bay, Oakland	Mud gravel flats, tide pools with fresh water	Contact Agency	No. The March's

SCIENTIFIC NAME COMMON NAME	STATE STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Olympia Oyster		Bay and southern Puget Sound (Currently only Southern Puget Sound) (WDFW, 2013)	seepage and intertidal zones to 165 feet in depth (WDFW, 2013).		Point site and the Flats site do not provide habitat for this species.
Speyeria zerene bremnerii Valley silverspot	Candidate	Southwestern British Columbia to west-central Oregon, along San Juan islands in Washington in the Puget Trough, and in the Olympic National Forest (Xerces society, 2011).	Windy peaks with nearby forest openings, native praries and grasses and more mesic sites (Xerces Society 2011).	Contact Agency	No. The March's Point site and the Flats site do not provide habitat for this species.

MARCH'S POINT BOTANICAL SURVEY

ANALYTICAL ENVIRONMENTAL SERVICES

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MEMORANDUM

To: Samish Indian Nation, City of Anacortes, Washington

From: Kelly Bayne

Date: 9/8/2011

Re: Botanical Survey Results for the Samish Indian Nation-Thompson Site Property in the City of Anacortes, Washington

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INTRODUCTION

Analytical Environmental Services (AES) prepared this technical memorandum (memo) to document the field verification results conducted to determine whether rare plants of Skagit County occur within the Samish Indian Nation (Tribe)-Thompson Site Property (property) located in the City of Anacortes, Washington. The City of Anacortes (City) adopted Biological Ordinance "17.70.320-Designation, Rating, and Mapping Wetlands" that designates wetlands in accordance with the Washington State Department of Ecology, Wetlands Identification and Delineation Manual, March 1997, Pub. No. 96-94. One criteria used to rate the wetlands designation is whether rare plants identified within Skagit County are present (WNHP, 2010). The City's trail system map identifies a Category III wetland on the property (City of Anacortes, 2006). Focused botanical surveys were conducted to ensure that no rare plants occur within the subject property.

PROJECT LOCATION

The approximately 14.84-acre property is located at the intersection of Thompson Road and SR-20 in the City of Anacortes, Skagit County, Washington. The property is situated in Township 34 North, Range 2 East, Section 4 of the Anacortes South, Washington, Willamette Meridian U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad). The centroid of the property is 48.459275° latitude, -122.556575° longitude.

METHODOLOGY

Preliminary Research

Prior to conducting the biological and focused botanical surveys, AES obtained biological information for the property from the following sources: Anacortes South quad; color aerial photography of the property (AES, 2007); map of priority habitats and species documented in the vicinity of the property (WDFW, 2011); Washington National Heritage Program (WNHP) list of rare plants in Skagit County (WNHP, 2010); list of endangered and threatened species in Skagit County (USFWS, 2011a); and delineation report of the property and surrounding vicinity (AES, 2010). The WNHP (2010) list is provided in **Attachment 1**.

Field Surveys and Analysis

AES senior biologist Kelly Bayne, M.S. conducted general biological and focused botanical surveys and delineations on October 21 and 22, 2009 and May 25 and 26, 2010. Ms. Bayne and botanist Laura Burris conducted general biological and focused botanical surveys on September 22 and 23, 2010. The results of the delineation are documented in a separate report (AES, 2011). The botanical surveys consisted of walking transects in a north to south direction to evaluate biological communities, conducting floristic inventories, and documenting potential habitat for special status plants with the potential to occur on the property. Plants observed within the property are identified in **Attachment 2**.

RESULTS

Habitat Types

Habitat types in the property include: nonnative annual grassland, riparian, snowberry (*Symphoricarpos albus*) patch, ruderal/disturbed areas, manmade ditch, and roadside ditch.

Special Status Plant Species

For the purposes of this assessment, special status plants have been defined to include those species that are:

- Listed as endangered or threatened under the federal Endangered Species Act (FESA) (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the Washington State ESA (or proposed for listing);
- Designated as sensitive under the state ESA; or
- Designated as review groups of potential concern under the state ESA.

Table 1 provides a summary of habitat requirements and geographic distributions of rare plants documented in Skagit County (WNHP, 2010) and a rationale as the whether the plants have the potential to occur within the property. The project site geography and elevation were used to eliminate from further consideration plants that occur outside these ranges. Other listed plants were eliminated from further consideration during the field surveys based on the absence of suitable habitat required by the plants. Plants without the potential to occur within the property are not discussed further. In conclusion, the property does not provide habitat for any federally listed special status plants. The property does, however, provide habitat and occurs within the known geographic and elevation ranges for the following four state listed plants: pink fawn lily (*Erythronium revolutum*), branching montia (*Montia diffusa*), California buttercup (*Ranunculus californicus*), and soft-leaved willow (*Salix sessilifolia*). These plants are discussed in further detail below.

Pink Fawn Lily (*Erythronium revolutum*)

State Status: Sensitive
Other: Historic Record

Pink fawn lily prefers moist mineral soil in open or moderately shaded areas. This species blooms from April to May (WNHP, 2010). Although this species is known from Skagit, Clallam, Jefferson, Wahkiakum, Pacific, and Grays Harbor counties in Washington, the WNHP (2010) identifies this species as a historic record with the most recent sighting in Skagit County occurring prior to 1977.

Table 1

Regionally Occurring Federally Listed Special Status Plants

SCIENTIFIC NAME COMMON NAME	FEDERAL/STATE STATUS/HISTORIC RECORD	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Anthoxanthum hirtum common northern sweet grass	--/R1,H	In Washington, currently known from Chelan, Okanogan, and Skamania counties (WNHP, 2010).	Found on moist slopes, meadows, and stream banks from the foothills to sub-alpines from 325 to 4,420 feet (WNHP, 2010).	April through July	No. The property does not provide habitat for this species, is outside the known geographic and elevation ranges for this species, and was not observed during the May 25 and 26, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species.
Carex comosa bristly sedge	--/S	In Washington, occurrences are scattered throughout the state (WNHP, 2010).	Found in marshes, lake shores, and wet meadows. Associated species may include *Carex utriculata, Potentilla palustris, Typha latifolia, Spiraea douglasii, Dulichium arundinaceum*, and *Phalaris arundinacea* from 50 to 2,000 feet (WNHP, 2010).	May through July.	No. The property does not provide habitat for this species, is outside the known elevation range for this species, and was not observed during the May 25 and 26, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species.
Carex magellanica ssp. *irrigua* poor sedge	--/S	In Washington, known from Pend Oreille, Okanogan, Whatcom, Skagit, Chelan, and Stevens counties (WNHP, 2010).	Found in fens, bogs, shady wet meadows, shrub wetlands, and marshes, often growing in peat soil, at 1,640 to 7,000 feet (WNHP, 2010).	June to September	No. The property does not provide habitat for this species, is outside the known elevation range for this species ,and was not observed during the September 22 and 23, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species.
Carex pauciflora few-flowered sedge	--/S	In Washington, known from Whatcom, Snohomish, San Juan, King, Jefferson, Clallam, Mason, and Kittitas counties (WNHP, 2010).	Found in sphagnum bogs and acidic peat, usually on open mats, but also in partial conifer shade. In Washington, this species grows from 320 to 4,550 feet (WNHP, 2010).	Late May to early September	No. The property does not provide habitat for this species, is outside the known geographic and elevation ranges for this species, and was not observed during the May 25 and 26, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species.
Carex praeceptorum teacher's sedge	--/R1	In Washington, known from Skagit, Pend Oreille, and Chelan counties (WNHP, 2010).	Found in sphagnum bogs and very wet shores around a lake, from 650 to 6,320 feet (WNHP, 2010).	June and August.	No. The property does not provide habitat for this species and is outside the known elevation range for this species.
Carex stylosa long styled sedge	--/S	In Washington, known from Clallam, Jefferson, Snohomish, Whatcom, and Skagit counties	Found in coastal regions, shallow marshes, gravelly loam, streambanks, and moist meadows. Occasionally found	June through September.	No. The property was not observed during the September 22 and 23, 2010 focused botanical surveys conducted

		(WNHP, 2010).	growing over hardened lava flow (WNHP, 2010).		within the evident and identifiable blooming period for this species.
Castilleja levisecta golden paintbrush	LT/SE, H	In Washington, known from the Puget Trough physiographic province (WNHP, 2010).	Perennial herb found in open grasslands with substrate composed of glacial outwash or depositional material, from 10 to 300 feet (WNHP, 2010).	April through July	No. The property provides habitat within the nonnative grassland, however, the property is outside the known geographic range for this species and was not observed during the May 25 and 26, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species.
Erythronium revolutum pink fawn lily	--/S, H	In Washington, known from Skagit, Clallam, Jefferson, Wahkiakum, Pacific, and Grays Harbor counties (WNHP, 2010).	Prefers moist mineral soil in open or moderately shaded areas (WNHP, 2010).	April to May.	Yes. See text.
Hypericum majus Canadian St. John's wart	--/S	Known from Benton, Franklin, Skagit, and Spokane counties (WNHP, 2010).	Found along ponds, lakesides or other low, wet places. In Washington, usually associated with riparian habitats from 100 to 2,300 feet (WNHP, 2010).	July through September	No. The property does not provide habitat for this species, is outside of the known elevation range for this species, and was not observed during the September 22 and 23, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species.
Lobelia dortmanna water lobelia	--/T	In Washington, scattered occurrences known from King County, north to Whatcom County, and west to Clallam County (WNHP, 2010).	Found in shallow water at the margins of lakes and ponds (WNHP, 2010).	June and lasting through August	No. The property does not provide habitat for this species.
Loiseleuria procumbens alpine azalea	--/T	In Washington, known from Skagit County (WNHP, 2010).	In Washington, found in alpine slopes from 6,100 to 6,550 feet (WNHP, 2010).	August.	No. The property does not provide habitat for this species and is outside of the known elevation range for this species.
Luzula arcuata ssp. *unalaschkensis* curved woodrush	--/S	In Washington, scattered, disjunct populations known from Pierce, Yakima, Okanogan, and Skagit counties (WNHP, 2010).	In Washington, found on a rocky exposed ridge at 7,080 feet and below a highly vegetated ridge crest between two snowfields on a volcanic boulder slope with flat pockets of sandy soil at 7,200 feet (WNHP, 2010).	August.	No. The property does not provide habitat for this species and is outside of the known elevation range for this species.
Meconella oregano white meconella	Species of Concern	In Washington, known from the Eastern Cascades, Western Cascades, and Puget Trough physiographic provinces (WNHP, 2010).	Annual herb found primarily in open grassland, sometimes within a mosaic of forest/grassland on gradual to almost 100 percent slopes from 100 to 450 feet (WNHP, 2010).	March to April	No. The property provides habitat within the nonnative grassland, however, the property is outside of the known elevation and geographic ranges for this species.

Montia diffusa branching montia	--/S	In Washington, known from Skamania, Snohomish, Clark, Kittitas, Skagit, and Clallam counties (WNHP, 2010).	Found in moist forests in the lowland and lower montane zones, and occasionally located in xeric soils or disturbed sites (WNHP, 2010).	April through July	Yes. See text.
Pinus albicaulis whitebark pine	Candidate	Found in two distinct sections; one following the British Columbia Coast Ranges, the Cascade Range, and the Sierra Nevada, and the other covering the Rocky Mountains from Wyoming to Alberta. In Washington, found in the northeastern Rocky Mountains (Bailey, 1975).	Gymnosperm found in subalpine forest from 7,000 and 12,000 feet (Calflora, 2011).	Year round	No. The property does not provide habitat for this species, is outside the elevation range for this species, and the species was not observed during any of the botanical surveys conducted within the evident and identifiable blooming period for this species.
Potamogeton obtusifolius blunt leaved pondweed	--/S, H	In Washington, known from Mason, Skagit, San Juan, and Jefferson counties (WNHP, 2010).	Found submerged on banks and in 3 to 9 feet (1-3.75 meters) of shallow water, from 100 to 513 feet (WNHP, 2010).	August.	No. The property does not provide habitat for this species and is outside the elevation range for this species.
Ranunculus californicus California buttercup	--/T, H	Known from southern Vancouver Island to southern California. Historically, known from San Juan and Skagit counties, Washington, however, two recent occurrences known from San Juan County (WNHP, 2010).	In Washington, found in open grassy areas, rocky slopes along the shore, and in rocky wooded areas from 15 to 50 feet (WNHP, 2010).	May to June.	Yes. See text.
Salix sessilifolia soft-leaved willow	--/S	In Washington, known from Cowlitz, Klickitat, Wahkiakum, Skagit, and Whatcom counties (WNHP, 2010).	In Washington, found lowland habitats including riparian forest, in dredge spoils, and on a silty bank at the upper edge of an intertidal zone (WNHP, 2010).	May through December	Yes. See text.
Saxifraga rivularis pygmy saxifrage	--/S	Known from British Columbia south to the Cascades and Olympics of Washington, and the Blue and Wallowa mountains (WNHP, 2010).	Found on damp cliffs, rock crevices, talus near snowbanks, alpine slopes, cracks, and shaded cliffs from 6,000 to 7,000 feet (WNHP, 2010).	July and August.	No. The property does not provide habitat for this species and is outside the elevation range for this species

Source: Washington National Heritage Program List of Rare Plants in Skagit County (November 2010)

Codes

H = Historic Record. Most recent sighting in the County is before 1977.

