

3.10 Land Use

3.10.1 Existing Conditions

The general study area for this land use analysis is an area within a 25-mile radius surrounding the Cogeneration Project site (see Figure 3.10-1, Land Use), as specified in Title 463, Chapter 42-362, Washington Administrative Code (WAC). However, because the Project will be located entirely within unincorporated Whatcom County and the potential land use impacts of the project are limited to Whatcom County, the analysis will focus on Whatcom County.

Land uses in other jurisdictions within the 25-mile radius are briefly described, however, BP is requesting a waiver from WAC 463-42-362(1)(a)'s requirement that it provide a copy of each adopted land use plan and zoning ordinance for these other jurisdictions:

Province of British Columbia, Canada	Ferndale, WA
Lummi Indian Reservation	Lynden, WA
Nooksack Indian Reservation	Sumas, WA
Skagit County	Abbotsford, B.C.
San Juan County	Delta, B.C.
Bellingham, WA	Langley, B.C.
Blaine, WA	Surrey, B.C.
Everson, WA	White Rock, B.C.

Distances from the project site to these locations and the most recent population estimates are provided in Table 3.10-1.

TABLE 3.10-1

Most Recent Population Estimates

Jurisdiction	Population ¹ (2000 est.)	Distance (Direct)
British Columbia/Washington Boundary	NA	8 miles
Lummi Indian Reservation	4,193	5 miles
Nooksack Indian Reservation	740 (1999 est.)	23 miles
Skagit County	102,979	19 miles
San Juan County	14,077	9 miles
Whatcom County	166,814	N/A
Bellingham, WA	67,171	15 miles
Blaine, WA	3,770	7 miles
Everson, WA	2,035	17 miles
Ferndale, WA	8,758	6 miles

¹ Source: U.S.Census 2000, Washington.
<http://www.ofm.wa.gov/census2000/pl/tables/ctable01.htm>

Lynden, WA	9,020	12 miles
Nooksack, WA	851	18 miles
Sumas, WA	960	22 miles
Canadian Cities²		
Abbotsford, B.C.	115,126	21 miles
Delta, B.C.	101,433	21 miles
Langley, B.C.	24,287	15 miles
Surrey, B.C.	340,094	21 miles
White Rock, B.C.	17,371	11 miles

The proposed Cogeneration Project would be constructed in an area zoned Heavy Impact Industrial on a 33-acre site, which is located immediately east of the existing BP Cherry Point Refinery (Refinery). In addition to the project site, approximately 36 acres of land would be required for construction laydown areas.

The Cogeneration Project site is located east of Blaine Road and south of Grandview Road, about two miles inland from Birch Bay along the Strait of Georgia. The proposed facility is located on BP-owned property, and the site is surrounded by industrially zoned land. An existing 230-kilovolt (kV) BPA transmission corridor is located to the east of the project site and connects to BPA's Custer Substation.

Land use within the defined study area includes a variety of recreation, industrial, commercial, residential and agricultural uses. Residential areas occur further to the north, east, and west of the Refinery, and are primarily single-family homes on large lots or acreage. Farther to the northwest, seasonal residential properties occur in bayfront communities of Birch Bay and Blaine. Additional land use information is provided with discussions of individual communities in Section 3.10.1.4, Whatcom County.

Other nearby land uses includes Native American reservation property and holdings, notably the Lummi and Nooksack lands. The Lummi Reservation is located adjacent to Whatcom County in the northwest corner of Washington State. The Lummi Reservation is approximately 5 miles west of the City of Bellingham, 12 miles south of the U.S.-Canadian border, and 5 miles from the Cogeneration Project site. The Lummi Nation signed the Treaty of Point Elliot in 1855, ceding much of their aboriginal lands in Western Washington. This treaty also established the Lummi Indian Reservation. The reservation occupies over 12,500 acres of land on two peninsulas and includes approximately 8,000 acres of tidelands surrounding the reservation. Associated resources include forestry and agricultural land, salmon and shellfish hatcheries, seafood processing plant, a convenience store, and a marina.

