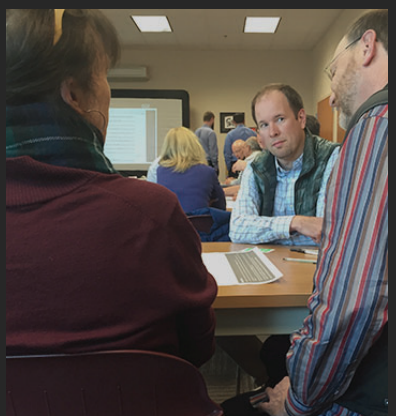
City of Port Angeles

Comprehensive Plan Appendices



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Appendix

A

Community Profile

City History

The City of Port Angeles has long been the primary urban center of the North Olympic Peninsula.

The earliest residents of the area were the Klallam Tribe ("Strong People"), Native Americans who were sustained by the region's abundant natural resources. These same natural resources - the naturally protected deep-water harbor, abundant coniferous forests, prolific wildlife and marine resources, and an overall natural beauty also attracted the first non-natives to the area and continue today to encourage visitors and new residents alike from all walks of life.

Known variously as "Old Dungeness," "False Dungeness," "Cherbourg," and "Port Angeles," settlement was intermittent and sporadic throughout the early history of the city.

In 1862 (due largely to the efforts of one man: Victor Smith, the "Father of Port Angeles"), President Abraham Lincoln signed an executive order setting aside 3,520 acres of land on the site as a U.S. Government Lighthouse and Military Reservation. Soon after, the original townsite layout was platted

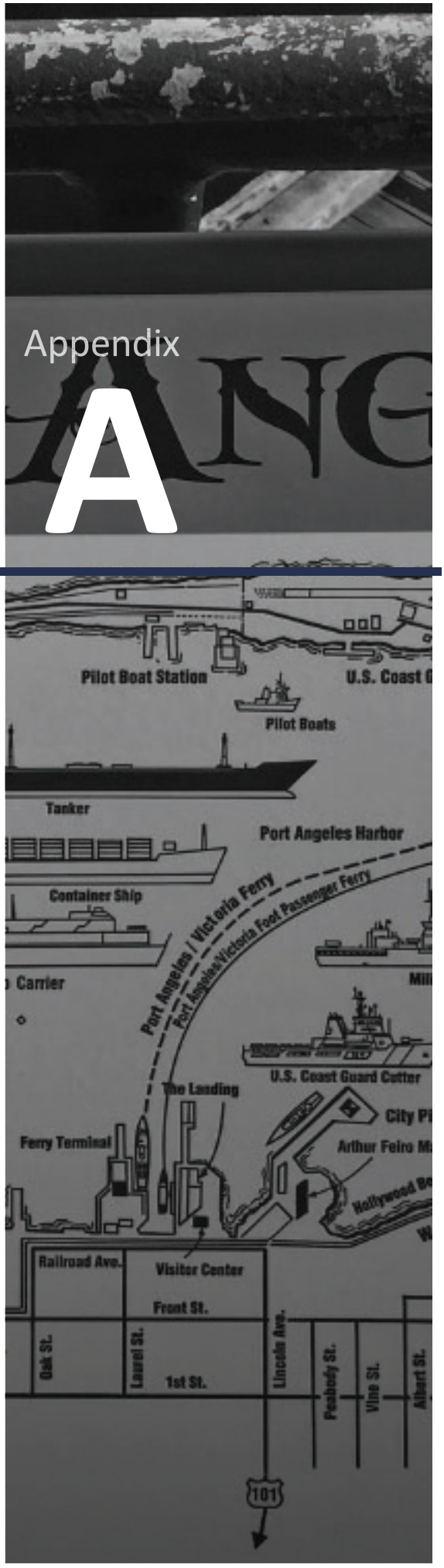


Figure A.01 – *Port Angeles, as depicted in a 1917 Army Corps/USGS survey map (Image: University of Texas, Perry-Castañeda Library Map Collection)*

by the US Army Corps of Engineers, and the townsite of Port Angeles has endured to this day.

Patterned after the plan of Cincinnati, Ohio (substituting the Harbor for the Ohio River), the streets are arranged and named the same: Front, First, Second, etc.; at right angles to these are Tumwater, Cedar, Pine, Valley, Cherry, Oak, Laurel, Vine, and Race Street.

While the City has benefited greatly from that original planning with its grid-pattern street layout, various challenges were also created such as utility service provision and circulatory problems, due to the topography of the land. Six different streams, with associated ravines, travel through the community flowing north from the foothills of the Olympic Mountains as they quickly make their way to the Strait of Juan de Fuca. They are: Dry Creek, Tumwater Creek, Valley Creek, Peabody Creek, Ennis Creek, White's Creek, with Lee's Creek, and Morse Creek located within the City's Urban Growth Areas.

Despite such early planning, major settlement did not take place within the city until 1887, with the founding of the Puget Sound Cooperative Colony. A social experiment in communal living, the Colony contributed greatly to the early expansion of Port Angeles.

Although short-lived, this settlement near the mouth of Ennis Creek built a sawmill, lath-mill and shipyard; constructed a 58-foot propeller-driven schooner ("The Angeles"); started the first newspaper in town ("The Model Commonwealth"); and built the first schoolhouse, office building and a city opera house - in addition to founding four different churches in Port Angeles. The colony was largely disbanded by 1889 due to internal disputes, but many of the colonists stayed and blended with the rest of the thriving community.

By 1890, the city population had soared to over 3,000 people, and the Government Reserve established 28 years earlier had become a bottleneck to progress, completely restricting further development of the city since it could not legally be homesteaded. The result was a "land rush" onto the federal property, as citizens took matters into their own hands as "Reserve Jumpers" - moving en- masse onto the reserve, platting lots, and establishing homesteads. Eventually, forced to recognize this matter officially, Congress conceded ownership to the squatters and opened the Reserve for sale to the public.

The year 1890 was also notable as the year Port Angeles was officially incorporated as a city in the newly established State of Washington, and that same year it also became the County Seat of Clallam County.

Thereafter, the City grew more slowly and developed much as other small towns in the Pacific Northwest. Gone were the early pretensions of becoming a great seaport or second national city patterned after Washington, D.C.

Logging and timber have long been important industries, and in 1914 Port Angeles was home to the world's largest sawmill. In 1920, a large pulp and paper mill was built by Washington Pulp and Paper Company. Purchased a few years later and operated by Crown Zellerbach for over 60 years, the paper mill, located at the base of

Figure A.02 – *This detail of the "Ennis Creek" mural depicts a 1700s-era Klallum village. (Image: Feiro Marine Life Center)*

Figure A.03 – *Port Angeles, as located in Clallam County and relative to Washington State.*

Figure A.04 – *Downtown Port Angeles was dramatically transformed in 1914 when street-level grades were raised 12 feet or more following a massive sluice operation - effectively a man-made mud slide using a nearby hillside for source material.*

Ediz Hook, is now owned and operated by McKinley Co.

The City experienced sporadic growth until the linking of Port Angeles with the transcontinental railroad in 1914 brought increased prosperity. As rail transport increased and sea travel waned, Port Angeles surpassed Port Townsend as the major center for trade and commerce on the Olympic Peninsula. Sustained largely by marine trades and the forest products and fishing industries, Port Angeles became a classic American small town and the center of urban life on the North Olympic Peninsula.

In 1922, the Port of Port Angeles was formed. The natural deep-water harbor has always attracted shipping as well as commercial and sports fishing. The Port now operates the Boat Haven Marina and The William Fairchild International Airport, in addition to managing much of the shoreline properties west of downtown Port Angeles.

The first Coast Guard air station on the Pacific Coast was established at Ediz Hook on June 1, 1935. It is the oldest United States Coast Guard Station in the country. The piece of land currently occupied by the Coast Guard Station is the one remaining part of the military reservation that once included all of what is now Port Angeles. The station officially became Coast Guard Group Port Angeles in September of 1944, and received its first helicopter in 1946.

By far the largest civic project was the regrading of the downtown streets, which occurred in 1914. That project created the current street elevation in the downtown

- which resulted in basement levels for then-existing businesses (now the "Port Angeles Underground"). The Olympic Power Company was formed in 1911 to construct the Lower Elwha Dam. The County Courthouse was built

on Lincoln Street in 1915. A new fire station was built in 1931. A new police station and jail was built in 1954, and a new City Hall in 1987. In 1953, Port Angeles received the "All American City" award.

Over the past forty years, except for a few periods of more rapid growth in the 1920s and 30s, the city has grown at a fairly stable rate of approximately one percent per year, to its present population of 19,370.

The City has used zoning to coordinate development and growth since the 1930s, and in the early 1960s, made a determined effort to improve planning efforts through development of a "701" master plan along with a new zoning ordinance and subdivision ordinance. In 1976, the City again reviewed its planning goals and processes, and adopted the 1976 Comprehensive Plan, which is the immediate predecessor of this Comprehensive Plan.

Even before the State passed the Growth Management Act (GMA) of 1990 requiring cities and counties to revise or adopt comprehensive plans, the City of Port Angeles had decided it was time to revise the existing Comprehensive Plan, and had already begun that process when the GMA established new requirements for comprehensive plans. In response, the City has continued to move forward, consistent with the GMA, meeting all of its requirements, including the mandated completion dates.