State Status Codes= State status of plant species is determined by the Washington Natural Heritage Program.
E = Endangered. In danger of becoming extinct or extirpated from Washington.
T = Threatened. Likely to become Endangered in Washington.
S = Sensitive. Vulnerable or declining and could become Endangered or Threatened in the state.
X = Possibly extinct or Extirpated from Washington.
R1 = Review group 1. Of potential concern but needs more field work to assign another rank.
R2 = Review group 2. Of potential concern but with unresolved taxonomic questions.

Federal Status Codes = Federal Status under the U.S. Endangered Species Act (ESA)
LE = Listed Endangered. In danger of extinction.
LT = Listed Threatened. Likely to become endangered.
PE = Proposed Endangered.
PT = Proposed Threatened.
C = Candidate species. Sufficient information exists to support listing as Endangered or
SC = Species of Concern.

The nonnative annual grassland within the property provides habitat for this species. This species was not observed during the May 25 and 26, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species. This species does not occur within the property.

Branching Montia (*Montia diffusa*)
State Status: Sensitive
Other: None

Branching montia is found in moist forests in the lowland and lower montane zones, and occasionally located in xeric soils or disturbed sites. The blooming period for this species in from April through July. This species is known from Skamania, Snohomish, Clark, Kittitas, Skagit, and Clallam counties (WNHP, 2010).

The ruderal/disturbed areas within the property provide habitat for this species. This species was not observed during the May 25 and 26, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species. This species does not occur within the property.

California Buttercup (*Ranunculus californicus*)
State Status: Threatened
Other: Historic Record

California buttercup is found in open grassy areas, rocky slopes along the shore, and in rocky wooded areas from 15 to 50 feet in Washington (WNHP, 2010). The blooming period for this species is from May to June. Although this species is known from southern Vancouver Island to southern California, the WNHP (2010) identifies this species as a historic record with the most recent sighting in Skagit County occurring prior to 1977.

The nonnative annual grassland within the property provides habitat for this species. This species was not observed during the May 25 and 26, 2010 focused botanical surveys conducted within the evident and identifiable blooming period for this species. This species does not occur within the property.

Soft-Leaved Willow (*Salis sessifolia*)
State Status: Sensitive
Other: None

Soft-leaved willow is found on lowland habitats including riparian forest, in dredge spoils, and on a silty bank at the upper edge of an intertidal zone. The blooming period for this species is from May through December. This species is known from Cowlitz, Klickitat, Wahkiakum, Skagit, and Whatcom counties (WNHP, 2010).

The riparian habitat within the property provides habitat for this species. This species was not observed during the October 21 and 22, 2009, May 25 and 26, 2010, and September 22 and 23, 2010 focused botanical surveys conducted within the evident and identifiable blooming period. This species does not occur within the property.

CONCLUSION

None of the potentially occurring special status species identified within the WNHP (2010) list occur within the property.

REFERENCES

Analytical Environmental Services (AES), 2011. Delineation of Waters of the U.S. for the Samish Indian Nation-Thomas Site Fee-To-Trust. Prepared by AES.

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Washington Natural Heritage Program (WNHP), 2010. Rare Plant Information. Washington National Heritage Information System. List of Known Occurrences of Rare Plants in Washington. Skagit County (November 2010). Washington State Department of Natural Resources. Available at: http://www.dnr.wa.gov/researchscience/topics/naturalheritage/pages/amp_nh.aspx. Accessed August 23, 2011.

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ATTACHMENTS

ATTACHMENT 1

WASHINGTON NATIONAL HERITAGE PROGRAM, PRIORITY HABITAT, AND U.S. FISH AND WILDLIFE LISTS

Washington Natural Heritage Information System
List of Known Occurrences of Rare Plants in Washington
November 2010

Skagit County

A key to status fields appears below. If a scientific name is underlined you may click on it to go to a field guide page (pdf format, average size 300 kb) for that taxon.

Scientific Name	Common Name	State Status	Federal Status	Historic Record
Anthoxanthum hirtum	common northern sweet grass	R1		H
Carex comosa	bristly sedge	S		
Carex magellanica ssp. irrigua	poor sedge	S		
Carex pauciflora	few-flowered sedge	S		
Carex praeceptorum	Teacher's sedge	R1		
Carex stylosa	long-styled sedge	S		
Castilleja levisecta	golden paintbrush	E	LT	H
Erythronium revolutum	pink fawn-lily	S		H
Hypericum majus	Canadian St. John's-wort	S		
Lobelia dortmanna	water lobelia	T		
Loiseleuria procumbens	alpine azalea	T		
Luzula arcuata ssp. unalaschkensis	curved woodrush	S		
Meconella oregana	white meconella	T	SC	H
Montia diffusa	branching montia	S		
Nuttallanthus texanus	Texas toadflax	S		
Potamogeton obtusifolius	blunt-leaved pondweed	S		H
Ranunculus californicus	California buttercup	T		H
Salix sessilifolia	soft-leaved willow	S		
Saxifraga rivularis	pygmy saxifrage	S		

Description of Codes

Historic Record:

H indicates most recent sighting in the county is before 1977.

State Status

State Status of plant species is determined by the Washington Natural Heritage Program. Factors considered include abundance, occurrence patterns, vulnerability, threats, existing protection, and taxonomic distinctness.
Values include:
E = Endangered. In danger of becoming extinct or extirpated from Washington.
T = Threatened. Likely to become Endangered in Washington.
S = Sensitive. Vulnerable or declining and could become Endangered or Threatened in the state.
X = Possibly extinct or Extirpated from Washington.
R1 = Review group 1. Of potential concern but needs more field work to assign another rank.

R2 = Review group 2. Of potential concern but with unresolved taxonomic questions.

Federal Status

Federal Status under the U.S. Endangered Species Act(USESA) as published in the Federal Register:
LE = Listed Endangered. In danger of extinction.
LT = Listed Threatened. Likely to become endangered.
PE = Proposed Endangered.
PT = Proposed Threatened.
C = Candidate species. Sufficient information exists to support listing as Endangered or Threatened.
SC = Species of Concern. An unofficial status, the species appears to be in jeopardy, but insufficient information to support listing.

ATTACHMENT 2

PLANTS OBSERVED WITHIN THE PROPERTY

PLANT SPECIES OBSERVED WITHIN THE PROPERTY

October 21 and 22, 2009, May 25 and 26, 2010, and September 22 and 23, 2010

Family	Scientific Name	Common Name
Aceraceae	*Acer macrophyllum*	Big-leaf maple
Apiaceae	*Daucus carota*	Queen Anne's lace
	Conium maculatum	Poison hemlock
Asteraceae	*Carduus pycnocephalus*	Italian thistle
	Cirsium arvense	Canada thistle
	Achillea millefolium	Yarrow
	Hypochaeris glabra	Smooth cat's ear
	Leucanthemum vulgare	White daisy
	Lactuca serriola	Prickly lettuce
	Aster subspicatus	Douglas aster
	Tanacetum bipinnatum	Common tansy
Betulaceae	*Alnus rubra*	Red alder
Boraginaceae	*Myosotis laxa*	Small-flowered forget-me-not
Brassicaceae	*Brassica rapa* (=B. *campestris)*	Field mustard
	Cardamine breweri	Bitter cress
	Erysimum sp.	
	Rorippa nasturtium-aquaticum	Water cress
Caprifoliaceae	*Lonicera involucrata* var. *involucrata*	Honeysuckle
	Symphoricarpos alba	Common snowberry
Caryophyllaceae	*Cerastium arvense*	Field chickweed
Chenopodaceae	*Atriplex patula*	Spear orache
Convulvaceae	*Calystegia sepium*	Hedge bindweed
Cyperaceae	*Carex* praegracilis	Clustered field sedge
	Carex stipata	Sawbeak sedge
	Carex ssp.	Sedge
Dipsacaceae	*Dipsacus sulvestris*	Teasel
Dryopteridaceae	*Polystichum munitum*	Sword fern
Equisetaceae	*Equisetum arvense*	Common horsetail
Ericaceae	*Gaultheria shallon*	Salal
	Vaccinium parvifolium	Red huckleberry
	Arbutus menziesii	Pacific madrone
Fabaceae	*Trifolium dubium*	Little hop clover
	Trifolium pretense	Red clover
	Trifolium repens	White clover
	Trifolium hirtum	Rose clover
	Cytisus scoparius	Scotch broom
	Lathyrus latifolius	Perennial pea
	Medicago lupulina	Black medic
Gentianaceae	*Centaurium erythraea*	Common centaury
	Centaurium umbellatum	Centaury
Geraniaceae	*Geranium dissectum*	Cranesbill
	Geranium robertianum	Robert's Geranium
	Geranium molle	Cranesbill
Hippocastanaceae	*Aesculus californica*	California buckeye
Hypericaceae	*Hypericum perforatum*	Klamathweed
Juncaceae	*Juncus balticus*	Baltic rush
	Juncus bufonius	Toad rush
	Juncus effusus ssp. *effuses*	Common rush
	Juncus effuses ssp. *pacificus*	Pacific rush

PLANT SPECIES OBSERVED WITHIN THE PROPERTY

October 21 and 22, 2009, May 25 and 26, 2010, and September 22 and 23, 2010

Liliaceae	*Stenanthium occidentale*	Western featherbells
Onagraceae	*Ludwigia palustris*	False loosestrife
	Epilobium paniculatum	Tall annual willow-herb
	Epilobium ciliatum	Common willow-herb
Papaveraceae	*Papaver nudicale*	Cultivated Iceland poppy
Pinaceae	*Picea sitchensis*	Sitka spruce
Plantaginaceae	*Plantago lanceolata*	English plantain
Poaceae	*Holcus lanatus*	Common velvet grass
	Festuca rubra	Red fescue
	Festuca idahoensis	Blue bunchgrass
	Anthoxanthum odoratum	Sweet vernalgrass
	Dactylis glomerata	Orchard grass
	Distichlis spicata	Saltgrass
	Echinochloa crus-galli	Barnyard grass
	Aira caryophyllea	Silver European hairgrass
	Agrostis capilaris	Colonial bentgrass
	Taeniatherum caput-medusae	Medusa head
	Bromus tectorum	Cheat grass
	Bromus hordeaceus	Soft brome
	Agrostis oregonensis	Oregon bentgrass
	Agrostis stolonifera	Creeping bentgrass
	Phalaris arundinaceae	Reed canary grass
Polygonaceae	*Rumex crispus*	Curly dock
	Rumex acetosella	Sheep sorrel
	Rumex occidentalis	western dock
Polypodiaceae	*Pteridium aquilinum*	Braken fern
Portulacaceae	*Claytonia perfoliata*	Miner's lettuce
Ranunculaceae	*Ranunculus* sp.	
	Ranunculus occidentalis	Buttercup
	Ranunculus uncinatus	Hook seeded buttercup
Rosaceae	*Crataegus* sp.	
	Potentilla sp.	
	Rosa nutkana	Nootka rose
	Rubus ursinus	California blackberry
	Rubus discolor	Himalayan blackberry
	Amelanchier alnifolia	Saskatoon serviceberry
	Prunus emarginata	
	Rubus spectabilis	Salmon berry
	Rubus parviflorus	Thimbleberry
	Prunus ilicifolia ssp. *ilicifolia*	Holly-leafed cherry
	Rosa sp.	
Rubiaceae	*Galium aparine*	Goose grass
Scrophulariaceae	*Veronica catenata*	Chain speedwell
	Mimulus alsinoides	Wingstem monkeyflower
	Mimulus guttatus	Yellow monkeyflower
	Verbascum thapsus	Common mullein
	Veronica americana	American brooklime
Solanaceae	*Solanum dulcamara*	Bittersweet nightshade

MARCH'S POINT DELINEATION OF WATERS OF THE UNITED STATES

DELINEATION OF WATERS OF THE UNITED STATES
SAMISH INDIAN NATION - THOMPSON SITE

AUGUST 2011

PREPARED FOR:

Samish Indian Nation
P.O. Box 217
2918 Commercial Avenue
Anacortes, WA 98221

PREPARED BY:

Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811

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1.0 INTRODUCTION

1.1 PROJECT OVERVIEW

This report presents the results of the delineation of waters of the U.S, as defined by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), for the Samish Indian Nation (Tribe)-Thompson Site Fee-To-Trust Project (proposed project) located in Skagit County, Washington. The purpose of the delineation was to identify whether wetlands and other waters of the U.S. occur within the proposed project study area (study area) and to rate the wetlands, if present. The jurisdictional delineation is considered preliminary until the USACE verifies the findings.