² Source: British Columbia Municipal and Regional District Population Estimates
<http://www.bcstats.gov.bc.ca/data/pop/pop/mun9600e.pdf>

The Nooksack Tribal land consists of over 2,000 acres adjacent to the unincorporated community of Deming, Washington, about 23 miles east from the Cogeneration Project site. Land use within this region is primarily agriculture and timber-related.

The U.S.-Canadian border is located about eight miles north of the Cogeneration Project site, forming the northern border of Blaine, Washington. Within the study area boundary are the Canadian cities and towns of Abbotsford, Delta, Langley, Surrey, and White Rock in the province of British Columbia (B.C.).

3.10.1.1 British Columbia Jurisdictions

The City of Abbotsford is the fifth largest British Columbia municipality, and is situated in an agricultural area serving as a regional commercial and residential hub for the Fraser Valley population. The City of Abbotsford's local zoning and land use regulations address a full range of agricultural, residential, commercial/special use commercial, industrial, institutional, and comprehensive development uses.

The Corporation of the District of Delta is located in the Lower Mainland area of B.C. and is comprised of three adjoining communities: Tsawwassen, Ladner and North Delta. These communities feature commercial fishing, retail and industrial activities as well as a significant agricultural base that includes dairy farms and a broad range of farm produce.

The Corporation of the Township of Langley, B.C. includes substantial and widespread agricultural interests plus manufacturing industries and a local retail and service sector.

The City of Surrey is an expansive metropolitan area covering some 116 square miles. It is the second largest city in B.C. Surrey includes urban and industrial centers as well as numerous parks and natural areas, and borders the neighboring Canadian municipalities of Delta and Langley to the west and east, respectively.

The City of White Rock, the closest Canadian community to the Project site, is located on Boundary Bay, three miles north of the Peace Arch Border Crossing on Highway 99.

3.10.1.2 Lummi Nation Indian Reservation

The Lummi Reservation consists of approximately 12,000 acres of mixed-use lands involving commercial, residential farming and marine activities. The Lummi Nation is governed through an elected 11-member council that manages various functions including health care, economic development, and general land use planning. In 1991, the Lummi Nation and Whatcom County drafted a Memorandum of Understanding to establish a process for a cooperative planning process for management of lands within the Lummi reservation.³ However, the draft was not signed and land use planning is done through the Lummi Tribal government.

³ Reference: <http://www.cwis.org/fwdp/Americas/lummimou.txt>

3.10.1.3 Nooksack Indian Reservation

The Tribe's land has a total holding of approximately 2,500 acres including 65 acres of tribally owned trust land. The Nooksack Tribe has approximately 1,341 enrolled members. Historically, the Nooksack people relied on fishing, hunting, clam digging, root gathering and trading with neighboring village peoples for their subsistence. In 1873 an effort was made to remove the Nooksacks to the Lummi Reservation. However, the Nooksacks returned to their upriver sites as they were not closely related by linguistic or kinship ties to the Lummi. In the mid-1930s the Nooksack tribe voted to accept the Wheeler-Howard Act and began working on a tribal constitution. Because they lacked a tribal land base, they were not given Federal recognition by the Bureau of Indian Affairs. In 1971 the Nooksack Tribe received full federal recognition and reservation status was established on one acre of land in Deming, WA.

3.10.1.4 Whatcom County

The Cogeneration Project site lies entirely within Whatcom County. The following plans and ordinances were reviewed during preparation of this analysis:

- Whatcom County Code (Ord. 10833 §1, 1997), Comprehensive Plan (Rev. Nov. 1999)
- Whatcom County Code, Title 20, Zoning Regulations (August 1998)
- Whatcom County Code, Title 16, Environment; Chapter 16.04, SEPA (adopted by reference from Chapter 197-11 WAC)
- Whatcom County Shoreline Management Program (1998 edition)
- Whatcom County Code, Title 16, Environment; Chapter 16.16, Critical Areas Ordinance (November 1997)
- Whatcom County Park and Open Space Plan (August 1991)
- Cherry Point-Ferndale Subarea, Background Document – An Inventory and Analysis of Existing Conditions (November 1979)

Key elements of these plans are discussed in more detail below.

