

Chapter 2: *Community Setting*

Many of the core characteristics and values that bring residents, businesses and visitors to Bellingham lie in the vast natural resources within and surrounding the city.

2.1 Location, Topography and Temperature

Bellingham is located in northwest Washington on the shore of Bellingham Bay. The south and east boundaries of the urban area about the slopes of Stewart, Lookout, and Chuckanut Mountains, at the edge of the Cascade foothills that frame Mount Baker.

Topography ranges from sea level to about 500 feet above Puget Sound on the hilltops around Bellingham. Elevation increases to 3,050 feet at the top of Stewart Mountain, and eventually to 10,785 at the top of Mount Baker. The landform is generally flat to rolling within the urban growth area, though the plateau edge overlooking Bellingham Bay can drop off abruptly in slopes ranging from 40% to 75%.

Mean temperatures vary from a high of 73 degrees in July to a low of 31 degrees Fahrenheit in January. Average annual precipitation is about 35 inches. Approximately 80% of the precipitation occurs from October through March with less than 6% falling during the summer months.

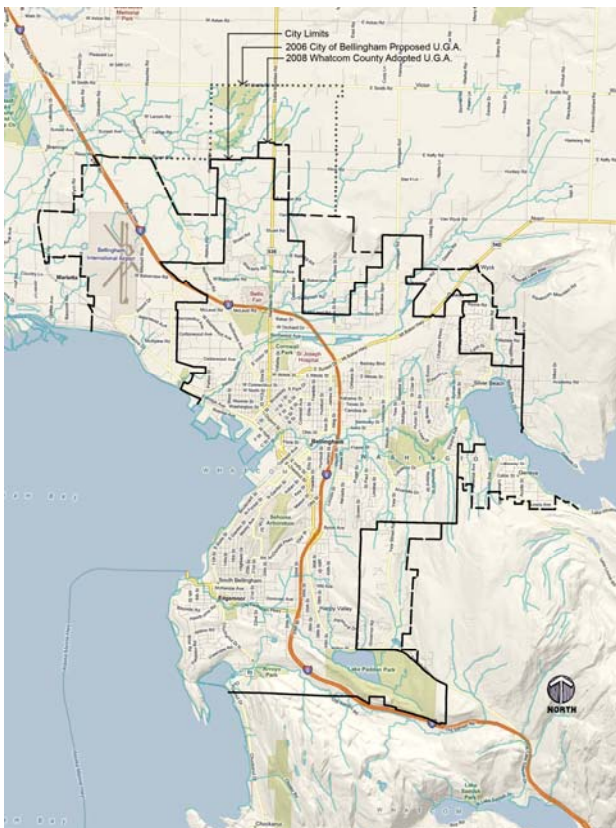
Following is a list of environmental features that are found in and around the Bellingham Urban Area.

2.2 Water

2.2.1 Creeks

Three major creeks and three minor ones drain the Bellingham area. These are:

- *Squalicum Creek* – A major creek that starts in the Nooksack Valley and flows southwest to the mouth of Bellingham Bay.
- *Whatcom Creek* – A major creek that drains from the northwest end of Lake Whatcom west into Bellingham Bay.
- *Padden Creek* – A major creek that drains from the west end of Lake Padden west into Bellingham Bay.



Existing Creeks, Streams & Tributaries

- Little Squalicum Creek - A perennial stream northwest of Squalicum Creek leading into Bellingham Bay.
- Connelly Creek – A perennial stream that drains south from Sehome Hill into Padden Creek.
- Chuckanut Creek – A perennial stream that drains from near Lake Samish west into Chuckanut Bay.

2.2.2 Rivers

The Nooksack River begins at Deming Glacier near Mt. Baker and eventually drains into Bellingham Bay. It passes through the northwest corner of the planning area.

2.2.3 Wetlands

Small wet spots, bogs, peat and muck deposits are common throughout the area, particularly within creek corridors or adjacent to lakes and ponds.

2.2.4 Floodplains

Floodplains are lands subject to high water inundation during heavy storms and/or high tides. The complete shoreline within the planning area is subject to some flooding during high tide. Very small portions of the Little Squalicum, Squalicum, Whatcom, and Padden Creek inlets to Bellingham Bay are also potentially affected by tidal floodwaters or during a 100-year storm, generally defined as the worst storm in an average 100 year period.

There are also numerous, sizable flood prone areas in other areas around Bellingham including:

- wetlands adjacent to Squalicum Creek, Bug Lake, and Sunset Pond,
- wetlands adjacent to Padden Creek and Connelly Creek,
- bogs adjacent to Lost Lake, on DNR property or adjacent to the airport, and
- marsh and tidelands adjacent to Chuckanut Bay and Chuckanut Creek.