1.2 PROJECT APPLICANT AND AGENT

Applicant	Agent
Ted Gage Samish Indian Nation 2918 Commercial Avenue Anacortes, Washington 98221	Analytical Environmental Services 1801 7th Street, Suite 100 Sacramento, California 95811 Phone: (916) 447-3479 Fax: (916) 447-1665

1.3 PROJECT DESCRIPTION

The Tribe proposes to transfer the study area into federal trust land. The Tribe intends to develop a casino on the eastern portion of the study area and a gas station on the western portion of the study area. These projects are separate and independent of each other.

1.4 STUDY AREA DESCRIPTION AND LOCATION

The approximately 14.84-acre study area is located at the intersection of Thompson Road and SR-20 in the City of Anacortes, Skagit County, Washington (**Figure 1**). The study area is situated in Township 34 North, Range 2 East, Section 4 of the Anacortes South, Washington, Willamette Meridian U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad). The centroid of the study area is 48.459275° latitude, -122.556575° longitude. A topographic map and an aerial photograph of the study area are shown in **Figures 2** and **3**, respectively.

The study area is hydrologic unit code (HUC) Strait of Georgia number: 17110002. Topography within the study area consists of a relatively gradual slope with elevations ranging from approximately 70 to 84 feet above mean sea level.

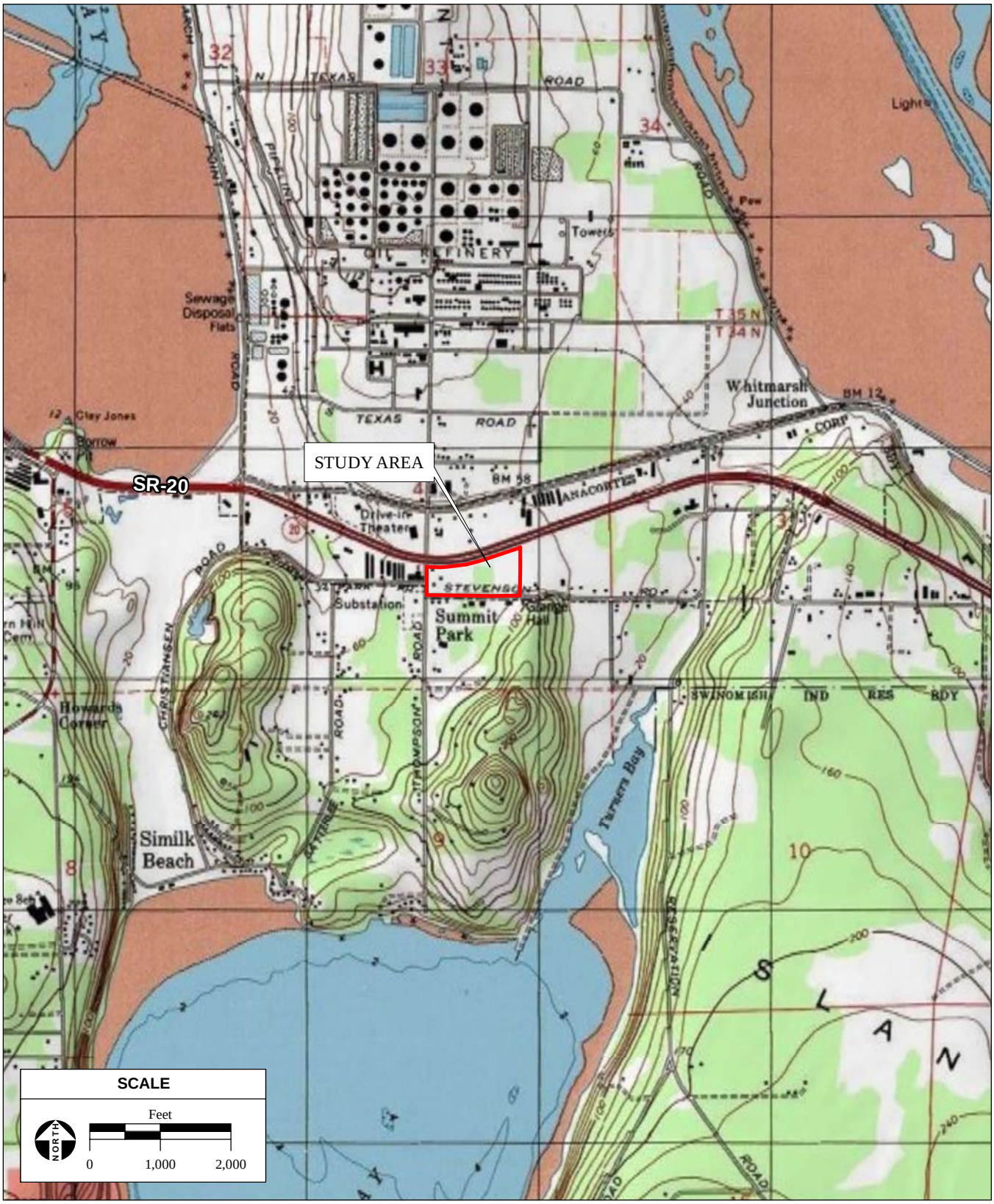
To access to the study area from Seattle, take Interstate 5 North for approximately 65 miles. Take the SR-20 exit toward Burlington/Anacortes and drive 0.4 miles. Turn left onto SR-20 West and drive 10.7 miles. Turn left onto Thompson Road. The northwestern boundary of the study area is located at the intersection of Thompson Road and SR-20.

SOURCE: ESRI Server Data, 2009; AES, 2011

Samish Indian Nation - Thompson Site Fee-To-Trust Delineation of Waters of the U.S. / 209532 ■

Figure 1

Regional Location - Proposed & Alternative Project Sites



SOURCE: "Anacortes North, WA" T34N R2E, Section 4; AES, 2011

Figure 2

Site and Vicinity - Proposed & Alternative Project Sites

SOURCE: Aerial Express Aerial Photograph, 8/2009; AES, 2011

Figure 3

Aerial Photograph - Proposed & Alternative Project Sites

2.0 REGULATORY BACKGROUND

Any person, firm, or agency planning to alter or work in navigable waters of the U.S., including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act of 1899 prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from the USACE (33 U.S.C. 403). Section 301 of the Federal Water Pollution Control Act and Amendments of 1972 ("Clean Water Act" (CWA)) prohibit the discharge of pollutants, including dredged or fill material, into waters of the U.S. without a Section 404 permit from USACE (33 U.S.C. 1344).

Waters of the U.S. are defined as:

> …all waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters (Section 404 of the CWA; 33 CFR Part 328).

The USACE considers defined beds and banks and presence of an ordinary high water mark occurring in part or all of the drainage is required for drainages to be considered potentially USACE jurisdictional waters of the U.S. when they lack one or more wetland field indicators (hydrophytic vegetation, hydric soil, or wetland hydrologic conditions).

The USACE (Federal Register, 1982), the Environmental Protection Agency (Federal Register 1985), the Shoreline Management Act and the Growth Management Act define wetlands as: *Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.* Wetlands generally include swamps, marshes, bogs, and similar areas. In addition, the Shoreline Management Act and the Growth Management Act definitions include: *Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway*.

The 1995 Washington State Legislature enacted a bill (SSB 5776) requiring the Department of Ecology to adopt a wetland delineation manual that *implements and is consistent with the 1987 manual in use on January 1, 1995 by the USACE and the U.S. Environmental Protection Agency*. This manual is intended to be used in implementing the Shoreline Management Act and other applicable state statutes. The manual is also to be used by local governments in implementing local regulations under the Growth Management Act.

The USACE and the Environmental Protection Agency issued the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* on May 30, 2007, to provide guidance based on the Supreme Court's decision regarding *Rapanos v. United States* and *Carabell v. United States* (USACE, 2007). The decision provides new standards that distinguishes between traditional navigable waters (TNWs), relatively permanent waters (RPWs), and non-relatively permanent waters (non-TNWs). Wetlands adjacent to non-TNWs are subject to CWA jurisdiction if: the water body is relatively permanent, or if a water body abuts a RPW, or if a water body, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs. The significant nexus standard will be based on evidence applicable to ecology, hydrology, and the influence of the water on the "chemical, physical, and biological integrity of downstream traditional navigable waters" (USACE, 2007). Isolated wetlands are not subject to CWA jurisdiction based on the Supreme Court's decision regarding Solid Waste Agency of Northern Cook County (SWAANC) (Guzy, 2001).

Roadside ditches are not considered waters of the U.S. when:

> Roadside ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are not considered waters of the U.S. because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters (Federal Register, 1983).

The City of Anacortes (City) biological ordinances have requirements for designating, rating, and mapping wetlands (17.70.320). The City designates wetlands as "those areas, designated in accordance with the *Washington State Department of Ecology, Wetlands Identification and Delineation Manual*, (1997; Pub. No. 96-94), that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. All areas within the City meeting the wetland designation criteria, regardless of any formal identification, not otherwise excluded under Sections 17.70.300, 17.70.340, and 17.70.520 of the general plan, are hereby designated critical areas and are subject to the applicable provisions. The City rates wetlands according to the wetland rating system found in the *Washington State Wetland Rating System for Western Washington* (Rating System) (Hruby, 2004; or as revised by Ecology).

3.0 METHODOLOGY

3.1 WETLAND DETERMINATION METHODS

Wetlands were determined in accordance with the USACE *Wetland Delineation Manual* (Environmental Laboratory, 1987), the *Washington State Department of Ecology, Wetlands Identification and Delineation Manual* (1997), and the Rating System. Wetland data sheets were completed at representative locations to determine whether suspect features qualify as jurisdictional waters of the U.S. The data sheets are included in **Attachment 1**. Wetlands were determined based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology indicators.

VEGETATION

Hydrophytic vegetation, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. Hydrophytic vegetation indicators include: prevalence of hydrophytic vegetation (majority of dominant plant species are obligate or facultative wetland plants) as listed in the *National List of Plant Species that Occur in Wetlands: Northwest Region 9* (Reed, 1988); and morphological or physiological adaptations to saturated soil conditions. Plant species wetland indicator status is a rating that indicates the probability that a particular plant species will occur in a wetland. Indicator status categories are defined as follows (Reed, 1988):

- Obligate (OBL) – almost always occurs in wetlands (greater than 99 percent probability of occurring in wetlands);
- Facultative Wetland (FACW) – usually occurs in wetlands (67 to 99 percent probability of occurrence in wetlands);
- Facultative (FAC) – equally likely to occur in wetlands or non-wetlands (34 to 66 percent of occurrence in wetlands);
- Facultative Upland (FACU) – usually occurs in non-wetlands, but occasionally occurs in wetlands (one to 33 percent of occurrence in wetlands);
- Obligate Upland (UPL) – almost never occurs in wetlands (one percent probability of occurrence in wetlands). Plant species not listed are considered upland species.