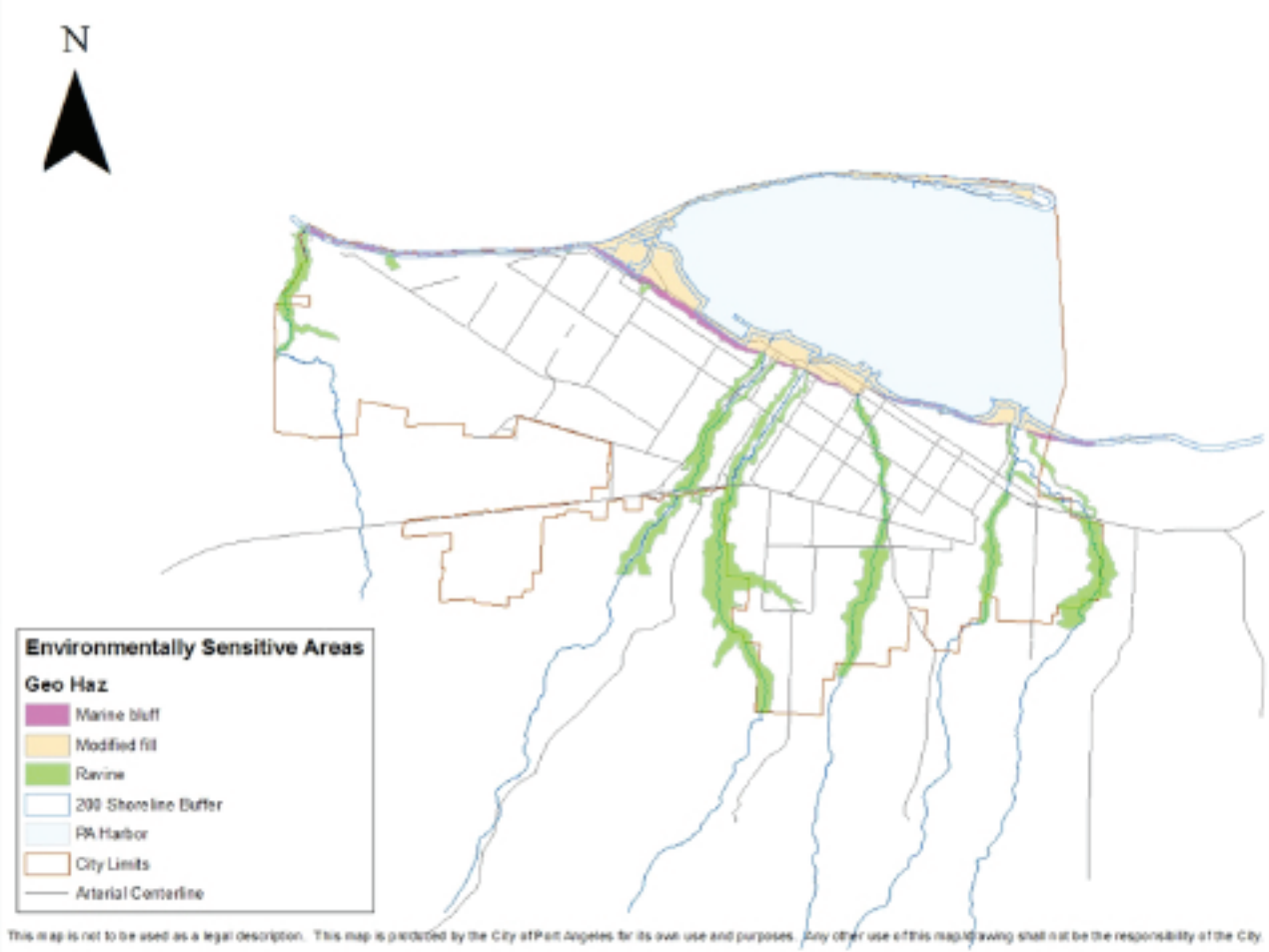


Figure A.05 – *This map of Port Angeles' "environmentally sensitive areas" shows general locations of marine bluffs, ravines, shoreline buffers and modified fill areas.*

Current Characteristics

An essential part of developing goals and setting directions for the future lies in reviewing the past and evaluating the present. An Environmental Impact Statement (EIS), prepared by the consulting firm of Nancy A. Ryan and Company for the 1994 Comprehensive Plan takes an in-depth look at the physical, social, and economic aspects of Port Angeles. A second addendum to the original EIS was prepared and adopted for the updates that have occurred over a three-year period ending in 2004. The following descriptions are intended to provide the users of this document with a general view of the community. For a more detailed analysis, refer to the EIS and the 2004 update addendum.

Location

The City of Port Angeles is located in Clallam County on the northern coast of Washington's Olympic Peninsula (See Figure A.03). It is less than three hours driving time (including the ferry ride) from Seattle or Olympia, and is located at the base of the Olympic Mountains' north slope. Immediately to the north is the coastal marine environment of the Port Angeles Harbor, one of the deepest naturally-protected harbors on the West Coast, and Strait of Juan de Fuca. To the south are the pristine alpine wilderness areas of the Olympic National Park, to the east is the semi-arid climate of the Sequim-Dungeness Valley, and within two hours time to the west is the Hoh Rain Forest and the beaches and rugged beauty of the Pacific Coast.

Air

The circulation of air around the Olympic Mountains and through the Strait of Juan de Fuca results in mostly easterly or westerly winds in the vicinity of Port Angeles. Highest winds are generally associated with intense winter storms, and may be from either an easterly or westerly direction. On most summer afternoons, a moderate to strong westerly breeze can be expected. Wind velocity and direction vary with the season. Winds from the west predominate and are strongest during the summer, averaging about 14 miles per hour. Winds from the south and east occur more frequently during the winter, with an average velocity of about nine miles per hour.

Water

Port Angeles is located in the Port Angeles watershed, which drains 65,000 acres (101.5 square miles). A gradually-descending slope from the Olympic Mountains north to the Strait of Juan de Fuca characterizes the topography of the immediate Port Angeles area. Steep hillsides and bluffs of 50 to 150 feet in elevation mark the northern edge of the slope. This region is segmented by streams, which flow from the mountains toward the Strait and have formed V-shaped ravines that are much lower in elevation than surrounding areas. These ravines contain the following major creeks passing through the community to Port Angeles Harbor and the Strait of Juan de Fuca: Dry Creek, Tumwater Creek, Valley Creek, Peabody Creek, Ennis/White's Creek; Lee's Creek and Morse Creek are located east of the City limits in the UGA. The Elwha River is located approximately 1.25 miles west of the City, and is the primary water

source for the city. Very few sites in the City obtain potable water from wells.

Wildlife

Port Angeles is located in an area replete with wildlife. The City is located adjacent to Olympic National Park and the Strait of Juan de Fuca. The drainages that pass through Port Angeles provide wooded corridors and habitat for a wide variety of wildlife. Various freshwater wetlands are scattered throughout the city. Port Angeles Harbor is approximately 2,435 acres in size and is one of the deepest natural harbors on the west coast. It provides habitat for many aquatic species.

The wooded riparian areas provide food, cover, spawning, breeding, and rearing areas for a wide variety of wildlife species. Trees and other plants shade streams and help keep water cool while stabilizing banks and providing food and habitat for insects, amphibians, reptiles, mammals, birds and fish. Trees also provide cover for wildlife. When trees die and fall into the streams, the logs create small dams and pools that offer fish rearing habitat and cover from predators. Logs that remain on land provide cover for wildlife. Wildlife from the ravines also make use of surrounding developed properties and undeveloped lands for foraging.

Within Clallam County, the Washington State Department of Wildlife (Priority Habitats and Species program) has indicated that there are 15 "priority habitats" and 104 "priority species" listed in Clallam County.2 Due to an agreement with the Department of Wildlife, the location of these habitats is not made available. The locations have been reviewed and considered as part of this analysis.

The location of other less sensitive species has been identified in the Draft Environmental Impact Statement (DEIS). In particular, there are three areas that harbor seals use for haul-out. Those sites are the beach at the former Rayonier Mill site, Hollywood Beach near downtown, and the south shore of Ediz Hook in Port Angeles Harbor. Department of Wildlife maps identify an area along the Harbor side of Ediz Hook that has "regular large concentrations" of shorebirds. The bluff along the shoreline also provides a special and valuable habitat for shorebirds and other wildlife.

Within the Olympic National Park, Roosevelt Elk roam the slopes of the mountains. Other wildlife include black bears, cougars, coyotes, mountain beavers, minks, raccoons, otters, wolves, eagles, hawks,

1. State of Washington Priority Habitats and Species List, August 2008

ravens, and grouse. Fisher have recently been reintroduced into the Olympic National Park as well. Mountain goats were introduced to the Olympic National Park during the last century and have become well-established.

All of the creeks that make up the Port Angeles watershed are used for fish habitat, but most have barriers to fish migration. Coho, cutthroat and possibly steelhead use Dry Creek. Tumwater Creek provides anadromous use by coho, cutthroat, and steelhead well-upstream of the City limits. Valley Creek and Peabody Creek may be used by sea-run cutthroat, however, these runs are not felt to be self-sustaining. The stream ravines provide sections of relatively high quality habitat, and are recognized by the State as sustaining significant populations of resident fish and potentially having salmon runs restored - once downstream impediments are removed. The resident fish currently present in Ennis Creek are coho, sea-run cutthroat, and steelhead. The fish migrate up to 4.9 miles from the Port Angeles Harbor. White's Creek, which joins Ennis Creek, contains coho, steelhead, and sea-run cutthroat only up to Front Street. The estuary at Valley Creek was restored to its original condition as a mitigation action in 1996. Extensive restoration of Valley Creek has been accomplished upstream from the southern end of Valley Street to the Highway 101 crossing. Restoration efforts have been supported by City land acquisitions along the lower portions of Valley Creek, with the intent of future restoration projects.

Natural Resources

There are very limited forest areas, and no mineral lands located within the City. Much of the forested areas are located within stream ravines or along the marine bluffs. Approximately 35 acres of developable lands remain forested. Lincoln Park and Shane park also contain forested areas that are protected from development, however the trees in Lincoln Park are beginning to penetrate the air space needed for approach to Fairchild Airport, and will likely be removed in the future. The City of Port Angeles contains 26 miles of marine shoreline including Ediz Hook, a four-mile-long sand spit, and 17 miles of streams.