Floodplains along all major urban streams are subject to inundation during severe precipitation events. Detention structures on several tributaries have been built and are intended to reduce the risk of downstream flooding in these and other areas.

2.2.5 Lakes

Lakes are defined here as water bodies greater than 20 acres in size or more than 6 feet in depth.

- Lake Whatcom is the largest freshwater lake in Bellingham located on the eastern edge of the urban growth area. The north end of the lake is developed with private residential uses. Public access to the lake within the City/UGA is provided at Bloedel-Donovan Park, North Shore DNR lease property, Euclid Park, and several unimproved street rights of way. Lake Whatcom is the source of drinking water for the area and is subject to land development restrictions and water quality controls.
- Lake Samish located south of the urban growth area, is the second largest freshwater lake. Most of the lake shoreline has been developed for private residential uses. Whatcom County has developed Lake Samish Park with swimming, fishing, and boat access.



- Lake Padden located on the southeastern edge of the City, is the third largest freshwater lake. The entire lake shoreline has been preserved by the city within the boundaries of Lake Padden Park.
- Toad Lake located on the northeastern edge of the urban growth area, is the fourth largest freshwater lake. Washington State Fish & Wildlife has developed a swimming, fishing and boat access on the south end of the lake. The rest has been developed with primarily residential uses.
- Sunset Pond is a freshwater retention pond located on North James Street. The pond shoreline has been preserved by the city within the boundaries of Sunset Pond Park and improved with perimeter walking trails.
- Bug Lake is a freshwater retention pond located on Squaticum Way. The pond shoreline has been preserved by the city with informal walking trails but no on-water access.
- Padden Lagoon is a saltwater estuary at the inlet of Padden Creek into Bellingham Bay. The lagoon shoreline has been partially restored and preserved but with no on-water access.

Most of the other small ponds or lakes in the Bellingham urban growth area have either been developed for private residential use and/or are too small in size to support public access activities.

2.3 Wildlife Habitats

Habitat conservation areas play a critical role in survival of the city's diverse plant and wildlife communities. Habitats encompass a variety of areas including large parcels of contiguous undeveloped land, special areas like streams or wetlands, and structural elements like rocky shorelines or standing dead trees.

The ecological value of an area depends on the quantity, quality, and diversity, of the food, water, and cover that it provides wildlife species. A particular site's value also depends on proximity to other usable habitats, the presence of rare species, and the rarity of the habitat type.

The preservation and restoration of critical habitat areas are key to protecting the biological diversity of the city and region. Critical habitat can be lost or degraded due to urban land use activities. Threats to critical habitat can be reduced with effective land use policies and regulations. In some instances, valuable habitat can also be restored or enhanced through preservation and conservation efforts.

For ease of discussion, wildlife habitats are generally classified as marine, estuarine, freshwater, and terrestrial categories. Many wildlife species rely upon most, even all, of these habitat categories for survival. Bellingham has all four categories of wildlife habitat. Each category is described in more detail in *Appendix B*. Unique or threatened species are also included in *Appendix B*.



Photo credit: Melinee Fischer 2007

2.3.1 Marine Habitat

Marine habitats are deepwater areas that extend outward from the upper limit of wave spray on land. In Bellingham, the marine habitat zone extends the complete circumference of Bellingham and Chuckanut Bays. Marine habitats provide critical plant, fish, and wildlife habitat that can be greatly affected by land and water based activities.

The waters of Puget Sound depend on the health of tide flats and the water column for primary production. Eelgrass, kelp, and phytoplankton provide the primary cornerstone for the grazing food chain, and shelter for both invertebrate and vertebrate animal species.

The deeper waters and narrow channel of Rosario Strait and Hales Passage, and Bellingham and Chuckanut Bays produce a unique marine environment rich in nutrients hosting a remarkable diversity of fish and animal life including octopus, ling cod, and wolf eels. Marine habitat includes beach habitat and offshore habitat.

2.3.2 Estuarine Habitat

Estuaries are semi-enclosed bodies of water that are freely connected with the open sea and within which saltwater mixes with freshwater drainage. Estuaries create transitions between marine, freshwater, and terrestrial environments that support a rich and diverse variety of wildlife species.

The estuaries within the Bay may support over 40 types of marine organisms and over 50 types of fish. In addition, some state priority bird species are associated with estuarine habitat include the bald eagle, heron, and osprey.

2.3.3 Freshwater Habitat

Freshwater bodies include lakes, rivers, creeks, wetlands and riparian areas. 87% of all wildlife and fish species are estimated to depend on freshwater habitat during some part of their life cycle for drinking water, foraging, nesting, and/or migratory movements. Freshwater habitat includes:

- Riparian areas
- Wetlands
- Lakes

Freshwater zones support terrestrial and aquatic insects and resident and migratory fish species. Freshwater zones also support a variety of birds and mammals. City streams provide freshwater habitat for various species of fish, including salmon and trout.