HYDRIC SOILS

Hydric soils include:

- All Histosols, except Folists; or soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups;
- Cumulic subgroups that are: (1) Somewhat poorly drained with a water table equal to 0 feet from the surface during the growing season, or (2) poorly drained or very poorly drained and have either: (a) a water table equal to 0 feet during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches, or for other soils, (b) a water table at less than or equal to 0.5 feet from the surface during the growing season if permeability is equal to or greater than 6 inches/hour in all layers within 20 inches, or (c) the water table is at less than or equal to one foot from the surface during the growing season if permeability is less than 6 inches/hour in any layer within 20 inches;
- Soils that are frequently ponded for a long or very long duration during the growing season; or
- Soils that are frequently flooded for a long or very long duration during the growing season.

Hydric soil indicators identified on the routine wetland determination data form include: hystosols, histic epipedon, sulfidic odor, aquic moisture regime, reducing conditions, gleyed or low-chroma matrix, matrix chroma less than 2 with mottles, magnesium or iron concentrations, high organic content in surface layer of soils, organic streaking in sandy soils, or listed on national/local hydric soils list.

WETLAND HYDROLOGY

Hydrology indicators identified on the routine wetland determination data form include: presence of water marks, sediment deposits, drainage patterns, drift lines, oxidized root channels less than 12 inches from the surface, and water-stained leaves.

3.2 WATERS OF THE U.S. DETERMINATION METHODS

For identification of water bodies other than wetlands that are subject to federal jurisdiction, 2 principle field characteristics were evaluated: 1) the presence of a channel; and 2) the presence of an ordinary high water mark. The ordinary high water mark is defined in 33 CFR Part 329.11, as the line on the shore established by the fluctuations of water, and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Other characteristics that were noted, where possible, include: dominant plant species within the bed and banks; hydrological connection (direct, or indirect via another tributary) to a navigable waterway; waterbody with interstate commerce use(s), or other potential USACE-jurisdictional feature; designation as ephemeral, intermittent, or perennial drainage feature; and presence of adjacent jurisdictional wetlands or other sensitive resources, such as riparian habitat. USACE regulations (33 CFR Part 328) were consulted to make a determination of whether these water bodies constitute waters of the U.S.

3.3 DATA REVIEW

Prior to the initiation of the delineation, AES reviewed the following sources of information:

- Anacortes North, WA quad;
- Color aerial photography of the study area and vicinity (AEX, 2007);
- Soil survey maps and unit descriptions (NRCS, 2010a);
- Hydric soil information (NRCS, 2010b); and
- USFWS Wetlands Online Mapper (USFWS, 2010).

3.4 DELINEATION SURVEYS

AES biologist Kelly Bayne (nee Buja), M.S. conducted the delineations within the study area on October 21 and 22, 2009 and on May 25 and 26, 2010. Field surveys consisted of walking transects in a north to south direction to map habitat types, wetlands, and waterways within the study area. Data collection points were chosen at representative locations and detailed information on vegetation, soils, and hydrology were taken for each data point (**Attachment 1**). Data points were obtained by excavating soil pits to a depth of 18 inches or until an impermeable layer was reached. The *National List of Vascular Plant Species that Occur in Wetlands, Region 9* (Reed, 1988), was used to determine the status of observed plants as wetland indicator species. Soil pits were excavated to 18 inches unless hardpan or bedrock was reached and were examined for presence of hydric soil indicators. A standard Munsell® soil color chart was used to determine soil matrix and mottle colors.

3.4.1 MAPPING

Global Positioning System (GPS) technology, a Trimble Geo XT™ receiver, was used to locate and map preliminary boundaries of waters of the U.S. during the 2009 fieldwork. The geographic coordinate system used to reference the data was Universal Transverse Mercator (UTM–Zone 10), North American Datum (NAD83) in meters.

Environmental Systems Research Institute (ESRI) shape files were generated. Each feature or complex was assessed by setting up transects perpendicular to the suspect wetland/upland edges and by observing the mandatory wetland indicators at selected points along each transect as defined by the USACE

Wetland Delineation Manual (Environmental Laboratory, 1987) and the *Washington State Department of Ecology, Wetlands Identification and Delineation Manual* (1997). Potential wetland boundaries were mapped at a level of accuracy of less than one meter. Soil pit locations were documented using a GPS to identify where the soil data were obtained. Wetland polygons were overlaid on a topographic base map and aerial photograph. The ESRI data and GIS software were used to calculate the acreages and linear feet of habitat types and wetland features.

3.5 WETLANDS RATING SYSTEM FOR WESTERN WASHINGTON

Wetlands delineated in the study area were rated using the revised Rating System. The Rating System is designed to differentiate between wetlands based on specific attributes such as rarity, sensitivity to disturbance, the functions they provide, and whether the wetland can be replaced. The Rating System is based on the Hydrogeomorphic (HGM) classification system (as opposed to the Cowardin classification system). Characteristics of the classification system consider the site's water quality, hydrological, and habitat functions. The Rating System uses a standardized form (Version 2 – Updated July 2006) to rate and score an individual wetland site. Each wetland site is then assigned a category (I through IV) based on its rating form score.

Category I Wetlands are those that:

- Represent a unique or rare wetland type;
- Are more sensitive to disturbance than most wetlands;
- are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or
- Provide a high level of functions. These include relatively undisturbed estuarine wetlands larger than one acre; natural heritage wetlands (wetlands identified by scientists of the Washington Department of Natural Resources, Natural Heritage Program as high quality, relatively undisturbed wetlands, or wetlands that support State listed threatened, endangered, or sensitive plants; bogs; mature and old-growth forested wetlands over one acres in size; wetlands in coastal lagoons; and wetlands that perform many functions very well (wetlands scoring 70 points or more on the questions related to functions).

Category II Wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. These include any estuarine wetland smaller than one acre, or those that are disturbed and larger than one acre; interdunal wetlands greater than one acre; and wetlands that perform functions well (score between 51 and 69 points on the questions related to functions).

Category III Wetlands are:

- Wetlands with a moderate level of functions (scores between 30-50 points) and
- Interdunal wetlands between 0.1 and one acre in size.

Category IV Wetlands have the lowest level of functions (scores less than 30 points) and are often heavily disturbed. These are wetlands that should be able to be replaced, and in some cases, be able to be improved.

4.0 ENVIRONMENTAL SETTING

4.1 CLIMATE

The Anacortes, Washington (#450176) monthly record climate data obtained in the vicinity of the study area documents an average maximum temperature of 58.6° Fahrenheit (F) and an average minimum temperature of 43.2°F from 1892 to 2009. The climate data recorded an average total annual precipitation of 26.64 inches from 1892 through 2009 (WRCC, 2010). The KWAANACO2 weather station located approximately 3 miles from the study area recorded a total annual precipitation of 26 inches between January and December 2009 (Weather Underground, Inc., 2010). Therefore, the average precipitation obtained for the 2009 water year is approximately 102 percent of the average total annual precipitation documented over 117 years.

4.2 SOIL TYPES

Mapped soil types in the study area were determined using the Web Soil Survey (NRCS, 2010a). Three soil types occur in the study area. The soil map is provided in **Figure 4** and descriptions are discussed below. **Table 1** identifies the soil types by series, map symbols, hydric characteristics, and estimated percentages occurring within the study area.

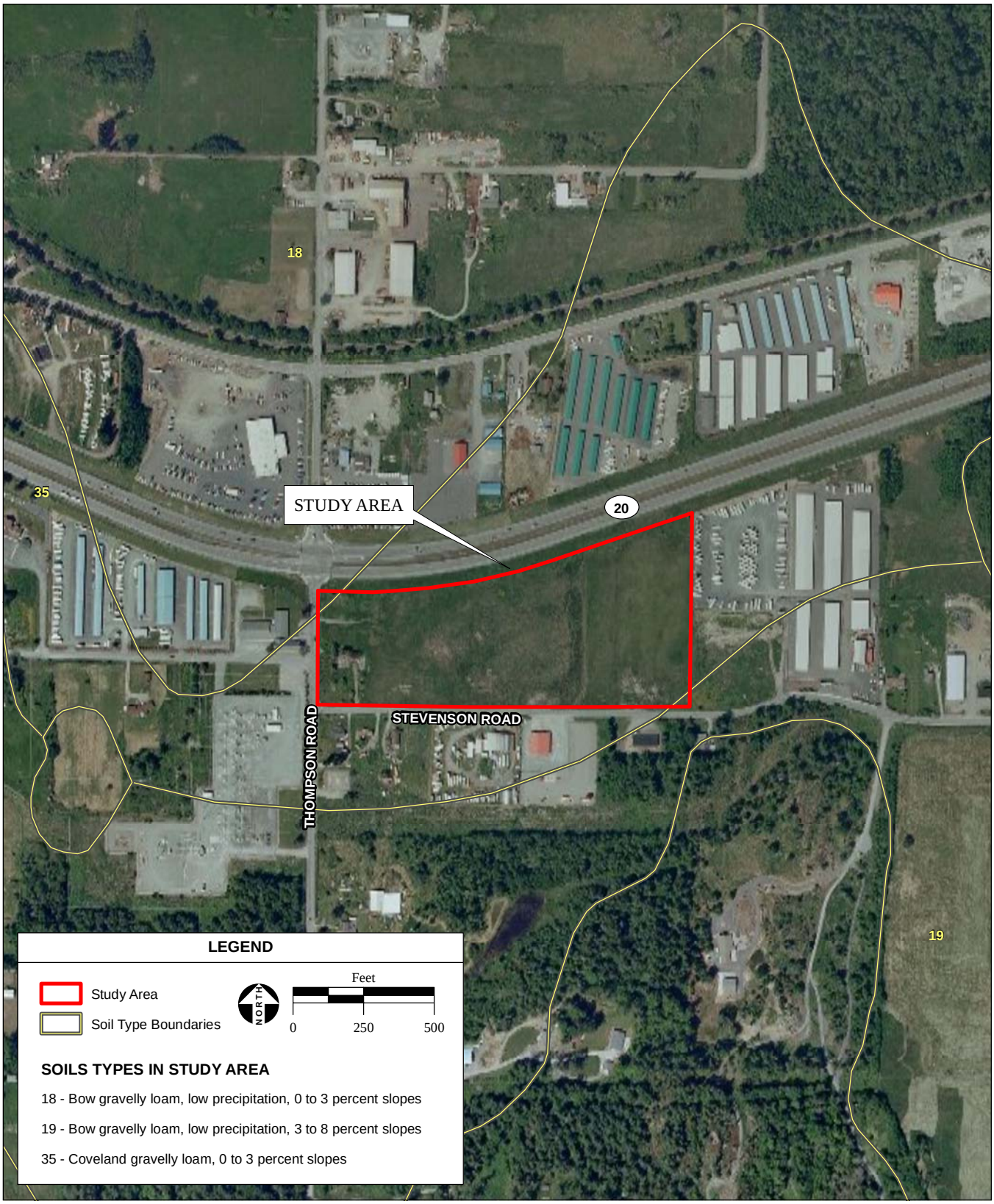
TABLE 1
MAPPED SOIL TYPES

Soil Series	Map Symbol	Hydric	% of Study Area
Bow gravelly loam, low precipitation, 0 to 3 percent slopes	18	**Yes**	2.2
Bow gravelly loam, low precipitation, 3 to 8 percent slopes	19	**Yes**	2.4
Coveland gravelly loam, 0 to 3 percent slopes	35	**Yes**	95.4
		Total	**100**

Source: NRCS, 2010a, b

Bow gravelly loam, low precipitation, 0 to 3 percent slopes (18)
This soil type is found on hillslopes and terraces derived from volcanic ash, glaciolacustrine deposits, and glacial drift parent material. Depth to water table is between 6 and 18 inches. Depth to restrictive layer is more than 80 inches. The soil type is somewhat poorly drained with a high available water capacity. The soil profile is typically gravelly loam from 0 to 8 inches, clay loam from 8 to 22 inches, and silty clay from 22 to 60 inches (NRCS, 2010a). This soil is classified as hydric (soil criteria 2A). Soil criteria 2A includes soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, or Andic, Cumulic, Pachic, or Vitrandic subgroups that are somewhat poorly drained with a water table equal to 0 feet from the surface during the growing season (NRCS, 2010b).