Diverse scenic resources are abundant in Port Angeles. Notable visual elements include the Strait of Juan de Fuca, Ediz Hook, Vancouver Island, San Juan Islands, Mt. Baker, Hurricane Ridge, and the Olympic National Park. Of special note are the views along the bluffs above Port Angeles Harbor. The Ocean View Cemetery

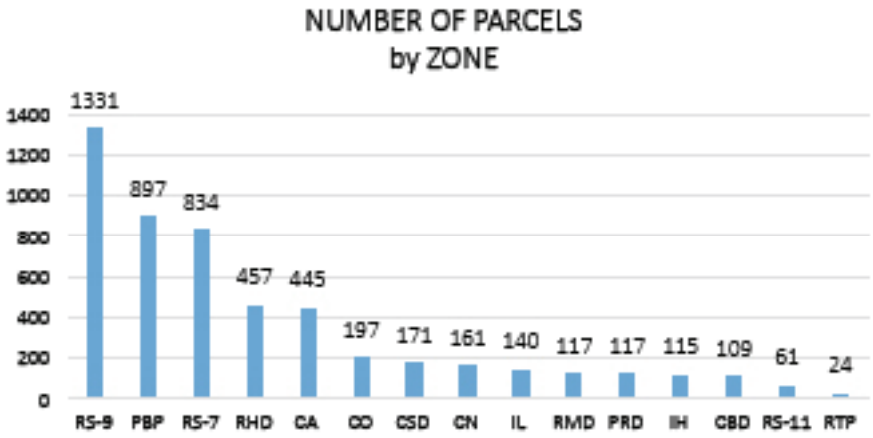


Figure A.06 – *This chart shows the number of parcels associated with Port Angeles zoning categories.*

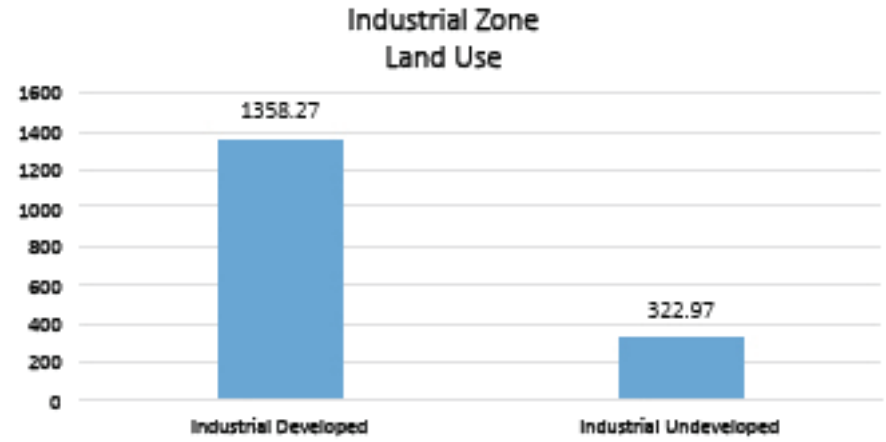


Figure A.07 – *Developed and undeveloped industrial-zoned land, in acres.*

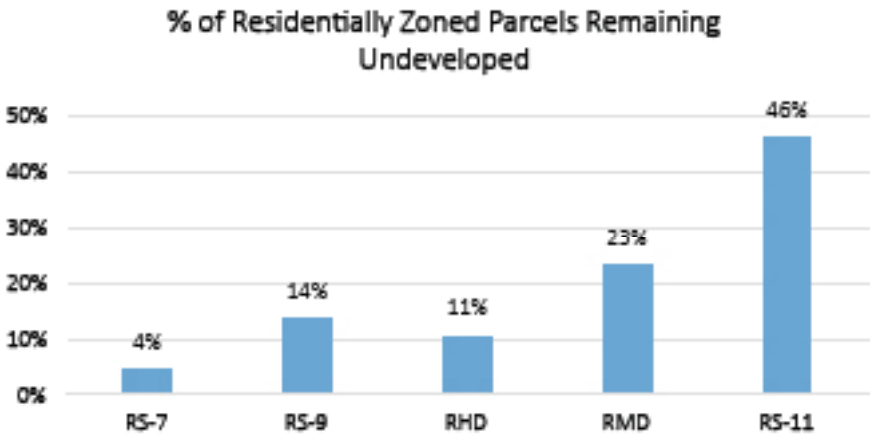


Figure A.08 – *Developed and undeveloped residential-zoned land, in acres.*

at the west edge of town provides views northward and along the coastline. The beaches and beachfront trail along the shoreline also offer views of Ediz Hook, the Strait of Juan de Fuca, and Vancouver Island. Ediz Hook has superlative views of the Strait, mountains, waterfront, and the city.

The vegetated creek ravines offer wooded open space, providing wildlife habitat and corridors connecting the waterfront with the foothills. Other open space amenities include wetlands, steep slopes, marshes, hilltops, and even open fields.

Noise

The primary sources of noise in Port Angeles is air traffic from the airport and the Coast Guard base, industrial activities along the Port Angeles Harbor shoreline, vehicular traffic, and construction activities. The ambient noise levels within the City of Port Angeles would be expected to vary depending on location within the city.

In 1986, a Noise Compatibility Planning Study was conducted for the Fairchild International Airport under the guidelines of the Federal Aviation Regulations. The Planning Study included analyses of both existing and projected noise levels associated with the aviation traffic.

The one remaining mill along the waterfront is a source of noise and is in a difficult place to provide noise attenuation. Since the mill is visible from many residential areas on the bluff top to the south, these residences can be expected to receive the greatest noise impacts.

The Rayonier Mill closed in late 1990s, leaving no noise-producing industries east of the downtown area. The K-Ply mill near downtown closed in 2011, with site remediation completed in 2016. The Port of Port Angeles intends redevelopment of the site for marine trades industries.

Higher noise levels are allowed for motor vehicles operations on public roads. Warning sirens and temporary construction equipment are generally exempt from the noise regulations. Traffic levels would be expected to be highest along major transportation routes of US 101, First Street, Front Street, Lincoln, Lauridsen Boulevard, Race Street, Tumwater Truck Route, and Marine Drive.

Population

The population for the City of Port Angeles in 1993 was 18,270; this represented an increase of three percent over the 1990 population of 17,710. The population for Clallam County in 1993 was 61,400. The percentage of the County population residing in the City dropped to 28.5% in 2004. The 2000 population of 18,397 marked a 3.7% increase over the 1990 population. The population had risen to 18,740 by 2007, and was 19,090 in 2015.

The State Office of Financial Management (OFM) has projected a five percent growth rate over the next 20 years for Clallam County; this, along with a linear projection for Port Angeles, is illustrated in Table A.01. The City population so far not grown at the projected rate.

Table A.01 - *Population Projections based on Office of Financial Management*

Population	2010	2015	2025	2035	2045
Port Angeles	19,038	20,509	23,802	27,623	32,058
Clallam County	71,404	75,717	85,142	95,739	107,655

The population figures in Table A.01 are projections based on an estimated 1.5% growth rate from 2010 census data. These numbers are considered high due to the historic growth rate for the City of 0.36% per year. Using information from the 2015 OF estimate, the percentage of Clallam County population attributed to the City of Port Angeles was 26.3%.

Land Use

The City of Port Angeles contains 10.7 square miles or 6,856 acres of land area. There are residential areas, industrial areas and commercial areas with a fairly well defined Central Business District (CBD). Figure A.06 shows the number of parcels within each zone.

Port Angeles currently has land available in each zone designation to meet the anticipated future needs for developable lands. Figure A.07 and Figure A.08 indicate the amount of available land for industrial and residential lands, respectively.

Currently, there are 567 parcels developed with infrastructure available for residential development.

Community Facilities

Community facilities include a 126-bed hospital, one public library, one fire station, one police station, 22 developed parks, the Senior

Services Community Center, a public swimming pool, the Vern Burton Community Center, a publicly owned cemetery, one private golf course, four cultural centers (Port Angeles Fine Arts Center, Arthur D. Fierro Marine Lab, The Lower Elwha Klallam Cultural Center, and the North Olympic Cultural Center).

The Port Angeles School District Number 121 serves the City of Port Angeles and its surrounding community. The District operates five elementary schools, one middle school (grades 7-8), one high school, one alternative high school, and is host to the North Olympic Peninsula Skills Center. Within the City of Port Angeles there are three elementary schools; Franklin Elementary, Hamilton Elementary, and Jefferson Elementary. Dry Creek Elementary School is located west of the city limits and Roosevelt Elementary is located east of the City limits. Stevens Middle School, Port Angeles High School and Lincoln High School provide for secondary education. The Skills Center, working closely with Peninsula College and five neighboring school districts - Cape Flattery, Crescent, Quileute, Port