3.10.1.5 Whatcom County Comprehensive Plan

The Whatcom County Comprehensive Plan designates the area surrounding the Cogeneration Project site as a Major/Port Industrial Area within the Cherry Point Urban Growth Area (UGA). The Cherry Point Urban Growth Area contains nearly 6,500 acres of industrial land, including the BP (formerly ARCO) Refinery, the Phillips (formerly Tosco) Oil Refinery and the Alcoa Intalco Works (formerly an Intalco Aluminum Plant). A peaking electrical generation plant owned by Puget Sound Energy is also located in the Cherry Point industrial area. BP's Refinery has nearly 2,500 acres within its ownership. The county's Comprehensive Plan states that remaining undeveloped acreage at Cherry Point will likely become fully developed during the 20-year planning period.

The Birch Bay UGA borders the Cherry Point UGA to the north. There are about 3,000 acres of undeveloped land in Birch Bay with urban zoning, over 1,000 of which are used for parks and other public uses or are undeveloped due to wetlands and other

environmentally sensitive areas. Other designated land uses around the Cherry Point UGA are Rural, Public Recreation (Lake Terrell), and Suburban Enclave.

3.10.1.6 Whatcom County Title 20 - Zoning

The Cogeneration Project site is zoned Heavy Impact Industrial, or HII. Land north of Grandview Road, both the east and west side of Blaine Road, is zoned Light Impact Industrial (LII). The land farther to the east and north is designated as Rural, and the area to the west and northwest along the shores of Birch Bay, historically a resort community, consists of Urban Growth Area. Other nearby land uses includes Urban Reserve land use near the City of Ferndale, Parks/Recreation land to the southeast, and both Rural and Residential-Rural zoned property to the north (see Zoning Map, Figure 3.10-2)

3.10.1.7 The Whatcom County Critical Areas Ordinance, Title 16

This ordinance includes within its objectives, the identification, and management of environmentally Critical Areas and ecosystems to balance human activity and the natural environment. Authorizations under this ordinance require a review of Critical Areas, even if no other permits are involved. The applicant must: 1) demonstrate that the proposal submitted is generally consistent with the purposes and standards of this ordinance, 2) assess impacts on the critical area from activities and uses proposed, and 3) identify protective mechanisms adequate to meet the requirements of this ordinance. Whatcom County would then determine if the proposal is consistent with the Critical Areas Ordinance and if the proposed actions are sufficient to protect the critical area, public health, safety, and welfare.

Specific goals of the Critical Areas Ordinance include the following objectives:

- Reduce potential losses to property and human life.
- Protect the public from harm due to landslide, subsidence, erosion, seismic, flooding, and other natural hazards.
- Minimize adverse impacts to the quality and quantity of water resources.
- Prevent destruction to the natural resources necessary to maintain the viability of natural ecosystems.
- Protect unique, fragile, and valuable elements of the environment, including fish, shellfish, and wildlife habitat.

- Protect the beneficial functions of wetlands, rivers and streams and avoid, minimize, or mitigate for damage to wetlands, rivers or streams whenever practicable.

Designated Critical Area categories are geologic hazard areas including landslide, seismic, mine, and alluvial fan hazard areas; frequently flooded areas, critical aquifer recharge areas and wetlands, and fish and wildlife habitat conservation areas. A limited range of activities are authorized within critical areas and standard buffers, provided that the activity will not result in increased risk or hazard and that adverse impacts to critical areas are minimized and disturbed areas are immediately restored. Mitigation may be determined necessary in order to restore or enhance sensitive resources, and any prescribed mitigation shall be completed and approved prior to critical area alteration.

3.10.1.8 Whatcom County Shoreline Program

The Shoreline Management Act (SMA) establishes a foundation for protecting coastal resources. The SMA involves all land within 200 feet of a state shoreline and may include the entirety of an associated wetland and/or floodplain. The implementing agencies are the WDOE and local jurisdictions, such as Whatcom County. The Cogeneration Project is not within a designated shoreline zone.