Bow gravelly loam, low precipitation, 3 to 8 percent slopes (19)
This soil type is found on hillslopes and terraces derived from volcanic ash, glaciolacustrine deposits, and glacial drift parent material. Depth to water table is between 6 and 18 inches. Depth to restrictive layer is more than 80 inches. The soil type is somewhat poorly drained with a high available water capacity. The soil profile is typically gravelly loam from 0 to 8 inches, clay loam from 8 to 22 inches, and silty clay from 22 to 60 inches (NRCS, 2010a). This soil is classified as hydric (soil criteria 2A) (NRCS, 2010b).



SOURCE: USDA/NRCS Soil Surveys, 1998-2009;
AEX Aerial Photograph, 5/2009; AES, 2011

Figure 4
Soils Map

Coveland gravelly loam, 0 to 3 percent slopes (35)
This soil type is found on swales derived from glaciolacustrine deposits parent material. Depth to water table is between 0 and 18 inches. Depth to restrictive layer is 10 to 20 inches to abrupt textural change. The soil type is somewhat poorly drained with a very low available water capacity. The soil profile is typically gravelly loam from 0 to 9 inches, very gravelly sandy loam from 9 to 14 inches, and silty clay from 14 to 60 inches (NRCS, 2010a). This soil is classified as hydric (soil criteria 2A) (NRCS, 2010b).

4.3 HABITAT TYPES

Habitat types in the study area include: nonnative annual grassland, riparian, snowberry (*Symphoricarpos albus*) patch, ruderal/disturbed, manmade ditch, and roadside ditch. Dominant vegetation within each habitat type is discussed below. A habitat map is illustrated in **Figure 5**. Photographs of the habitat types are illustrated in **Figures 6** and **7**.

4.3.1 NONNATIVE ANNUAL GRASSLAND

Nonnative annual grassland occurs throughout the majority of the study area (**Figure 6**: **Photograph 1**). The majority of the study area had been mowed prior to conducting the survey in November 2009 and May 2010. Dominant vegetation observed in the nonnative annual grassland includes: orchard grass (*Dactylis glomerata*), velvet grass (*Holcus lanatus*), Johnsongrass (*Sorghum halipense*), red fescue (*Festuca rubra*), and Robert geranium (*Geranium robertianum*). Ornatmental landscape trees occur within the nonnative annual grassland on the western portion of the study area (**Figure 6**: **Photograph 2**).

4.3.2 RIPARIAN

Riparian habitat occurs within the study area (**Figure 6**: **Photograph 4**; **Figure 7**: **Photographs 6** and **7**). Dominant vegetation observed in the riparian habitat includes: willow (*Salix* sp.), Oregon grape (*Berberis aquifolium*), American speedwell (*Veronica Americana*), chain speedwell (*Veronica catenata*), rose (*Rosa* sp.), and trailing blackberry (*Rubus ursinus*).

4.3.3 SNOWBERRY PATCH

A snowberry patch occurs within the southeastern portion of the study area (**Figure 7**: **Photograph 8**). Dominant vegetation observed in the vicinity of the snowberry patch includes: snowberry, trailing blackberry, and red huckleberry (*Vaccinium parviflorum*).

4.3.4 MANMADE DRAINAGE DITCH

One manmade drainage ditch (DCH 1) occurs within the study area (**Figure 7**: **Photographs 9** and **10**). Dominant vegetation observed in the vicinity of the manmade drainage ditch includes: chain speedwell, buttercup (*Ranunculus occidentalis*), miner's lettuce (*Claytonia perfoliata*), common sheep sorrel (*Rumex acetocella*), and monkeyflower (*Mimulus guttatus*).

SOURCE: AEX Aerial Photograph, 9/15/2007; AES, 2011

Figure 5
Habitat Types and Delineation of Potential Waters of the U.S.

PHOTO 1: View eastward of the nonnative annual grassland from the southwestern portion of the study area.

PHOTO 2: View northwestward of the ruderal/disturbed areas and the ornamental landscape trees within the native annual grasss-land of the western portion of the study area.

PHOTO 3: View southward of ruderal/disturbed areas from the western portion of the study area.

PHOTO 4: View northwestward of the riparian vegetation from the western portion of the study area.

PHOTO 5: View of a roadside drainage ditch (DCH 3) from the western portion of the study area.

SOURCE: AES, 2011

Figure 6
Site Photographs

PHOTO 6: View southward of a roadside ditch (DCH 3) and riparian vegetation from the northwestern portion of the study area.

PHOTO 7: View eastward of riparian vegetation surrounding a roadside ditch (DCH 2) from the southern boundary of the study area.

PHOTO 8: View northward of snowberry patch from the southeastern portion of the study area.

PHOTO 9: View westward of manmade drainage ditch (DCH 1) from northeast side of study area.

PHOTO 10: View southward of manmade drainage ditch (DCH 1) that flows south to north through the eastern portion of the study area.

SOURCE: AES, 2011

Figure 7
Site Photographs

4.3.5 ROADSIDE DITCH

Three roadside ditches (DCHs 2, 3, and 4) occur within the study area (**Figure 6**: **Photograph 5**; **Figure 7**: **Photographs 6** and **7**). Dominant vegetation observed in the vicinity of the roadside ditches includes: trailing blackberry, common sheep sorrel, velvet grass, Johnsongrass, and teasle (*Dipsacus* sp.).

4.3.6 RUDERAL/DISTURBED

Ruderal/disturbed areas occur throughout the study area (**Figure 6**: **Photographs 2** and **3**). These areas include dirt roads, graded driveways, remnant housing pads, and piles of metal and wood.

4.4 HYDROLOGY

4.4.1 REGIONAL AND LOCAL WATERSHED

The study area receives water from runoff from SR-20 through a roadside ditch (DCH 4) that flows south into the study area, and drains to the manmade drainage ditch (DCH 1). DCH 1 receives runoff from a roadside ditch (DCH 2) and from Stevenson Road through sheet flow. DCH 1 flows northward through the study area, then eastward until it exits the northeastern boundary of the study area. DCH 1 continues northward outside the eastern boundary of the study area, continues northeastward, drains northward through a culvert beneath SR-20 continues, and eventually drains to Padilla Bay. DCH 3 receives runoff from Thompson Road, drains northward, and exits the northwestern boundary of the study area. DCH 3 terminates where it loses its defined bed and banks just north of the northwestern boundary of the study area.

4.4.2 USFWS WETLANDS ONLINE MAPPER

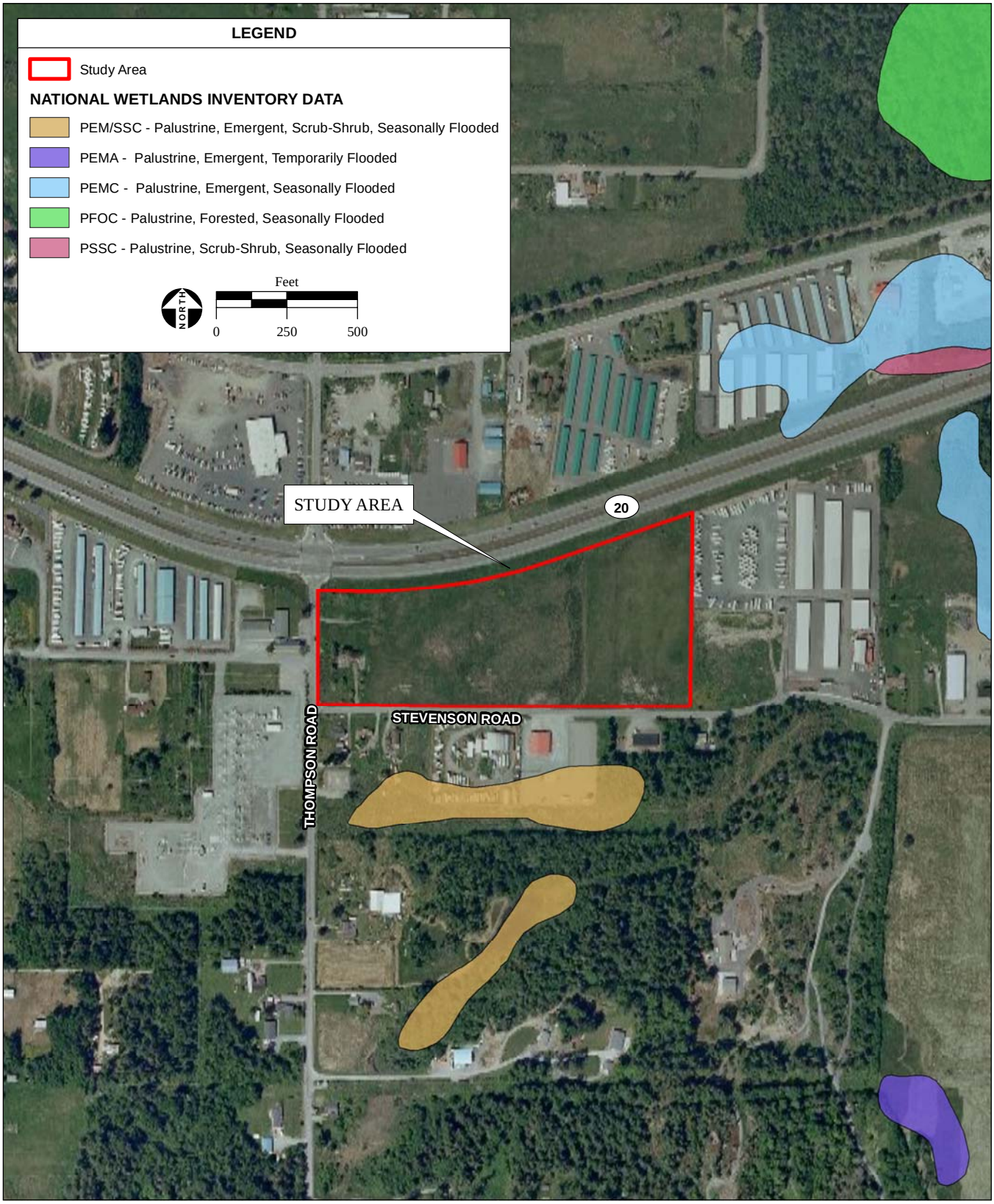
The USFWS Wetlands Online Mapper (2007) does not identify any wetland features within the study area. The USFWS Wetlands Online Mapper is shown in **Figure 8**.

5.0 DELINEATION RESULTS

Potential wetlands and other waters of the U.S. in the study area include one manmade drainage ditch and 3 roadside ditches. **Figure 5** illustrates the waterways mapped during the delineation of the study area.

Manmade Drainage Ditch

A manmade drainage ditch (DCH 1) flows south to north through the eastern portion of the study area (**Figure 7**: **Photographs 9** and **10**). DCH 1 was constructed to transport runoff from Stevenson Road just outside the south side of the study area. DCH 1 exits the northeast side of the study area, continues northward, is culverted beneath SR-20, continues northward until eventually draining to Padilla Bay. Channel features observed along the bed and banks of the manmade drainage ditch include: defined bed and banks and distinct drainage patterns. Vegetation consists of 80 percent obligate, facultative wet, and/or facultative species and visual observation of plant species growing in areas of prolonged inundation/saturation. Wetland hydrology consists of oxidized roots, drainage patterns, and inundation. Hydric soil consists of iron concentrations and is listed on the NRCS hydric soils list (2010b).