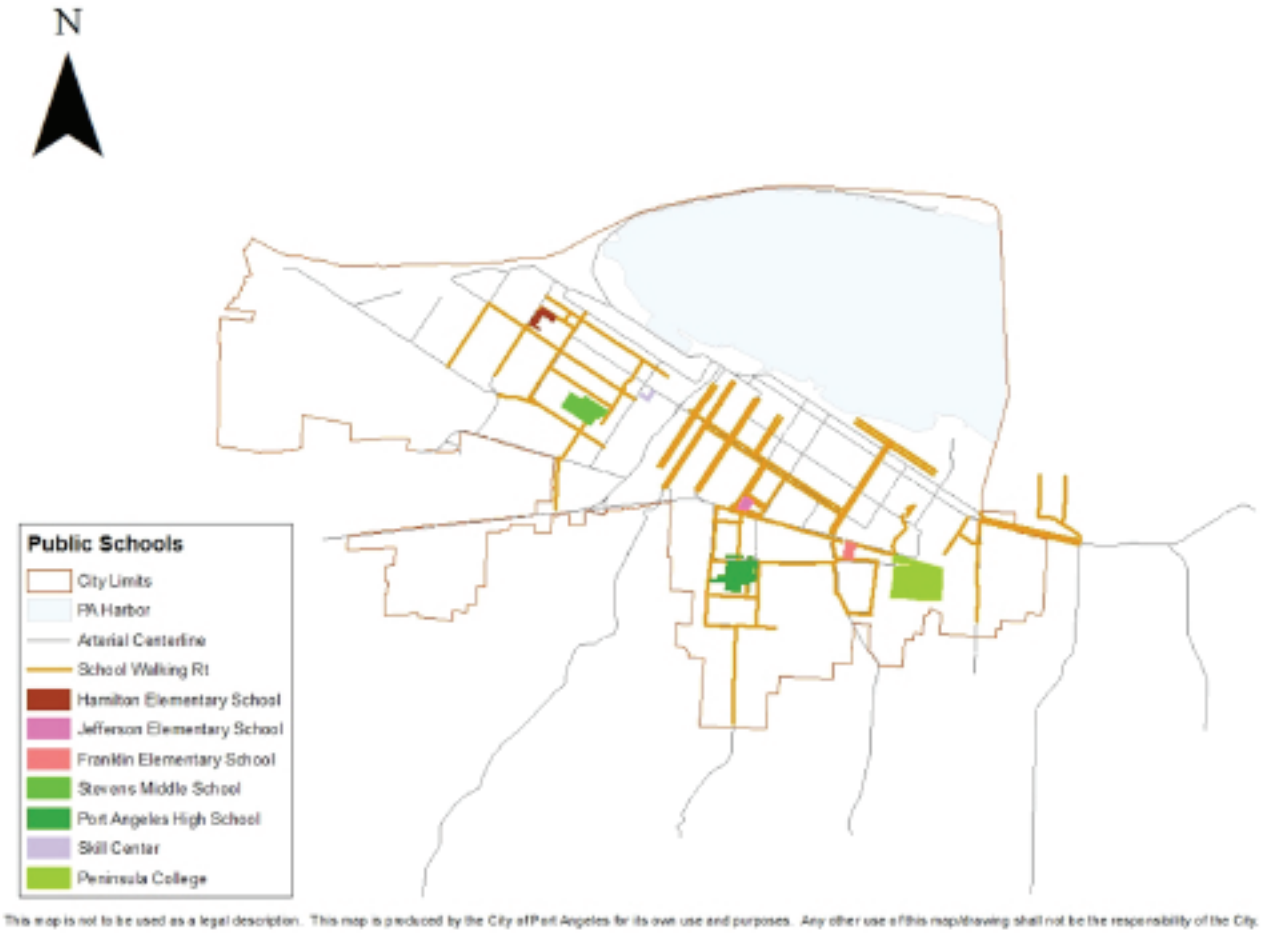


Figure A.21 – *Public schools located in Port Angeles.*

Angeles and Sequim School Districts - provides the latest vocational/ technical education in a competency-based learning environment.

Peninsula College, with its main campus located in the foothills of the Olympic Mountains and overlooking the Strait of Juan de Fuca, provides a vital center for higher education and diverse cultural opportunities, enhancing and strengthening community bonds for the residents of the North Olympic Peninsula. College programs include traditional academic transfer offerings, professional-technical training, Basic Education for Adults, adult continuing education, on-line learning courses and a center for baccalaureate degrees, allowing students many educational options.

In addition to the many associate degree and certificate programs, Peninsula College offers a baccalaureate degree in Applied Management. The college also works with key university partners, providing numerous opportunities for residents to earn bachelor degrees locally. These partners include City University, Western Washington University, Goddard College and Evergreen State College.

Peninsula College is committed to providing college/community connections and has numerous partnerships and collaborations in the community with the City of Port Angeles, the Port of Port Angeles, the Port Angeles School District, the Economic Development Council, local tribes, private businesses and others. The college offers classes, training and resources in support of workforce development and community enrichment.

The college currently serves over 5,000 students and employs 145 full-time faculty and staff and approximately 390 part-time faculty and staff.

The Port of Port Angeles operates a 16.1-acre marina, with approximately 375 boat slips and 3,000 feet of dock for tie-ups, and a public boat yard for repair and maintenance. The Boat Haven Marina was upgraded during 2007-2008. The port also operates the William R. Fairchild International Airport.

Planning Areas

The Comprehensive Plan divides the City into eight planning areas. For the purpose of description, the individual planning areas are identified as the Harbor, Northwest, Southwest, North Central, South Central, East, Eastern Urban Growth Area and Southwestern Urban Growth Area planning areas. These areas are located on Figure A.09 and are described as follows:

Harbor

The Harbor planning area includes all shoreline areas adjacent to Port Angeles Harbor and contains the Coast Guard Station, the City-operated boat ramps, Harborview Park, and the McKinley Paper Company Mill, all on Ediz Hook. The historic downtown and waterfront are also essential parts of this sub-area. The boat haven marina, log export terminal, the Coho Ferry terminal, and City Pier Park line the waterfront. Entertainment activities (movie theater, bookstores, antique shops, galleries, historic underground tour and restaurants) abound within the pedestrian-oriented central business district.

Also in the Harbor planning area is the former Rayonier Mill site. The mill has been closed since 1997, and has been demolished. The site is undergoing remediation for clean-up of materials left from the previous mill operation. In 2013, the City purchased a five million- gallon storage tank that remained on the site and has incorporated the tank into its facilities for the remediation of combined sewer overflows into Port Angeles Harbor.

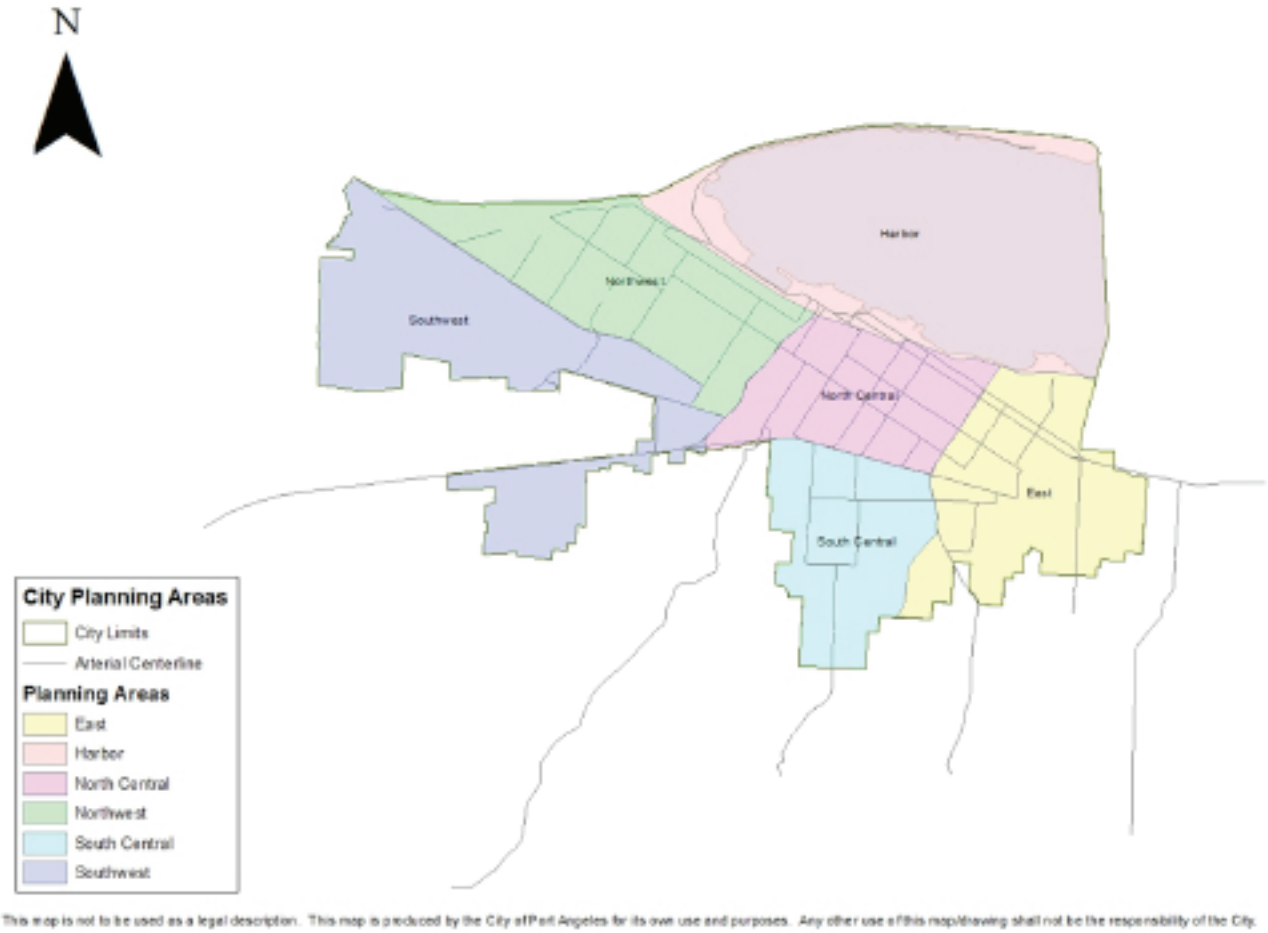


Figure A.09 – *Planning areas defined for purposes of this comprehensive plan.*

Northwest

The Northwest planning area covers the western edge of the city lying west of Tumwater Creek and north of Fairchild International Airport. This area is comprised largely of older homes, however recent growth pressure has led to new subdivisions and home construction in the area. There is a commercial area located at 8th and "C" Street, serving the residents of the west end of the City. A pocket of industrial/ commercial activities is located along the Tumwater Truck Route near

the US 101 junction. This area of town has limited access because of the Tumwater Creek ravine and the bluffs. The Northwest Planning Area has the largest segment of undeveloped residential land within the current City limits.