A number of fish runs are considered endangered or threatened in Whatcom County including spring chinook, fall chinook, and the sea-run cutthroat trout. Chinook salmon (Puget Sound) and bull trout also are indicated for this area. Chinook and bull trout are state candidates and federal threatened species. Washington Department of Fisheries & Wildlife and various Tribal Governments supplement the original stocks of most of these species with hatchery-raised fish.

2.3.4 Terrestrial Habitat

Terrestrial areas are upland lands located above freshwater, estuarine, and marine water zones. These zones extend from the level lowlands that border Bellingham Bay to the hilltops that surround the city. Ecological communities within this habitat zone include:

- forests,
- grasslands,

- shrub/grass communities, and
- timberline and alpine areas.

2.3.5 Land Use Implications

Marine, estuarine, freshwater, and terrestrial habitats contribute to the overall biological diversity of the region and provide a number of additional environmental functions and values of interest to area residents. Many species depend on the constant interaction of all four of these habitat systems for food, cover, nesting, and other survival requirements.

Some plant, fish, and wildlife habitat will be lost as the area population continues to grow. These impacts can be minimized, however, by sensitive development, innovative design concepts, and performance oriented development standards that:

- *Replant* - native vegetation along the shoreline and tidal boundaries, within the estuarine zone, and along drainage corridors,
- *Remove* - artificial shoreline constructions, barriers to the mixing of salt and freshwater, and freshwater impoundment or diversions,
- *Control* - stormwater runoff content and quality that enters the marine estuary system and in the terrestrial watershed in natural impoundment on-site where pollutants can be separated from runoff,
- *Remove* – invasive plant species that displace native materials and habitat,
- *Plant* - native trees and shrubs that support and retain native wildlife species, and
- *Cluster* – park improvements to preserve natural shorelines and contiguous open spaces as common lands.

Mature shoreline trees, snags, and downed logs should be preserved where possible to allow wildlife species to coexist in urban areas.

Intense park activities should be separated from the most sensitive areas by maintaining and enhancing buffers to protect habitat function. Access to select sensitive areas may be provided through low impact trails.

Where appropriate, the Park, Recreation, and Open Space Comprehensive Plan should identify areas to preserve and enhance through purchase of development rights or title for open space and other low impact park uses.

2.4 Historical Development

Lummi, Nooksack, and Samish Indians lived in and around the Nooksack River and Bellingham Bay area. These tribes fished Puget Sound and the

The most critical and unique habitat areas should be preserved and enhanced. Low impact trail access to habitat areas should be provided in a sensitive manner for no net loss of habitat function.

river. The tribes also exhibited some agricultural and hunting characteristics common to eastern or interior tribes.

Indian encampments consisted of tribal groups that may have numbered more than 250 persons per group in densities of 4-10 persons per square mile. Village sites were located along Bellingham Bay and the Nooksack River.

In 1792, the first western exploration of Puget Sound was accomplished by British explorer Captain George Vancouver. Vancouver charted Bellingham Bay and named it in honor of Sir William Bellingham, Controller of the British Navy.

In 1852, Henry Roeder and Russell Peabody arrived from California and started the Roeder-Peabody-Page sawmill on Whatcom Creek Waterway to process virgin red cedar and Douglas fir.



By 1854, the towns of Whatcom, Sehome, Bellingham, and Fairhaven were settled around Bellingham Bay; the Washington Territorial Legislature established Whatcom County and designated the residence of RV Peabody, near the mouth of Whatcom Creek as the county seat. Whatcom was derived from an Indian term meaning “rough tumbling waters” – a reference to lower Whatcom Falls.

In 1857, gold was discovered on the Fraser River creating an instant stampede through the Whatcom Creek settlement then north to Sumas to the gold fields. On a peak day, 7 steamers and 13 square-rigged sailing ships anchored at the mouth of the Whatcom Creek Waterway. Soon after, the Canadian government required all miners to clear customs in Victoria then travel by steamboat directly up the Fraser River, bypassing the Bellingham area.

The 4 towns developed around Bellingham Bay separated from each other by dense forest.

- *Fairhaven* – was developed in earnest in the 1880s in expectation of becoming the western terminus of the Great Northern

Railway. The central business district housed 135 brick and commercial block buildings including retail stores and fine mansions. The Panic of 1893 dried up investments in Fairhaven.

- *Sehome* – developed in 1858 around a vein of coal that angled into the bay at the bottom of Sehome Hill. Coal tailings were dumped at the



base of the hill and into the bay until the coal vein ran out in 1878. In 1893, Sehome resident and Washington poet laureate Ella Higginson persuaded officials to locate a state normal school (teachers' college) on the hill above the abandoned mine. The school, which evolved into Western Washington University, occupies the former site of the Higginson home.