3.10.1.9 Whatcom County Park and Open Space Plan

The Whatcom County Park and Open Space Plan and the Natural Heritage Plan for Whatcom County (Preserving a Way of Life: A Natural Heritage Plan for Whatcom County, 1991) recommend priority lands to be incorporated into existing policies and plans. The Comprehensive Plan has incorporated these recommendations, which is generally consistent with the Growth Management Act. Open space includes lands designated under the provisions of the Open Space Taxation Act (RCW 84.34). BP has designated approximately 1000 acres as open space timberland including the proposed project area. The closest designated recreational area is Terrell Lake.

3.10.1.10 City Codes and Ordinances within Whatcom County

City of Bellingham

The City of Bellingham is approximately 15 miles south of the Cogeneration Project site. Land uses in Bellingham (Title 20, Land Use Development) are defined within six types of neighborhood plans and a land use classification system with accompanying guidelines that detail development regulations. This chapter also refers to the Comprehensive Land Use Plan. The defined use types are (a) Residential Single, (b) Residential Multi, (c) Commercial, (d) Industrial, (e) Institutional, and (f) Public. Within these groupings are use qualifiers such as cluster, light, etc. Some uses involve density or special considerations and prerequisite, or discretionary, conditions.

City of Blaine

The City of Blaine, Washington is located 7 miles northwest of the proposed Cogeneration Project site. Blaine's Municipal Code, Title 17, Land Use addresses the Comprehensive Plan / Capital Facilities Plan, subdivisions, zoning, sign regulations, and administration. Title 16 of the Code includes SEPA, shoreline and wetland management, and natural resources/critical areas policies. Noted codes and policies would be unaffected by the proposed Cogeneration Project.

City of Everson

Everson is one of the smaller local communities located approximately 17 miles from the project site. The Everson area is primarily involved in agribusiness, producing dairy products, apples, berries, potatoes and other farm crops.

City of Ferndale

Ferndale is a small community along the Nooksack River, which features a harbor and marina. It is about six miles north of Bellingham, and approximately 6 miles south of the Project site.

City of Lynden

Lynden is located approximately 12 miles from the project site, in the Nooksack River Valley about 4 miles south of the U.S.-Canadian border. Lynden's economy includes agricultural products, farm equipment manufacturing, and food processing.

City of Nooksack

The City of Nooksack is located northeast of Everson, about 18 miles from the Project site, and about 5 miles south of the U.S.-Canadian border along Highway 9. Although Nooksack does have a small business district, a 10-year Community Action Plan (CAP) has been developed to increase business and recreation opportunities through the creation of a central market district, a business campus, and a parks and trails system.

City of Sumas

The City of Sumas is located along the U.S.-Canadian border south of Abbotsford, B.C., and approximately 22 miles from the Cogeneration Project site. The town includes small businesses and a 24-hour border crossing with Canadian and U.S. Customs offices. Agriculture and farming provide the mainstay for the area, which produces dairy products and field crops including corn and various berries.

3.10.1.11 Skagit County

The following codes for Skagit County were reviewed.

- Skagit County Code, Title 14, Unified Development Code 2000

- Chapter 14.16 – Zoning Code; Chapter 14.24 – Critical Areas Ordinance
- Skagit County Comprehensive Plan 2000, Chapter 4 – Land Use Element

Only a small portion of the northwest corner of Skagit County is included within the study area. The waterfront community of Anacortes lies along the boundary of the defined area, with a population of about 14,000. Anacortes is known for its tourism and natural amenities, outdoor recreation, and retail businesses.