Southwest

The Southwest planning area includes Fairchild International Airport, the Clallam County Fairgrounds, Ocean View Cemetery, the Port Angeles Regional Transfer Station, The Extreme Sports Park property,

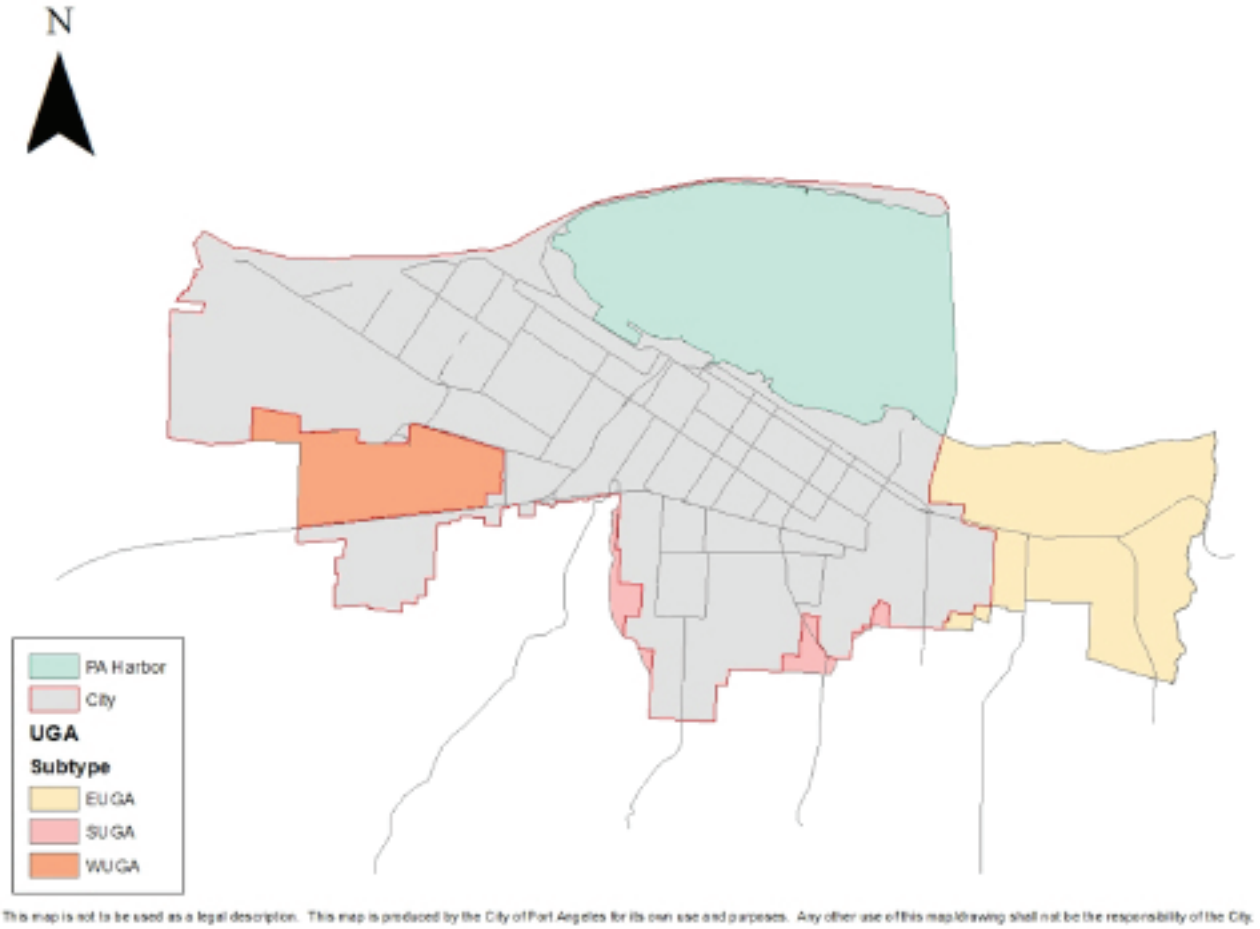


Figure A.10 – *Urban Growth Areas (UGAs) defined for purposes of this comprehensive plan.*

Fairchild International Airport and Lincoln Park. In 2005, the city annexed 358 acres of land into the southwest planning area. Much of the area is included in the Eclipse Industrial Park. Industrial development is located at the airport industrial park, and the area was annexed in 2005. A few homes lie within the City limits along Lower Elwha Road, but otherwise this planning area contains predominantly industrial and public land uses.

North Central

The North Central planning area is an older, denser portion of town. It is an area bounded on the west by the Tumwater Creek ravine and divided by Valley Creek and Peabody Creek ravines. It contains City Hall, Clallam County courthouse, the William Shore pool and the Carnegie Library museum. The commercial uses along Lincoln Street provide community shopping opportunities. Recreation is provided by a number of neighborhood parks. Much of the city's multifamily housing is within this planning area.

South Central

The South Central planning area is the area of town with newer homes on larger lots. This planning area was annexed into the City after much development had occurred. The street pattern changes from traditional townsite blocks to smaller lots in older areas and large blocks and cul-de-sacs in newer areas. The Port Angeles High School lies within this planning area. The Olympic National Park Headquarters and Visitors Center is along the Heart of the Hills Road.

East

The East planning area is the area east of Race Street to the eastern city limits. This area has a mix of older homes and newer residential subdivisions and development, as well as a portion of the First and Front Street commercial corridor. This planning area includes Peninsula College facilities and Peninsula Golf Club.

Urban Growth Areas

Eastern UGA

The Eastern Urban Growth Area (UGA) is generally the area east of the city limits. Remnant properties in the UGA that are located south of the city limits and east of Valley Creek are considered to be in this UGA until annexation occurs, whereby they will be considered to be part of the adjacent planning area. Policies for this planning area are adopted by Clallam County as a part of the Port Angeles Regional Comprehensive Plan.

Figure A.12 – *Downtown is Port Angeles' smallest neighborhood, but it's also the city's most dynamic, featuring dozens of shops, restaurants, beach and community gathering areas, and the Coho Ferry serving Victoria, BC. (Image: Studio Cascade, Inc.)*

Western UGA

The Western UGA is generally the area west and south of the City limits. Remnant properties in the UGA that are located south of the pre-2005 city limits, north of Highway 101 and west of Tumwater Creek as far as Reddick Road are considered to be in this UGA until annexation occurs, whereby they will be considered to be part of the adjacent planning area. Policies for this planning area are adopted by Clallam County as a part of the Port Angeles Regional Comprehensive Plan.

Neighborhoods

The City's planning areas are made up of 18 separate neighborhoods. The distinct neighborhoods are described in the following sections.

Downtown

The downtown neighborhood is the smallest neighborhood, extending north from the marine bluff to the waterfront and east from Valley Street to Chase Street on the east, and extending east along the Waterfront Trail to Vine Street (extended). The Downtown neighborhood is the traditional community center of the City. Many of the structures are two stories tall, with a few having residential uses on the second floor, or are used for offices. Many others are in disrepair, or are vacant. Buildings in the downtown area span several decades and architectural styles, some dating to the early 20th century. Few structures are more than two stories tall. The Lee Plaza is the major residential structure in the downtown area, and is managed by the Peninsula Housing Authority for low-income individuals. The City's Comprehensive Plan and zoning ordinance support increased residential uses in the downtown.

The downtown is a walkable neighborhood, with ample sidewalk areas, mid-block crosswalks and a large variety of eateries and gathering places. A locally-owned natural

foods market, specializing in organic products and locally-grown produce anchors the west end of the downtown area. Washington State Department of Health and Human Services operates out of a downtown location. Ample parking is scattered throughout the downtown area. There are no longer any large anchor chain stores in the Downtown, however there are many individual shops providing unique items, such as clothing, books, candy, brewing supplies, boutique clothing, athletic goods, auto parts, novelties, gifts, art and furniture.

Several City projects have been undertaken in the downtown in recent years. Water mains, sewer lines, sidewalks and street trees have been replaced. The sidewalks are constructed of pavers to enhance the aesthetics of the area.

A recent project has replaced shoreline armoring along a portion of Railroad Avenue west of the ferry landing. Improved waterfront treatments and removal of hard armoring in favor of two pocket beach areas has returned areas further west to a much more natural