SOURCE: USFWS, 1981; AEX Aerial Photograph, 5/2009; AES, 2011

Figure 8

National Wetlands Inventory - Study Area

Roadside Ditch

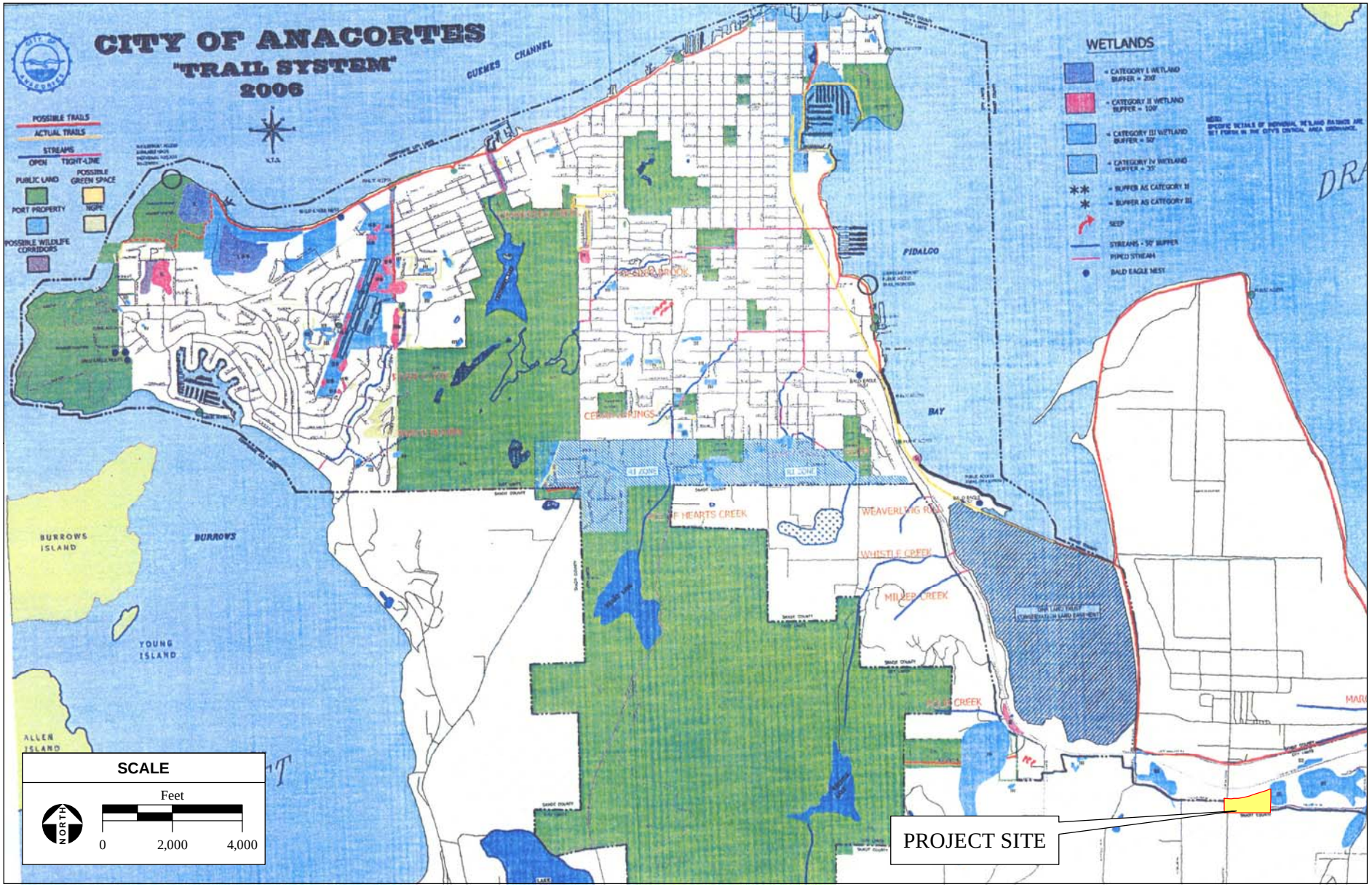
Three roadside ditches occur within the study area (**Figure 6**: **Photograph 5; Figure 7**: **Photographs 6** and **7**). Channel features observed along the bed and banks of the roadside ditches include: defined bed and banks and distinct drainage patterns. Vegetation consists of 96 percent obligate, facultative wet, and/or facultative species. Wetland hydrology consists of presence of water in the soil pits, saturated soil, and distinct drainage patterns. Hydric soil consists of iron concentrations and is listed on the NRCS hydric soils list (2010b).

6.0 WETLAND RATING SYSTEM RESULTS

There are no wetlands within the project site. Therefore, the Rating System is not applicable to the study area. The City has mapped a wetland feature within the study area (City of Anacortes, 2006) (**Figure 9**). The City likely mapped the feature based on review of an aerial photograph. However, upon ground-truthing of the study area during the October 21 and 22, 2009 delineations, the AES biologist determined that the feature mapped by the City is actually a snowberry patch (**Figure 5**) (**Figure 7**: **Photograph 9**). The snowberry patch is a terrestrial habitat type that does not contain hydric indicators.

7.0 CONCLUSION

In accordance with the Shoreline Management Act and the Growth Management Act definitions, *Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990*. The roadside ditches and the manmade drainage ditch were dug in uplands. Although there is a hydrologic connection to Padilla Bay, a waters of the U.S., the nexus is not significant because these features are not of substantial biological, economic, water quality, or hydrologic importance to Padilla Bay. Therefore, these features are not likely considered jurisdictional waters of the U.S., and are not likely subject to Section 404 of the Clean Water Act. The results of this delineation are considered preliminary until the USACE and/or the Department of Ecology verify the findings.



SOURCE: City of Anacortes, 2006; AES, 2011

Figure 9
Trail System

8.0 REFERENCES

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DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thampson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 1

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Distichlis spicata	H	80	FACW				
Bromus hordeaceus	H	2	UPL				
Rumex acetosella	H	1	FACU				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 80/83 = 96%

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	____	Physiological/reproductive adaptations	____
Morphological adaptations	____	Wetland plant database	____
Technical Literature	____	Personal knowledge of regional plant communities	____
		Other (explain)	

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? (yes) 5/25/10 no 10/21/09

Based on: _____ soil temp (record temp _____)
_____ other (explain)

Water Marks: yes no on _____		Sediment Deposits: yes no	
Drift Lines: yes no		Drainage Patterns: (yes) no	
Dept. of inundation: ____ inches	Oxidized Root (live roots) Channels <12 in. yes no	Local Soil Survey: yes no	
Depth to free water in pit: 10 inches	FAC Neutral: yes no	Water-stained Leaves yes no	
Depth to saturated soil: 1 inches			
Check all that apply & explain below: Stream, Lake or gage data: ____ Aerial photographs: ____ Other: ____	Other (explain):		

Wetland hydrology present? (yes) no
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase): Cleveland gravelly loam, 0 to 3% slopes

Drainage Class: somewhat poorly drained

Field observations confirm mapped type? (Yes) No

Taxonomy (subgroup): _____

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-12		10YR 3/2			loam	
12-13	3	10YR 5/8	2.5YR 5/3	20% abundant	clay	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ✓ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present?	(yes)	no			
Hydric soils present?	(yes)	no	Is the sampling point	(yes)	no
Wetland hydrology present?	(yes)	no	within a ~~wetland~~? roadside ditch		

Rationale/Remarks:

This feature is a manmade roadside ditch, 1' wide, 3' deep

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 2

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Aira caryophyllea	H	15	UPL				
Elymus mollis	H	90	UPL				
Taeniatherum caput-medusae	H	5	UPL				
Bromus hordeaceus	H	5	UPL				
Bromus tectorum	H	5	UPL				
Plantago lanceolata	H	5	FACU				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 0

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	____	Physiological/reproductive adaptations	____
Morphological adaptations	____	Wetland plant database	____
Technical Literature		Personal knowledge of regional plant communities	____
		Other (explain)	

Hydrophytic vegetation present? yes (no)
Rationale for decision/Remarks:

upland

HYDROLOGY

Is it the growing season? (yes) 5/25/10 no 10/21/09

Based on: _____ soil temp (record temp _____)
_____ other (explain)

Dept. of inundation:	____ inches	Water Marks: yes no on	Sediment Deposits: yes no
		Drift Lines: yes no	Drainage Patterns: yes no
Depth to free water in pit:	____ inches	Oxidized Root (live roots) Channels <12 in. yes no	Local Soil Survey: yes no
Depth to saturated soil:	____ inches	FAC Neutral: yes no	Water-stained Leaves yes no
Check all that apply & explain below: Stream, Lake or gage data: ____ Aerial photographs: ____ Other: ____		Other (explain):	

Wetland hydrology present? yes (no)
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Cove land gravelly loam, 0 to 3% slopes Drainage Class Somewhat poorly drained

Taxonomy (subgroup) _____ Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-2		7.5YR 3/4			loam	
2-6		7.5YR 3/4		cobbles		

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? **yes** **no**

Rationale for decision/Remarks:

impenetrible after 6"

Wetland Determination (circle)

Hydrophytic vegetation present?	yes	no		
Hydric soils present?	yes	no	Is the sampling point within a wetland?	yes no
Wetland hydrology present?	yes	no		

Rationale/Remarks:

NOTES:

DATA FORM 1 ***(Revised)***
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 3

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Dactylis glomerata	H	70	FACU				
Plantago lanceolata	H	15	FACU				
Trifolium sp.	H	5	?				
Aira caryophyllea	H	5	UPL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 0

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	____	Physiological/reproductive adaptations	____
Morphological adaptations	____	Wetland plant database	____
Technical Literature	____	Personal knowledge of regional plant communities	____
		Other (explain)	____

Hydrophytic vegetation present? yes (no)
Rationale for decision/Remarks:

upland

HYDROLOGY

Is it the growing season? yes no

Based on: _____ soil temp (record temp _____)
_____ other (explain)

	Water Marks: yes no on _____	Sediment Deposits: yes no
	Drift Lines: yes no	Drainage Patterns: yes no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes no	Local Soil Survey: yes no
Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	FAC Neutral: yes no	Water-stained Leaves yes no

Check all that apply & explain below:
Stream, Lake or gage data: _____
Aerial photographs: _____ Other:

Other (explain):

Wetland hydrology present? yes (no)
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Coxville gravelly loam 0-3% slopes Drainage Class somewhat poorly drained

Taxonomy (subgroup)

Field observations confirm mapped type? (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-2		7.5YR 3/4			loam	
2-10		7.5YR 4/4			loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present?	yes	(no)		
Hydric soils present?	(yes)	no	Is the sampling point within a wetland?	yes (no)
Wetland hydrology present?	yes	(no)		

Rationale/Remarks:

Upland

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 4

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Plantago lanceolata	H	5	FACU				
Aira caryophyllea	H	3	UPL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 0

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	____	Physiological/reproductive adaptations	____
Morphological adaptations	____	Wetland plant database	____
Technical Literature	____	Personal knowledge of regional plant communities	____
		Other (explain)	____

Hydrophytic vegetation present? yes no
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes no Based on: _____ soil temp (record temp _____) _____ other (explain)	Water Marks: yes no on _____ Drift Lines: yes no	Sediment Deposits: yes no Drainage Patterns: yes no
Dept. of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	Oxidized Root (live roots) Channels <12 in. yes no FAC Neutral: yes no	Local Soil Survey: yes no Water-stained Leaves yes no
Check all that apply & explain below: Stream, Lake or gage data: _____ Aerial photographs: Other:	Other (explain):	

Wetland hydrology present? yes (no)
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Coveland gravelly loam, 0-3% slopes Drainage Class somewhat poorly drained

Taxonomy (subgroup) Field observations confirm mapped type? (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-12		7.5YR3/4			loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present?	yes	no			
Hydric soils present?	(yes)	no	Is the sampling point within a wetland?	yes	(no)
Wetland hydrology present?	yes	(no)			

Rationale/Remarks:

Upland

NOTES:

DATA FORM 1 ***(Revised)***
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 5

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Dactylis glomerata	H	70	FACU				
Achillea millefolium	H	3	UPL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 0

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	____	Physiological/reproductive adaptations	____
Morphological adaptations	____	Wetland plant database	____
Technical Literature		Personal knowledge of regional plant communities	____
		Other (explain)	

Hydrophytic vegetation present? yes (no)

Rationale for decision/Remarks:

upland

HYDROLOGY

Is it the growing season? yes no Based on: _____ soil temp (record temp _____) _____ other (explain)	Water Marks: yes no on _____ Drift Lines: yes no	Sediment Deposits: yes no Drainage Patterns: yes no
Dept. of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	Oxidized Root (live roots) Channels <12 in. yes no FAC Neutral: yes no	Local Soil Survey: yes no Water-stained Leaves yes no
Check all that apply & explain below: Stream, Lake or gage data: _____ Aerial photographs: _____ Other:	Other (explain):	

Wetland hydrology present? yes (no)

Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Cove land gravelly loam, 0-3% slopes Drainage Class somewhat poorly drained

Taxonomy (subgroup) Field observations confirm mapped type? (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-8		7.5YR 3/2	7.5YR 4/6	35 prominent	loam	
			7.5YR 3/1	3		