Zoning regulations are found within the Skagit County Code cited above, which classifies and regulates the development of land for agriculture, forest, mineral resource extraction, residential, commercial, industrial and public land uses for the unincorporated area of Skagit County. Designated land uses include several categories of rural uses, agricultural and natural resource lands, and industrial uses. Skagit County's Critical Areas Ordinance is intended to assist in orderly development, conserve the value of property, safeguard the public welfare, and provide for the protection of the quality and quantity of groundwater used for public water supplies. This ordinance defines critical areas as wetlands, aquifer recharge areas, flood hazard areas, geologically hazardous areas, and fish and wildlife habitat conservation areas. Other sections of the Code address natural resource land management, open space current use assessment applications, drainage and flood damage prevention, and land division.

Skagit County's Comprehensive Plan contains a Land Use Element that represents the County's policy plan for growth through the year 2015. Local goals include encouraging urban development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner, a reduction in inappropriate conversion of undeveloped land into sprawling, low-density development, and retention of open space and development of recreation opportunities.

3.10.1.12 San Juan County

The following codes for San Juan County were reviewed:

- San Juan County Code, Title 16, Land Use and Development
- San Juan County Code, Title 18, Unified Development Code
- San Juan Comprehensive Plan, Dec. 1998 (Updated through Oct. 2000)

San Juan County includes standards for surveying, subarea plans, open space and land bank, and wireless communication overlay district within their Land Use and Development codes (Title 16). The preceding sections within Title 15, Buildings, and Construction adopt and/or modify State codes, owner/builder provisions that address system and flood hazard control regulations. Similarly, Title 18, Unified Development Code, includes chapters on land use districts, shoreline master programs, development standards, land divisions, and application requirements and criteria. The Cogeneration Project would not impact these county issues.

The Comprehensive Plan includes elements for Land Use and Shoreline Master Program plus Water Resources, Housing, Transportation and others. Identified land use issues include protecting the primarily rural character and natural environment of the islands while allowing for sustainable development and economic diversity to maintain these characteristics. The land use concept focuses on general goals, land use (growth areas, activity centers, rural and resource lands), special districts (conservancy and nature), overlay districts, and subarea plan.

3.10.1.13 Existing Conditions at the Project Site

BP owns all of the property surrounding the Cogeneration Project site. A 230kV BPA transmission line corridor is located about 3,200 feet east of the Cogeneration Project site. BP land ownership extends to the east across the Burlington Northern Santa Fe (BNSF) Railroad track to the edge of this corridor. Along the property boundary extending east to the BPA power lines are mixed coniferous and deciduous trees.

The site itself consists of previously used agricultural land that has not been cultivated for several decades. A stand of hybrid poplar trees used for production of pulp for paper manufacturing separates the site from Grandview Road. There has been no active management of the hybrid poplar tree crop since planting was stopped in 1991.

There are few sensitive land uses in the vicinity of the project site. The closest sensitive land uses include Birch Bay State Park (1.93-miles) and the Birch Bay Community Church (1.2-mile); the closest residence is approximately 1.0-mile from the project site.

3.10.2 Environmental Impacts of the Proposed Action

3.10.2.1 Introduction

The proposed Cogeneration Project will be located on land that Whatcom County has zoned for Heavy Impact Industrial Use. The Project site is also located within the Cherry Point Major Industrial Urban Growth Area/ Port Industrial Zone defined in the Whatcom County Comprehensive Plan. The proposed Cogeneration Project, including all associated facilities, is consistent and compatible with existing zoning, land uses, plans, and ordinances within the Cherry Point Major Industrial Urban Growth Area. Although the land within the project vicinity was historically used for agricultural purposes, it has been used for industrial purposes for the past 30 years.

The Whatcom County Comprehensive Plan clearly indicates that the land use designation where the Cogeneration Project will be located constitutes a beneficial use, and such industries are economically significant to Whatcom County. Development of the Cogeneration Project is not anticipated to result in adverse changes or impacts to any adjacent land uses. Traffic along Grandview Road would likely increase to a limited degree throughout the duration of construction. [Options to mitigate this traffic increase will be mitigated with being discussed with the WSDOT consist of good traffic management practices](#), a left hand turn lane on Grandview road at the project site and, if necessary, improvements to traffic signals [as agreed by WSDOT, and good traffic management praetiees](#).