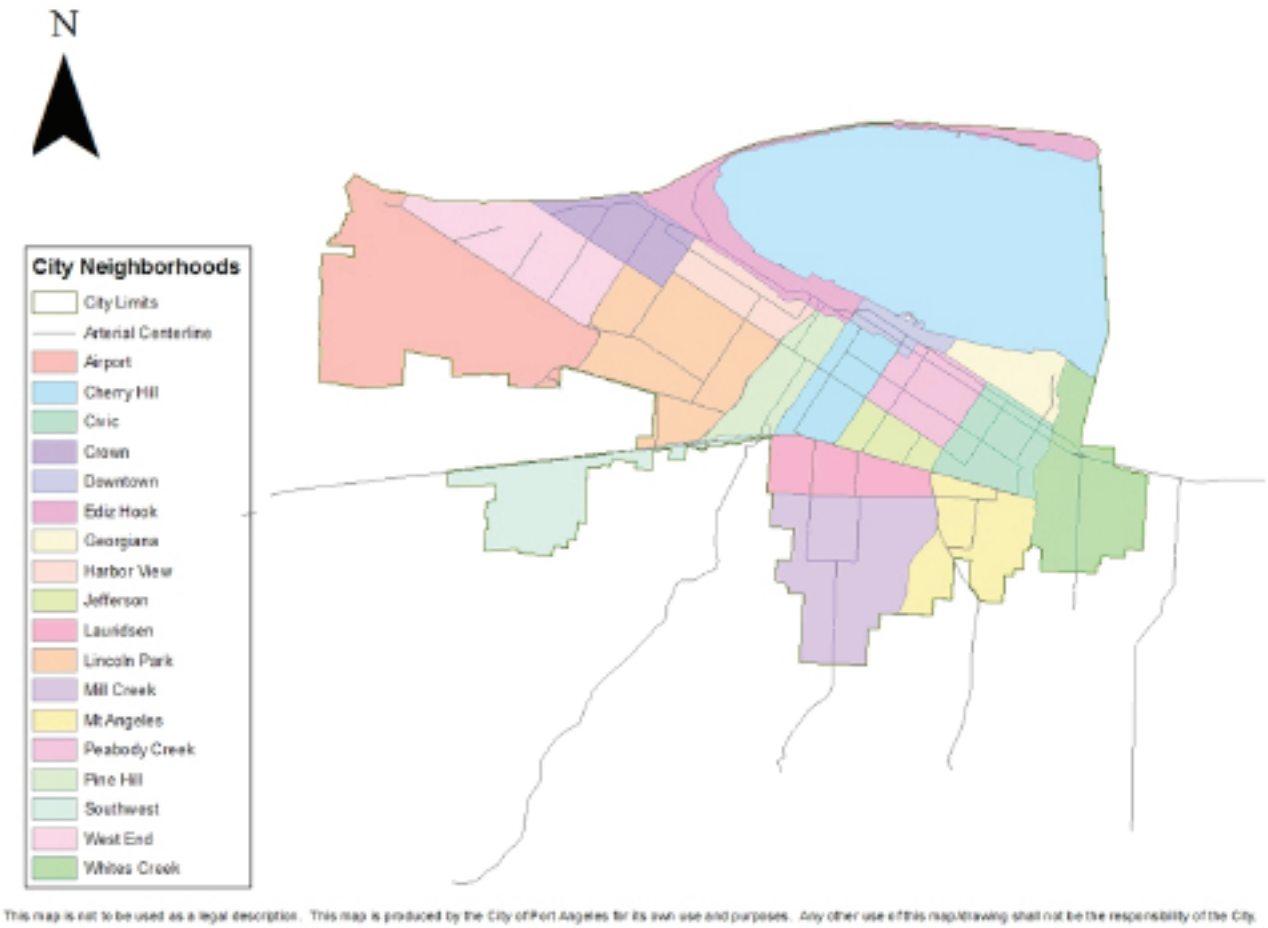


Figure A.11 – *Port Angeles neighborhoods defined for purposes of this comprehensive plan.*

Figure A.13 – *2016 updates to the Comprehensive Plan support greater housing diversity in Port Angeles neighborhoods, providing options for all. (Image: Studio Cascade, Inc.)*

appearance. This project also resulted in the formal extension of the Olympic Discovery/ Waterfront Trail through the downtown area, and created a block-long park on the west end of the Downtown, which complements City Pier Park located at the east end of the Downtown.

The Downtown is an international port, hosting the Coho Ferry, which provides direct access to Victoria Canada.

Pine Hill

The Pine hill neighborhood extends from the center of Valley Creek ravine on the east to the center of Tumwater Creek ravine on the west. The northern boundary of the neighborhood is the marine bluff and the southern boundary is Highway 101.

Pine Hill neighborhood is one of the older central city neighborhoods. The urban character of this neighborhood is similar to several other older neighborhoods, typically featuring 7,000 square-foot lots and standard grid pattern streets. The homes in this area typically are older structures built in the early 20th century, with a variety of more recent infill homes scattered throughout the area. The predominant style of house is typically American Craftsman.

The area is generally level, with a slight rise from north to south. This aspect limits views towards the water (north) but many homes have views of the Olympic Mountains to the south.

Very few commercial uses exist in this neighborhood. Those commercial uses that do exist are located along the 8th Street corridor. The Pine Hill neighborhood is only served by transit along 8th Street. Sidewalks do exist throughout the neighborhood.

West End

The West End neighborhood extends west from 'M' Street to the marine bluff, and south

from 10th Street to 18th Street, and is one of the least-developed areas of the city. Larger-lot zoning (up to 11,000 square feet) and the allowance for curvilinear streets and cul-de-sacs result in a more suburban character. The neighborhood contains five different zone designations, allowing a range of densities from less than four dwelling units per acre to 12.44 dwelling units per acre. Two residential manufactured home parks exist in the neighborhood. Serenity House of Clallam County, Clallam County Housing Authority, and Habitat for Humanity all have developed housing for low-income families in the area.

Much of this area remains undeveloped with large tracts of forested land. Two areas in the neighborhood have been set aside and used by industrial interests to store low-hazard waste materials, making those sites unlikely to be redeveloped in the near future.

Several newer (1970s to current) subdivisions have been developed in this neighborhood, however not all of the developed lots are occupied yet. Many excellent building sites are developed with urban services but remain vacant. Homes in the area are newer, many of them single-story, ranch style structures.

Although the development in this area is newer than other neighborhoods, streets are developed with few sidewalks for pedestrian use. No commercial services are available in the area. Due to this limitation, the neighborhood is not considered highly walkable. The Olympic Discovery Trail spans the neighborhood following Milwaukee Drive from 10th Street to 18th Street. The City-owned Ocean View Cemetery is located at the northwest limit of the neighborhood.

Views from this neighborhood are primarily to the Olympic Mountains; the few developments west of Milwaukee Drive have outstanding views of the Strait of Juan de Fuca.

Airport

The airport neighborhood extends west from 'M' Street to the western City limit and south from 18th Street to the City's southern limits, and is the City's largest neighborhood with 1,217 acres. The primary land use is the William Fairchild Airport. The airport also contains an industrial park situated on the north side of the runways and south of 18th Street. The neighborhood also contains the City's refuse transfer station, recycling center, and compost facility. The Extreme Sports Park is located in the neighborhood's southwest corner. Several large tracts of forested land and farm sites exist in this neighborhood. This is the least populated neighborhood in the City.

Cherry Hill

The Cherry Hill neighborhood extends from Lincoln Street on the east to Valley Creek on the west, and from Lauridsen Boulevard on the south to marine bluff on the north. This is an older neighborhood, and contains a large portion of the City's High Density Residential zoning located at the north end of the neighborhood. The southern portion of the neighborhood is primarily single-family residential zoning. The 8th Street commercial corridor separates the two zoning districts, and a second commercial corridor extends north and south along the west side of Lincoln Street.

The neighborhood contains three small parks and the east slope of the Valley Creek ravine. Homes in the area are mostly older structures.

Peabody Creek

The Peabody Creek neighborhood extends east of Lincoln Street to Race Street, and from 8th Street on the south to the Georgiana/Front alley on the north. The boundaries of the Peabody Creek neighborhood are all comprised of commercial corridors, with high-density residential uses west of Peabody Creek and single family residential uses east of the creek. Peabody Creek Ravine divides the neighborhood diagonally from the southeast to the northwest. The neighborhood contains Jesse Webster Park, Erikson Park, and the Dream Playground; it also contains City Hall, Clallam County Courthouse, and the Senior Center.

Crown

The Crown neighborhood extends from 'I' Street on the east to the marine bluff on the west and from 10th Street on the south to the top of the marine bluff on the north. The Crown neighborhood contains Crown Park which provides panoramic views from the bluff top. Hamilton Elementary School is located within this neighborhood. The neighborhood is primarily a single-family residential neighborhood and contains no commercial zones. Much of the housing in the area is newer and there are still areas that are undeveloped.

Ediz Hook

The Ediz Hook neighborhood is made up of Ediz Hook itself along with the waterfront area extending west of Valley Street. The neighborhood is unique in that there are no residential uses in the neighborhood, with the exception of full-time residential use of boats in the marina. The primary uses are industrial, with a few commercial activities that support the industries. Several large industries make up the major uses, including the McKinley Paper Company mill, Westport Marine and Platypus Marine. Tesoro Petroleum provides fueling operations for large ocean-going vessels. Icicle Seafoods and the Puget Sound Pilots office and facility are located at the east end of Ediz Hook. The

Port of Port Angeles owns and operates several industrial/commercial operations along the waterfront, including log storage and bark removal, topside repair of large ocean-going vessels, and berthing of navy support boats. They also own and operate the Boat Haven Marina. The Native American village Tse-wit-wen is also located within the Ediz Hook neighborhood. Ediz Hook itself provides outdoor recreation opportunities through the Sail and Paddle Park at the west end of the spit, and Harbor View Park at the east end. The parks are connected by an extension of the Olympic Discovery Trail. A boat launch is provided at the east end of the spit and at the Boat Haven Marina. Ediz Hook has recently undergone extensive habitat restoration efforts led by the Lower Elwha Klallam Tribe.

Georgiana

The Georgiana neighborhood extends north from the Georgiana/Front Street alley to the waterfront, and extends from Vine Street on the west to the Whites Creek Ravine on the west. Although this is primarily a single-family residential neighborhood, the Olympic Medical Center's hospital and associated medical support offices make up the bulk of uses in the central portion of the neighborhood. Two parks are located in the neighborhood - Georgiana Park and Francis Street Park - which provide access to the Waterfront Trail. The abandoned Rayonier Mill site is located on the waterfront at the east end of this neighborhood.

Harbor View

The Harbor View neighborhood extends from the Tumwater Creek Ravine west to 'I' Street and north from 8th Street to the marine bluff. This is also primarily a single-family residential zone, with commercial uses located only at the intersection of 8th and 'C' Street. Shane Park is the only park in the neighborhood.

Jefferson

The Jefferson neighborhood is located between Lincoln Street on the west and Race Street on the east. It is bounded on the south by Lauridsen Boulevard, and on the north by the 8th Street corridor. This neighborhood is also primarily a single-family residential neighborhood, with the exception of uses on the south side of the 8th Street corridor. Jefferson Elementary School is located in the southwest corner of the neighborhood.

Civic

The Civic neighborhood extends east from Race Street to the White's Creek ravine, and north from Lauridsen Boulevard to the Georgiana/ Front Street alley. The neighborhood contains the major commercial strip along First and Front Streets, but is otherwise a single-family neighborhood. Low- intensity commercial uses are also located along

Race Street. This neighborhood contains Civic Field - the City's major sports facility - the Fine Art Center, and Webster Woods, a premier art venue providing unique outdoor art.

Lauridsen

The Lauridsen neighborhood extends south of Lauridsen Boulevard to Park Avenue, and from the Valley Creek ravine on the west to Race Street on the east. Commercial uses in this neighborhood are confined to the western portion of Lauridsen Boulevard. The Housing Authority of Clallam County manages Mount Angeles View, an affordable housing project. Lyons Park is the only formal City park in the neighborhood.