- *Whatcom* – the earliest settlement, had a neighboring community develop across the creek after 1880 when 25 Kansas families signed an agreement with local promoters, bought stock in a development company, and arrived to found Washington Colony. They built a wharf, sawmill, and a small town on Whatcom Creek. In 1884, confusions over land ownership resulted in the dissolution of the colony in legal challenges. The Whatcom business district continued to develop on pilings and plank roads along the waterfront from Prospect to Broadway Streets. By the 1890s, the railroads arrived and built wharves far out into the bay to service shipping lines.
- *Bellingham* – the smallest of the bay's settlements, began along the base of Sehome Hill at the Pattle coal claim. Although Bellingham proved to be inconsequential and transitory, the other communities chose the name when they decided to overcome rivalry and merge into a single town.

In 1903, the towns of Whatcom, Sehome, Bellingham, and Fairhaven were consolidated into the City of Bellingham. Tideland areas were filled and the Great Northern Railway constructed passenger and freight depots in the Whatcom "Old Town" business district to service the rapidly expanding city. As Bellingham continued to expand the core business district gradually moved onto the hill overlooking Whatcom Creek and Bellingham Bay.

2.5 Population

2.5.1 Population Trends

Bellingham's population was estimated to be 67,171 persons in 2000 and 75,220 in the year 2007, equal to an average annual increase of 1.7% per year over the 7 year period. The unincorporated Urban Growth Area (UGA) for Bellingham's has an estimated 13,618 people for a total UGA population of 88,838 in the year 2007.

2007 City Population	=	75,220
2007 UGA Population	=	13,618
2007 Total Population	=	88,838
2022 Projected Population	=	113,055

2.5.2 Population Projections

According to the Washington State Office of Financial Management (OFM) and Bellingham's Planning Department, the city's population will increase to 113,055 persons by the year 2022 assuming all UGA areas are

incorporated, or by another 24,217 people. This is equal to an annual average increase of 1.9% per year over the 14 year planning period.

2.6 Demographics

The following demographic information was taken from the 2006 United States Census Data for Bellingham. Demographics are important to consider in reviewing various opportunities for specific recreation proposals, such as age characteristics, or in evaluating new trends or interests in recreation programming or facilities, such as ethnic characteristics.

Economic Characteristics		
Census Year	2000	2006
Mean travel time to work in minutes	17.8	15.7
Median household income*	\$ 32,530	\$ 36,862
Median family income*	\$ 47,196	\$ 60,962
Per capita income*	\$ 19,483	\$ 21,848
Families below poverty level	9%	7%

** all income listed is in inflation-adjusted dollars*

Housing Characteristics		
Census Year	2000	2006
Occupied Housing Units	95.0%	92.3%
Vacant housing units	5.0%	7.7%
Owner-occupied housing units	39.1%	45.9%
Renter-occupied housing units	52.0%	54.1%
Unspecified	8.9%	0.0%

Age Characteristics		
Census Year	2000	2006
Median Age	30.4	30.7
Under 5 Years	5%	5%
5 to 19 Years	19%	23%
20 to 34 Years	32%	27%
35 to 64 Years	32%	33%
65 Years and Over	12%	12%

Ethnic Characteristics		
Census Year	2000	2006
White	85.8%	84.8%
Hispanic or Latino	4.6%	6.2%
Black or African American	1.0%	0.8%
Asian	4.2%	5.6%
American Indian and Alaska Native	1.5%	0.8%
Native Hawaiian and Other Pacific Islander	0.2%	0.0%
Two or More Races	2.1%	1.6%
Other	0.6%	0.2%
Language other than English at home	9.8%	19.7%

2.7 Recreation Trends

Similar to the rest of the state, Bellingham has seen a steady increase in organized sports. In Bellingham, that increase has also included new types of organized sports, such as rugby, ultimate frisbee and disc golf. There is also an increased interest in more extreme sports, such as mountain biking, skateboarding, dirt bike jumping, and rock climbing.

A changing socio-economic demographic and an increase in cultural diversity in the Bellingham area have brought new types of interests in recreational activities and programs. It has also brought a greater need for more general recreational activities and financial assistance to residents where needed for recreational program or facility fees.

Similar to trends across the nation, Bellingham residents continue to demand increasingly more off road walking and bicycling trails. As trails increase in popularity and the community around grows, there are increasing conflicts among the various trail users.

Nationally, there is an increased recognition of the importance of recreation and park systems to overall quality of life, especially as related to the growing obesity rate across the nation and in children. The relationship of park systems to quality of life has, for example, included new research and recognition of the healing effect of parks, gardens and other natural areas.

In recent years, park systems have played an increasingly recognized role in:

- promoting economic development*
 - improving quality of life*
 - facilitating healthy lifestyles*
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