Utilities currently exist near the site, including electrical transmission lines and a natural gas transmission line. Connection to these resources would be on BP property.

3.10.2.2 Whatcom County Zoning Requirements

The Whatcom County Code identifies power generating facilities below the EFSEC jurisdictional threshold as permitted uses within the Heavy Impact Industrial Zone.² Larger power facilities require EFSEC approval. The Whatcom County Planning Department indicates that such facilities are consistent with the county zoning code as long as EFSEC approval is obtained.

3.10.2.3 Critical Areas

Whatcom County Code chapter 16.16, Critical Areas regulates development activities that may impact or be impacted by geologic hazards, flooding, aquifers, wetlands, and fish and wildlife conservation areas. The proposed Cogeneration Project, with mitigation, will comply with the Critical Areas Ordinance. The only impact to a Critical Area will be to wetlands. The Critical Areas Ordinance provides guidelines regarding wetland impacts and mitigation. These guidelines will be addressed in BP's wetland mitigation proposal.

3.10.2.4 Shoreline Management

The Cogeneration Project is not located within a designated shoreline zone so the requirements of Whatcom County Shoreline Master Program are not applicable.

3.10.3 Environmental Impacts of the No Action Alternatives

Under the “no action” alternative, there would be no immediate plans to develop the Cogeneration Project site and, therefore, there would be no impacts to land use. However, under the “no action” alternative, the need for additional power facilities would not be addressed by this facility. It is likely that other stand-alone power projects would build at other locations, which may be comparable or greater land use impacts.

3.10.4 Mitigation Measures

With the implementation of the mitigation measures proposed for each of the other environmental resources examined during this Application for Site Certification, construction, and operation of the Cogeneration Project will not result in any significant unavoidable adverse impacts to land use. Therefore, additional mitigation measures related to land use activities throughout the construction and operation phases of the project are not applicable.

² See Whatcom County Code, section 20.68.060. The zoning code currently references the previous 250 megawatt (MW) EFSEC jurisdictional threshold. The Whatcom County Planning Department, however, expects the Zoning Code to be revised to reflect the current 350 MW threshold. (R. Middleton, Nov. 2001).

3.10.5 Cumulative Impacts

Whatcom County's planning processes, comprehensive plan and zoning all contemplate that the area surrounding the proposed Cogeneration Project site will be developed for heavy industrial uses. The fundamental purpose in the Cherry Pointy UGA is to recognize the unique characteristics that make the area locally and regionally important for the siting of industrial developments. In designating the area of the proposed Cogeneration Project as heavy impact industrial, the planning process has taken cumulative impacts into consideration.

Some industrial development is anticipated at Cherry Point in addition to the Cogeneration Project. Two marine material handling facilities have also been proposed. The first, designated Pacific Terminals, consists of a partnership between Bellingham Stevedoring and Bellingham Marine to handle bulk products, is currently awaiting a permit issued by the Washington Division of Natural Resources (personal communication, Van Buren). The second, another bulk materials handling terminal proposed north of the Pacific Terminals project, appears no longer to be under consideration (personal communication, Van Buren).³

A new mixed-use and residential development is also proposed approximately over 1 mile north of the Cogeneration Project site. The development would be separated from the Cogeneration Project by Terrell Creek and surrounding woodlands creating a buffer zone (personal communication, Hertz).

Taken together, the Cogeneration Project and these other projects (if they go forward) would likely have positive cumulative impacts on the local economy, but no adverse cumulative impact on land use. Instead, the cumulative impact on land use would be consistent with established zoning regulations and Comprehensive Plan goals.

3.10.6 Significant Unavoidable Adverse Impacts

The Cogeneration Project would have no significant unavoidable adverse impacts on land use. The Project will be located in an area that as already been designated for Heavy Impact Industrial development.

³ In 2001, American Energy Systems mentioned the possibility of constructing an 850-megawatt coal-fired generation facility, but the company never applied for any permits. The company no longer appears to be pursuing this project idea (personal communication, Van Buren).