Lincoln Park

The Lincoln Park neighborhood extends south from 8th Street to Highway 101 and west from Tumwater Truck Route west to 'M' Street (with some variation). Commercial areas are located along the 'C' Street corridor, and at the west end of the neighborhood along Highway 101. An industrial-zoned area exists at the south end of the Tumwater truck route, where several small manufacturing and construction-related industries exist. Park View Villas, a senior/retirement center, is located in this neighborhood as well as a cluster of high-density apartments found in the vicinity of the 'C' Street and Lauridsen Boulevard intersection. The remainder of the neighborhood is single- family residential.

Schools in the area include Stevens Middle School - the only middle school in the City - the North Olympic Skills Center, and Choice Alternative School. The former Lincoln School has become the Clallam County Historical Society headquarters, and is planned to become the Clallam County museum.

Lincoln Park is the City's largest park, and includes the Clallam County Fairgrounds, baseball fields, two ponds, and a large wooded area. Big Boy Pond, one of the City's largest wetland areas, is located west of Stevens Middle School.

Mill Creek

The Mill Creek neighborhood extends south from Park Street to the southern City boundary, and from the western City boundary to Race Street and Hurricane Ridge Road on the east. This neighborhood contains the northernmost portion of the Olympic National Park, and the Park headquarters building and maintenance area. Also located in this neighborhood is Port Angeles High School.

Areas directly surrounding the high school are primarily single-family residential uses situated on standard-size lots. The southern portion of the neighborhood is also single family residential, however those

lots are larger, less developed and are typified by newer homes. No commercial uses are located within the Mill Creek Neighborhood.

Mt. Angeles

The Mt. Angeles neighborhood extends south from Lauridsen Boulevard to the southern City limits, and from Hurricane Ridge Road on the west to the White's Creek ravine and the eastern City limits. A large portion of this neighborhood is occupied by Peninsula College, the only institution of higher education in the City. The neighborhood also contains Franklin Elementary School.

Land uses are primarily single-family residential on larger suburban-size lots; however, some medium and high-density residential uses are located near the college campus.

Southwest

The southwest neighborhood is located south of Highway 101 and includes the entire area annexed into the City in 2005.

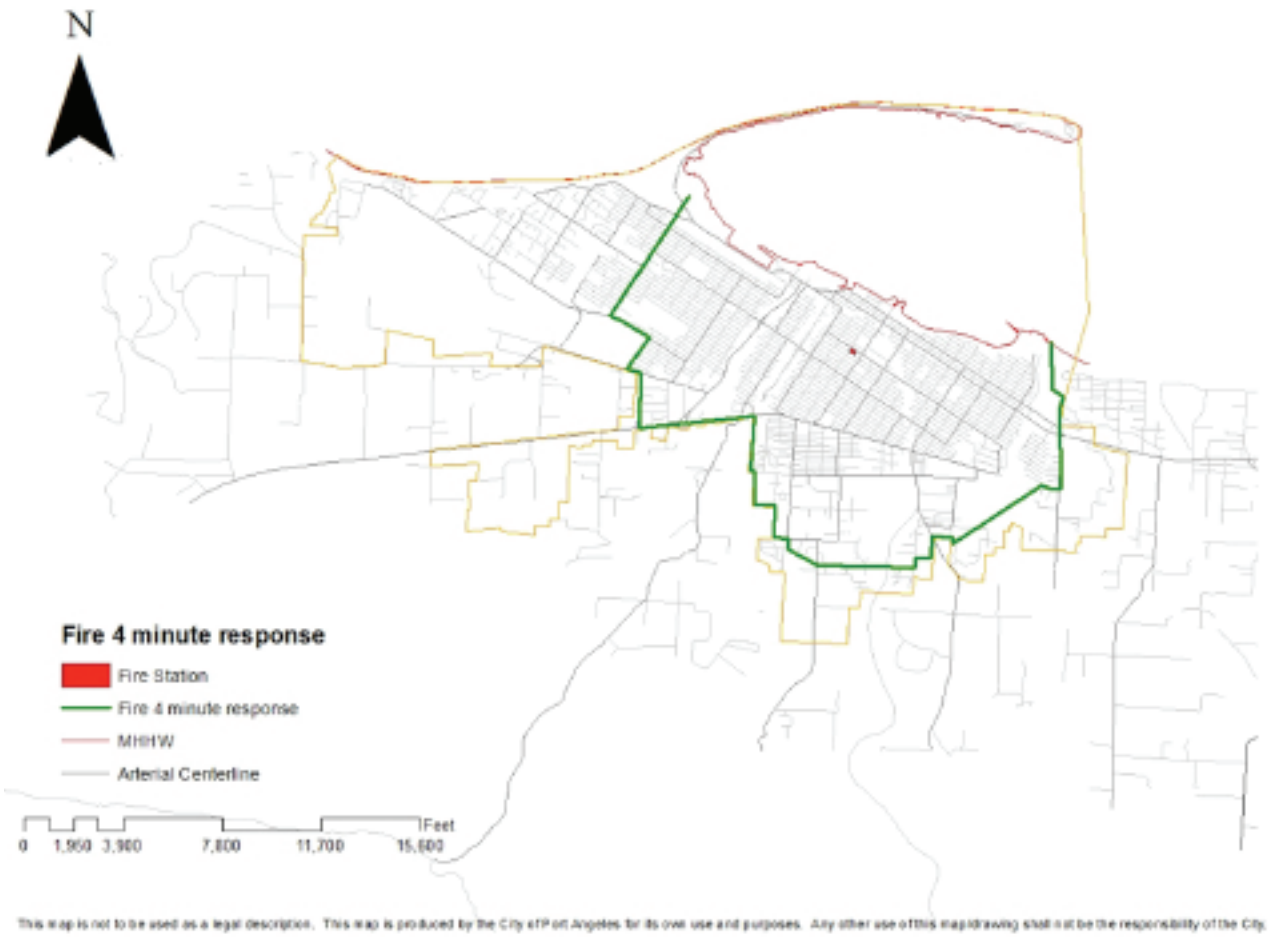


Figure A.17 – *Port Angeles' station and fire response map.*

White's Creek

The White's Creek neighborhood extends east from the White's Creek ravine east to the City limits on the north, south and east. This neighborhood contains a large private golf course, the only golf course in the City. Also contained within this neighborhood is the City's wastewater treatment plant, which now includes a five-million gallon storage tank recently acquired from Rayonier corporation. The area includes the eastern portion of the Rayonier mill site, which is currently unused and awaiting further cleanup efforts. Recently, the City constructed a new bridge spanning Ennis Creek to provide an appropriate crossing for sewer and stormwater pipes. The bridge is also capable of carrying vehicular traffic and the Olympic Discovery/ Waterfront Trail.

Housing

In 1990, 7,553 dwelling units were located in Port Angeles. By 1992, units had increased by 422 (or 5.6%) to a total of 7,975 dwelling units. By 2004, units had increased by another 797 (or 10%) to a total of 9,479 units. In the decade of the 1990s, the City of Port Angeles grew at a slow rate of 3.9%. The growth in the UGA during the same time was 6.3%. During the period of 1996 to 2003, building permit activity showed that only 10.7% of the county-wide residential building units were constructed in the City of Port Angeles, while 14.2% of the county's residential construction was in rural areas of the Port Angeles planning region. Recent amendments to the Comprehensive Plan are intended to reverse the City's no-growth trend.

Currently, the City has 6,834 parcels that are zoned for residential use. Of those residentially-zoned parcels, 761 are available for building. The City currently has a number of large undeveloped areas, and based on anticipated densities, currently undeveloped parcels would provide area for 2,280 additional dwelling units.

Transportation

The Regional Transportation Planning Organization (RTPO) has designated Port Angeles as a primary center of mixed-use development, and the City's UGA has been identified as a secondary center of mixed use development in the Regional Transportation Plan. Goals and policies in the Growth Management Element of this plan support focusing new growth and mixed-use opportunities in the City and UGA.

The road network in the City of Port Angeles is characterized by a gridded street pattern that is oriented east to west (parallel to the waterfront) and north to south. This pattern shifts slightly south of Lauridsen Boulevard, where the street orientation shifts to match the platting

pattern established by the County before City boundaries were expanded. The regular geometry of this pattern is generally retained, except where topography of the foothills, deep ravines or bluffs along the Strait of Juan de Fuca force road realignment. Some areas located in the western portion of the City also diverge from the grid pattern, forming a more curvilinear, suburban-style pattern.

Street grades are moderate in most areas, adapting to area topography - which rises from the waterfront and gently undulates as the foothills flatten to meet the Strait of Juan de Fuca. The most unique characteristic of the City's street network is the way it is interrupted by several deep ravines, which bisect east-west street connectivity and results in a limited number of streets that run continuously from one end of the City to the other.