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

large boulders at 8" deep

Wetland Determination (circle)

Hydrophytic vegetation present?	yes	(no)			
Hydric soils present?	(yes)	no	Is the sampling point within a wetland?	yes	(no)
Wetland hydrology present?	yes	(no)			

Rationale/Remarks:

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buja	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 8

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Ranunculus occidentalis	herb	10	FAC				
Veronica catenata	H	5	OBL				
Claytonia perfoliata	H	3	FAC				
Mimulus guttatus	H	2	OBL				
Rumex acetosella	H	2	FACU				
-							

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 80%

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	√	Physiological/reproductive adaptations	____
Morphological adaptations	____	Wetland plant database	____
Technical Literature		Personal knowledge of regional plant communities	____
		Other (explain)	

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? (yes) for 5/25/2010 (no) for 10/21/2009

Based on: ____ soil temp (record temp _____)
winter other (explain)

Dept. of inundation: 24 inches		Water Marks: yes no on ____	Sediment Deposits: yes no
		Drift Lines: yes no	Drainage Patterns: (yes) no
Depth to free water in pit: ____ inches		Oxidized Root (live roots) Channels <12 in (yes) no	Local Soil Survey: yes no
Depth to saturated soil: ____ inches		FAC Neutral: yes no	Water-stained Leaves yes no

Check all that apply & explain below:
Stream, Lake or gage data: ____
Aerial photographs: ____ Other: ____

Other (explain):

Wetland hydrology present? (yes) **no**
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Loveland gravelly loam, 0 to 3% slopes Drainage Class somewhat poorly drained

Taxonomy (subgroup) _____ Field observations confirm mapped type? (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-12		10YR 3/2	none		loam	
12-18		2.5YR 5/3	10YR 5/8	abundant 20%	clay	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ✓ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present? (yes) no

Hydric soils present? (yes) no

Wetland hydrology present? (yes) no

Is the sampling point within a ~~wetland~~? drainage (yes) no

Rationale/Remarks:

This feature is a manmade drainage, 1' wide, 3 deep

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly distnrbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 6

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Rosa rugophyllea		5	UPL				
Distychlis spicata		5	FACW				
Rosa sp.		3	FAC U				
Bromus hordeaceus	A	5	UPL				
Agrostis tenuis		20	UPL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 5/38 = 13

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	____	Physiological/reproductive adaptations	____
		Wetland plant database	____
Morphological adaptations	____	Personal knowledge of regional plant communities	____
Technical Literature		Other (explain)	

Hydrophytic vegetation present? yes (no)
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes no Based on: _____ soil temp (record temp _____) _____ other (explain)	Water Marks: yes no on _____ Drift Lines: yes no	Sediment Deposits: yes no Drainage Patterns: yes no
Dept. of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	Oxidized Root (live roots) Channels <12 in. yes no FAC Neutral: yes no	Local Soil Survey: yes no Water-stained Leaves yes no
Check all that apply & explain below: Stream, Lake or gage data: _____ Aerial photographs: _____ Other:	Other (explain):	

Wetland hydrology present? yes (no)
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Loveland gravelly loam, 0 to 3% slopes

Drainage Class somewhat poorly drained

Taxonomy (subgroup) _____

Field observations confirm mapped type? (Yes) No

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-12		10YR 2/2			clay loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? yes no

Rationale for decision/Remarks:

impenetrable beyond 12"

Wetland Determination (circle)

Hydrophytic vegetation present?	yes	(no)		
Hydric soils present?	(yes)	no	Is the sampling point within a wetland?	yes (no)
Wetland hydrology present?	yes	(no)		

Rationale/Remarks:

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 7

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Symphoricarpus albus	S	80	FACU				
Rubus discolor	V	20	FACU				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 0

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	____	Physiological/reproductive adaptations	____
Morphological adaptations	____	Wetland plant database	____
Technical Literature	____	Personal knowledge of regional plant communities	____
		Other (explain)	____

Hydrophytic vegetation present? yes (no)
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes no Based on: ____ soil temp (record temp ____) ____ other (explain)	Water Marks: yes no on Drift Lines: yes no	Sediment Deposits: yes no Drainage Patterns: yes no
Dept. of inundation: ____ inches Depth to free water in pit: ____ inches Depth to saturated soil: ____ inches	Oxidized Root (live roots) Channels <12 in. yes no FAC Neutral: yes no	Local Soil Survey: yes no Water-stained Leaves yes no
Check all that apply & explain below: Stream, Lake or gage data: ____ Aerial photographs: ____ Other:	Other (explain):	

Wetland hydrology present? yes **(no)**
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Coveland gravelly loam, 0-3% slopes Drainage Class somewhat poorly drained

Taxonomy (subgroup) Field observations confirm mapped type? (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)

Hydric Soil Indicators: (check all that apply)

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic Moisture Regime
_____ Reducing Conditions
_____ Gleyed or Low-Chroma (=1) matrix
_____ Matrix chroma ≤ 2 with mottles
_____ Mg or Fe Concretions
_____ High Organic Content in Surface Layer of Sandy Soils
_____ Organic Streaking in Sandy Soils
✓ Listed on National/Local Hydric Soils List
_____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present? yes (no)
Hydric soils present? (yes) no
Wetland hydrology present? yes (no)

Is the sampling point within a wetland? yes (no)

Rationale/Remarks:

this is a huge snowberry patch. It is mapped as a wetland by the City of Anacortes. This is an upland.

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 8

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Juncus balticus	H	5	OBL				
Bromus hordeaceus	H	15	UPL				
Elymus mollis	H	20	UPL				
Dactylis glomerata		30	UPL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 5/70 = 7%

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation		Physiological/reproductive adaptations	
		Wetland plant database	
Morphological adaptations		Personal knowledge of regional plant communities	
Technical Literature		Other (explain)	

Hydrophytic vegetation present? yes (no)
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes no Based on: _____ soil temp (record temp _____) _____ other (explain)	Water Marks: yes no on _____ Drift Lines: yes no	Sediment Deposits: yes no Drainage Patterns: yes no
Dept. of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	Oxidized Root (live roots) Channels <12 in. yes no FAC Neutral: yes no	Local Soil Survey: yes no Water-stained Leaves yes no
Check all that apply & explain below: Stream, Lake or gage data: _____ Aerial photographs: _____ Other:	Other (explain):	

Wetland hydrology present? yes (no)
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) coveland gravelly loam, 0 to 3% slopes Drainage Class somewhat poorly drained

Taxonomy (subgroup)

Field observations confirm mapped type? (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4		7.5YR 3/1			loam, cobbles	
4+2		7.5YR 4/1	7.5YR 5/8	10 prominent		

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ✓ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

impenetrable bedrock 12"

Wetland Determination (circle)

Hydrophytic vegetation present?	yes	(no)		
Hydric soils present?	(yes)	no	Is the sampling point within a wetland?	yes (no)
Wetland hydrology present?	yes	(no)		

Rationale/Remarks:

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Thompson Site Applicant/owner: Samish Indian Nation Investigator(s): Kelly Buta	Date: 10/21/2009 5/25/2010 County: Skagit State: WA S/T/R:
Do Normal Circumstances exist on the site? (yes) no Is the site significantly disturbed (atypical situation)? yes (no) Is the area a potential Problem Area? yes (no) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: 9

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Bromus hordaceus	H	5	UPL				
Rubus discolor	H	10	FACU				
Cirsium vulgare	H	10	FACU				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 70

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation	____	Physiological/reproductive adaptations	____
Morphological adaptations	____	Wetland plant database	____
Technical Literature	____	Personal knowledge of regional plant communities	____
		Other (explain)	

Hydrophytic vegetation present? yes no
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? (yes) no 5/25/10 10/21/09

Based on: ____ soil temp (record temp ____) ____ other (explain)	Water Marks: yes no on ____ Drift Lines: yes no	Sediment Deposits: yes no Drainage Patterns: yes no
Dept. of inundation: ____ inches Depth to free water in pit: ____ inches Depth to saturated soil: ____ inches	Oxidized Root (live roots) Channels <12 in. yes no FAC Neutral: yes no	Local Soil Survey: yes no Water-stained Leaves yes no
Check all that apply & explain below: Stream, Lake or gage data: ____ Aerial photographs: ____ Other: ____	Other (explain):	

Wetland hydrology present? yes (no)
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Copeland gravelly loam, 0-2% slopes Drainage Class somewhat poorly drained

Taxonomy (subgroup) _____ Field observations confirm mapped type? (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-12		10YR 3/2			loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma ≤ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ✓ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present?	yes	(no)		
Hydric soils present?	(yes)	no	Is the sampling point within a wetland?	yes (no)
Wetland hydrology present?	yes	(no)		

Rationale/Remarks:

NOTES:

APPENDIX K

Memorandum of Understanding – April 2003

MEMORANDUM OF UNDERSTANDING BETWEEN THE SAMISH INDIAN NATION AND THE CITY OF ANACORTES

PARTIES

The Samish Indian Nation (hereinafter referred to as the "Tribe") is a federally recognized Indian tribe and party to the 1855 Treaty of Point Elliott that promulgated articles of agreement between the United States and the Tribe. The Tribe is recognized as eligible by the Secretary of the Interior for the special programs and a service provided by the United States to Indians because of their status as Indians, and is recognized as possessing powers of self-government. The Tribe is a sovereign government whose members are descendants of indigenous peoples who have resided in the Puget Sound region of Washington since time immemorial. The Tribe has a vital interest in, and responsibility for, the planning and protection of the public health, wellness, safety, education, housing, economic and social welfare and cultural and resource management needs and interests of their members.

The City of Anacortes (hereinafter referred to as "City") is a political subdivision of the State of Washington. The City has a vital interest in, and responsibility for, the planning and protection of the public health, wellness, safety, education, housing, economic and social welfare and cultural and resource management needs and interests of its residents and businesses.

The Tribe and the City ("The Parties"), recognize the contributions, both unique to and shared by the Parties, that each make to a broad cultural, economic, and historical heritage. Better communication and more systematic opportunities to work and celebrate together are understood by both Parties to further basic goals of a regional community such as promoting respect for different cultures, linking people to their heritage, fostering a sense of place, deepening community pride, encouraging civility, fostering empathy, and offering increased hope for the future.

The Parties acknowledge that certain actions on the part of either the City or the Tribe have the potential to affect aquatic habitats, fisheries, cultural resources, security, environmental resources, or economic well-being of the Parties.

The Parties recognize that the Tribe has a vital economic, cultural, and/or spiritual interest that may be affected by City activities. Further, the City's own economic and cultural interests may be influenced by activities of the Tribe.

The Parties acknowledge that success in achieving their respective goals, responsibilities, and interests can be significantly affected by the actions of the other, and it is therefore in the interests of both Parties to establish a process that facilitates cooperation between the Parties, and provides methods for better communication, continued education, and resolution of various issues.

The Parties recognize that implementation of this MOU may require educational efforts to promote understanding of the government-to-government relationship within their respective governments and with the public.

GUIDING PRINCIPLES

This memorandum of understanding (hereinafter referred to as "MOU") dated April 12, 2003, is executed between the Samish Indian Nation and the City of Anacortes in order to better achieve mutual goals through an improved relationship between sovereign Tribal government and City government

The Parties to this MOU recognize and respect the sovereignty and legal status of one another. The Parties further recognize that each has and reserves all rights, powers and remedies now or hereafter existing at law, in equity, or by statute, Treaty, or otherwise.

This MOU provides a framework that the signatory Parties agree to use to achieve the purpose of applicable laws and regulations.

This MOU does not diminish, increase, or otherwise alter the rights and entitlements of each party, and nothing herein is intended to confer jurisdiction on the City over the Tribe.

This MOU is a testament to the commitment by the Parties to strengthen their government-to-government relationship. This relationship respects the sovereign status of the Tribe and of the City, enhances and improves communications between them, and seeks to facilitate the resolution of issues.

This MOU provides a foundation for subsequent agreements between the governments of a more specific nature that outline specific tasks to address or resolve specific issues; such as,

- Road Construction and Maintenance;
- Bridge Construction and Maintenance;
- Law Enforcement and Emergency Response;
- New Business Development and Recruitment;
- Environmental Regulatory Programs and Funding;
- Archeological Protections – Attachment A;
- Fire Protection and Emergency Medical Services.

PREAMBLE

WHEREAS, the Tribe has purchased lands and properties within the jurisdiction of the City and plans to purchase additional lands (the "Tribal Property"); and

WHEREAS, the Tribe is a sovereign nation and federally restored Indian tribe and has certain legal rights to govern the lands which it owns and controls; and

WHEREAS, the Tribe and the City desire to enter into this Agreement to establish how the Tribe and the City will cooperate in connection with regulation, management, and governmental administration of the Tribal Property; and

WHEREAS, part of the Tribe's plans for the Tribal Property includes the following:

- construction, ownership, leasing and management of low income and/or subsidized housing for Tribal members and their families ("Housing Sites"); and
- Administrative Offices for the Tribe; and
- Tribal Preschool Building; and
- Title VI Elders Program.

WHEREAS, construction of the Housing Sites and other projects may be undertaken using funds provided under the federal block grant program established under Title I of the Native American Housing and Self-Determination Act of 1996, as amended (the "Block Grant Program"), and the Tribe may only use funds obtained pursuant to the Block Grant Program for rental or lease-purchase dwelling units that are owned by the Tribe if (i) such units are exempted from real and personal property taxation and (ii) the City and the Tribe have entered into this Agreement; and

WHEREAS, the Tribe and the City deem it to be in their mutual best interest to reach an understanding and agreement as to the taxation and regulation of the Tribe's activities on Tribal Property and the provision of Public Services (as defined below) by the City to facilities and persons on the Tribal Property,

WHEREAS, nothing in this agreement affects the rights of the parties and nothing herein confers any jurisdiction on the City over the Tribe.

WITNESSETH:

In consideration of the mutual covenants hereinafter set forth, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereto agree as follows:

1. Definitions. Whenever used in this MOU:

   (a) "Tribe" shall have the meaning set forth in the Preamble of this Agreement.

   (b) "Tribal Property" is defined as property owned by the Tribe and shall include at least those properties set forth on Exhibit 1 to this Agreement (Schedule of Tribal Properties). Exhibit 1 may be amended from time to time by further agreement of all Parties, but failure to amend Exhibit 1 to add a property does not exclude that property from being treated as Tribal Property if the property otherwise qualifies as such.

   (c) "Public Services" shall mean police protection services; fire protection services; paramedic and ambulance services; sewer services; water services; publicly-funded sidewalk construction and maintenance services; road construction and maintenance services; drainage maintenance and control services; emergency services; code enforcement services; and similar services, benefits and duties to the extent provided by the City of Anacortes.

   (d) "Housing Sites" shall have the meaning set forth in the Preamble to this Agreement, and shall include at least those properties set forth on Exhibit 2 to this Agreement (Schedule of Housing Site Properties). Exhibit 2 may be amended from time to time by further agreement of all Parties, but failure to amend Exhibit 2 to add a property does not exclude that property from being treated as a Housing Sites if the property otherwise qualifies as such.

   (e) "Shelter Rent" shall mean the total of all charges to a residential Housing Unit for rents.

   (f) "Taxing Body" shall mean the State of Washington, County of Skagit, City of Anacortes, or any non-tribal political subdivision or governmental unit in which any Tribal Properties are situated and which has authority to assess or levy real or personal property taxes, or to certify such taxes to a taxing body or a public officer to be levied for its use and benefit, with respect to the Tribal Property.

2. Exemption from Taxation. The City of Anacortes hereby exempts all the Tribal Property from all real and personal property taxes and special assessments levied or imposed by the City unless separately agreed to by the parties.

   The City also hereby exempts from all real and personal property taxes levied or imposed by the City all Housing Sites purchased, constructed, or improved using funds provided under the Block Grant Program.

3. Payment in Lieu of Taxes for Housing Sites. With respect to Housing Sites, the Tribe agrees to make payments in lieu of taxes (hereinafter referred to as "PILOT") to the City for the cost of providing Public Services to the Housing Sites at a rate of $150 per unit

per Housing Site per year or the maximum payable under Title 1, § 102 (d) (2), United States Code, whichever is the greater. Such payments shall be made at the time when real or personal property taxes would have been due to the City. Upon failure of the Tribe to make any PILOT, the City shall be entitled to all remedies available at law, including an action for breach of this Agreement, except that no lien against any Housing Site or other real property assets of the Tribe shall attach. Those identified Housing Sites shall remain exempt from taxation as long as title is vested with the Samish Indian Nation or a tribal agency or entity. Once the Tribe does transfer title, then the Housing Site is no longer covered by the terms of this agreement.

4. Payment in Lieu of Taxes for Tribal Properties. With respect to the Tribal Property, the Tribe agrees to make payments in lieu of taxes (hereinafter referred to as "PILOT") to compensate the City for the cost of providing Public Services to specific Tribal Properties, as follows:

   (a) The Samish Administrative Offices located at 2918 Commercial Avenue, Anacortes, WA 98221, a yearly payment of $982.78 in 2003, increasing annually thereafter by the Seattle CPI U.

   (b) The Samish Longhouse located at 1618 D Street, Anacortes, WA 98221, a payment of $804.16 in 2003, increasing annually thereafter by the Seattle CPI U.

   Such payments shall be made at the time when real or personal property taxes would have been due to the Taxing Bodies. Upon failure of the Tribe to make any PILOT, the City shall be entitled to all remedies available at law, including an action for breach of this Agreement, except that no lien against any real property assets of the Tribe shall attach.

5. Provision of Public Services. With respect to all Tribal Properties and Housing Sites, the City shall furnish or cause to be furnished, when within its mandate to do so, Public Services of the same character and kind, under the same terms, conditions, and payment terms, and to the same extent as provided to other dwellings, buildings, residents and inhabitants within the jurisdiction of the City.

6. Compliance with Laws, Standards and Requirements for Housing Sites. The Tribe agrees to meet or exceed the substantive standards of City laws and requirements for the construction, use and maintenance of the Housing Sites.

7. Compliance with Laws, Standards and Requirements for Tribal Properties. With respect to Tribal Properties, the City recognizes and agrees that the Tribe shall exercise its sovereign powers to regulate and manage such Tribal Properties, it being understood that the Tribe intends to adopt and enforce all ordinances, standards, and requirements of the City until such time that the Tribe does adopt and enforce standards of environmental protection, building code standards, fire code standards, safety standards, etc., that are designed to provide protection and regulation of its Tribal members and others affected by its sovereign governmental authority and to meet or exceed City standards. Accordingly, the City will not seek to enforce its statutes, ordinances, standards and requirements over Tribal Property and the City agrees that it has no jurisdiction or enforcement authority over the Tribe.

8. Police and Enforcement Authorities. The Tribe and the City agree that the Housing Sites and the inhabitants thereof will be and remain subject to the civil and criminal law enforcement powers and jurisdiction of the City.

With respect to the Tribal Property, the Tribe shall exercise its powers of civil and criminal enforcement, subject to Cross-Deputization Agreements with appropriate cooperating enforcement authorities, upon entering into a law enforcement and emergency response agreement with the City.

9. Miscellaneous.

(a) Modification. This Agreement may only be modified by a writing signed by the party against whom such modifications are sought to be enforced.

(b) Term. The term of this Agreement shall commence upon its execution, and shall continue in effect so long as the Tribe owns Tribe Properties within the jurisdiction of the City, provided that the term shall not exceed 20 years.

(c) Situs of the Contract; Governing Law. Each Party reserves any and all rights it may otherwise have to enforce its rights or seek resolution of the dispute under applicable law.

(d) Notice. Any notice required to be given pursuant to this Agreement shall be delivered to the appropriate party by certified mail return receipt requested, or by overnight mail, or courier service, to the following addresses:

If to the Tribe:
Samish Indian Nation
2918 Commercial Avenue
Anacortes, WA 98221

Attn: Chairman, Tribal Council

If to the City:
Mayor
City of Anacortes
P.O. Box 547 (6th and "Q")
Anacortes, WA 98221

(e) Further Actions. Each party agrees to execute all documents and to take all actions reasonably necessary to comply with the provisions of this Agreement and its intent.

(f) Waivers. No failure or delay by a party to insist upon the strict performance of any covenant, agreement, term or condition of this Agreement, or to exercise any right or remedy upon the breach thereof, shall constitute a waiver of any such breach or any subsequent breach of such covenant, agreement, term or condition. No covenant, agreement, term, or condition of this Agreement and no breach thereof shall be waived, altered or modified except by written instrument.

(g) Captions. The captions for each section and subsection are intended for convenience only.

(h) Severability. If any provision, or any portion of any provision, of this Agreement is found to be invalid or unenforceable, such unenforceable provision, or unenforceable portion of such provision, shall be deemed severed from the remainder of this Agreement and shall not cause the remainder of this Agreement to be invalid or unenforceable. If any provision, or any portion of any provision, of this Agreement is deemed invalid due to its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.

(i) Third Party Beneficiary. This Agreement is exclusively for the benefit of the Parties hereto. It may not be enforced by any party other than the Parties to this Agreement, and shall not give rise to rights or liability to any third party.

(j) Successors and Assigns. The benefits and obligations of this Agreement shall inure to and be binding upon the Parties hereto and their respective successors and assigns. The Parties cannot assign their rights or obligations under this Agreement except with the written consent of the other Parties, except that the Tribe may, without the consent of the Governmental Unit, assign this Agreement to an instrumentality of the Tribe organized to administer programs or services or to conduct the business of the Tribe, if the other instrumentality assumes all obligations of the Tribe. No such assignment shall relieve the Tribe of any obligation under this Agreement, unless otherwise agreed by the City.

(k) Entire Agreement. This Agreement contains the entire understanding and agreement of the Parties hereto and supersedes all other prior agreements and understandings, written or oral between the Parties. There are no oral agreements.

(l) Preparation of Agreement. This Agreement was drafted and entered into after careful review and upon the advice of legal counsel; it shall not be construed for or against any party.

(m) Execution. This Agreement may be executed in counterparts, all of which taken together shall constitute one document.

(n) Authorization. Each person signing for an entity warrants that he or she is duly authorized to do so.

10. 25 U.S.C. § 81. The undersigned Parties agree that this Cooperation Agreement does not require approval under Title 25, United States Code, Section 81, and agree that neither party will assert lack of approval by the Secretary of the Interior as a defense to performance under this Agreement. If either party elects to submit the Agreement for approval (or if a court or the Secretary of the Interior determines such approval is necessary), each party agrees that they shall each support its approval, and shall make reasonable modifications to the terms of this Agreement as may be required to obtain such approval. The City agrees to be bound by this Agreement notwithstanding any failure to submit it for approval under Section 81.

11. Consultation Process. The undersigned Parties agree that if either government provides written comments, concerns and/or recommendation, they will be conveyed triggering a staff-level consultation meeting. The consultation process will provide the opportunity for both governments to come together and discuss various issues. The intent is to provide a procedural mechanism through which to voice concerns, identify problems, and explore solutions in a professional manner.

12. Resolution of Disputes. The undersigned Parties agree that should an agreement not be reached at the staff-level through the consultation process, each government will prepare a staff report for submittal to the Council of both the City and the Tribe for further consultation.

In Witness Whereof, the Tribe and the City have executed this Agreement as of the date indicated.

SAMISH INDIAN NATION pursuant to Resolution# 2003-04-010 of the Tribal Council of the Samish Indian Nation dated April 12, 2003

By: _____
Tribal Council Chairman

Its: Chris DeKay
Secretary of Tribal Council

CITY OF ANACORTES, pursuant to City Council Approval on May 19, 2003

By: W. Dean Maxwell 6/2/03

Its: MAYOR

ATTACHMENT A

Archeological Protections – Site # 45SK43

1. The Tribe will conduct the following work ("this work"): survey the extent of Site # 45SK43 on City owned property, stabilize the shoreline along 300 feet of City owned property immediately north of Site # 45SK43, and recommend design standards for the Tommy Thompson Parkway ("Parkway") as this Parkway crosses Site # 45SK43.

2. The City will reimburse the Tribe for up to $30,000 for this work and will incorporate the design standards called for in Section 1 of this Attachment into the Parkway design.

3. The Tribe will continue to support the City's efforts to develop the Tommy Thompson Parkway as a bike and pedestrian pathway.