The RTPO identifies US 101 as the only Highway of Statewide Significance in Port Angeles. The Level of Service (LOS) for Highways of Statewide Significance is established by Washington State Department of

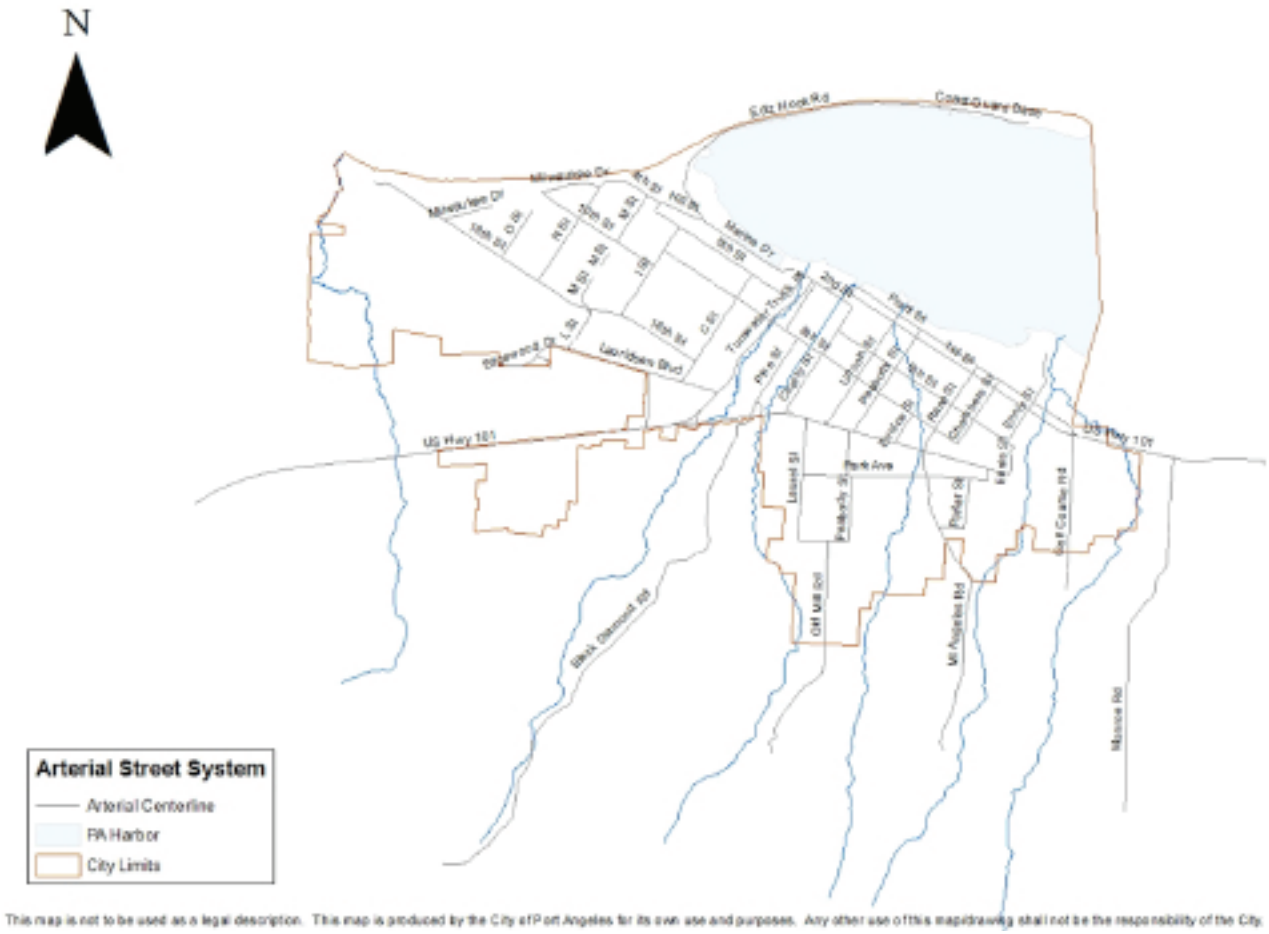


Figure A.14 – *Port Angeles' street system.*

Transportation. There are five Highways of Regional Significance through the City, including:

- US 101
- State Route 117 Tumwater Truck Route
- Race Street leading to the Olympic Park Visitor Center and Hurricane Ridge
- The First/Front Street couplet Marine Drive from US 101 to SR 117
- Lincoln/Laurel/Oak Streets connecting US 101 with the Coho Ferry landing on Railroad Avenue).

There is one designated truck route in the City that runs from east to west along the Front/First Street couplet to Tumwater Truck Route (State Route 117) and along Tumwater Truck Route south to US 101. All roads in Port Angeles including highways of statewide and regional significance operate at LOS "D" or better.

The City of Port Angeles is served by Clallam Transit System (CTS), the Public Transportation Benefit Area (PTBA) agency that serves Clallam County with a combination of fixed-route, paratransit, and vanpool services. Similar to trends seen by other rural transit providers during times of low fuel prices and strong economic growth, ridership has declined over the past several years.

The hub of CTS's fixed-route service is Gateway Transit Center, located at the corner of Lincoln and Front Streets in downtown Port Angeles. From Gateway Transit Center, passengers can board one of four routes circulating within the city or three routes connecting Port Angeles with Sequim, Forks, and Joyce. The Strait Shot, a regional express route started by CTS in 2017, connects Gateway Transit Center with the Bainbridge Island Ferry Terminal where travelers can make timed connections to Seattle, Seattle-Tacoma International Airport, and other regional destinations. An intermediate stop in Poulsbo provides connections with Kitsap Transit for service to Silverdale and Bremerton.

Paratransit service is provided to all locations within the city for those who qualify. Vanpools extend the reach of the transit network and are frequently used by those commuting to locations which are difficult to serve with fixed-route service

The Dungeness Line, a part of the Washington State Department of Transportation's rural transit program, provides twice-daily service between Port Angeles and the Seattle area, including regular stops at major hospitals, Greyhound, Amtrak, and Seattle-Tacoma International Airport.

The Port of Port Angeles is responsible for most operations along the waterfront, including ownership of the Black Ball Ferry Terminal, the Boat Haven Marina, and other waterfront properties supporting water related industry. The Port is also responsible for operations at Fairchild International Airport and the Airport Industrial Park.

The William R. Fairchild International Airport is located approximately three miles southwest of the central city and serves a combination of commercial and private aviation demands in the region. The airport is owned and operated by the Port of Port Angeles and is classified as a commercial service airport by both Federal Aviation Administration (FAA) and the Washington State Department of Transportation, Aviation Division (WSDOT Aviation). The airport serves the commercial service needs of the entire Peninsula including Clallam, Jefferson and portions of Mason Counties and the general aviation needs of Clallam and portions of Jefferson Counties. The airport has more than 800 acres of property, with 690 in aeronautical use, and 110 in industrial park use.

Two runways are available at the Airport for the needs of larger and smaller aircraft. The Primary runway is 6,350 feet long by 150 feet wide with the secondary smaller runway being 3,250 feet long by 50 feet wide and available during daylight hours only. The primary runway has the capacity for aircraft up to 115,000 pounds. The runway is equipped with an instrument landing system, visual approach slope indicator, eight runway-end identifier lights, medium intensity approach lighting

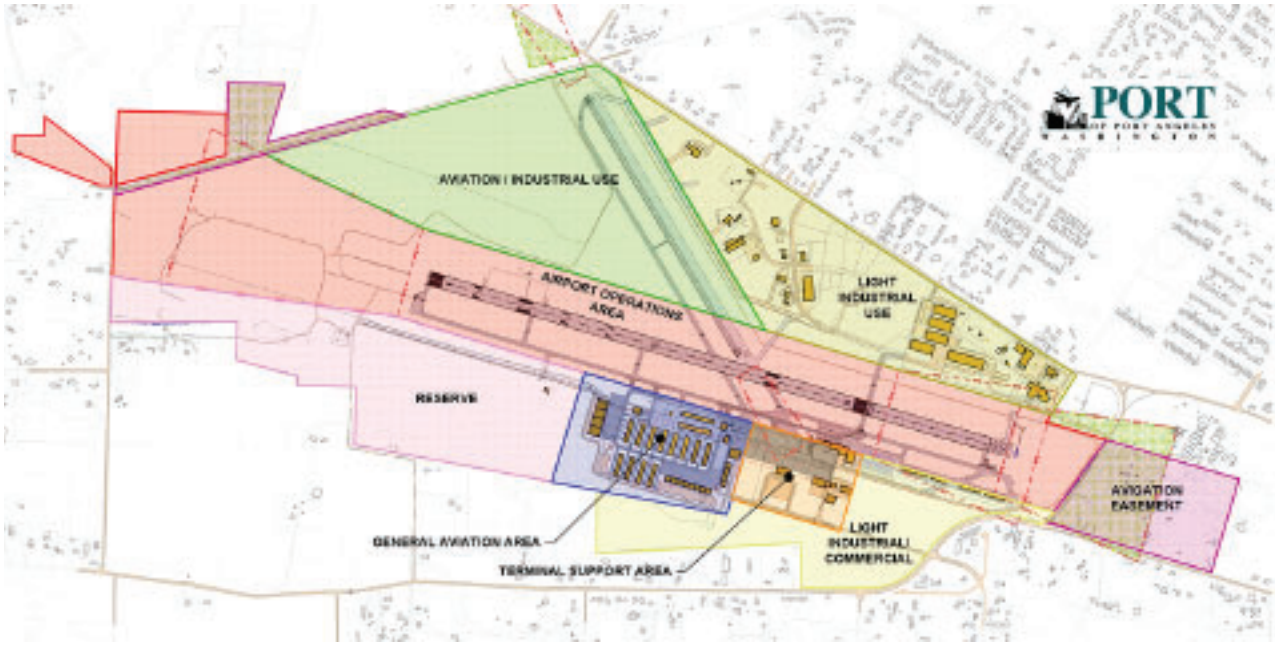


Figure A.16 – *Commercial flights to and from Fairchild Airport have ceased, but the facility remains an important part of Port Angeles' economic development strategy.*

system with runway alignment indicator, runway and taxiway lighting, and signage.

The 2011 Airport Master Plan describes the short, intermediate and long-term plans for facility development and maintenance. A copy of this plan is available on the Port of Port Angeles website at http://www.portofpa.com/ index.aspx?NID=276

Land uses surrounding the William R. Fairchild International Airport include residential, industrial and park/open space. The main landing approach area for the airport is over the most densely populated portion of the City, with the final approach over Lincoln Park located immediately east of the airport. Due to the height of the trees growing in Lincoln Park, debate over the future of Lincoln Park has been an on-going discussion.

The area to the west of the airport (the primary take-off area contains the City's solid waste Transfer Station, recycling center and composting facility. Farther to the west, the area is located in the County and is zoned Rural Low and Moderate density and Rural Character Conservation (RCC3) to maintain low-density residential areas in the flight

path area. The lands adjacent to the airport on both the north and south are designated and zoned as industrial to buffer the impacts that may be expected from airport use to less intense land uses adjacent to the airport.

Urban Services

Police

The Port Angeles Police Department provides the full range of police services within the city limits of Port Angeles, operates PenCom (the county wide 911 dispatch center for police, fire and EMS calls that represents 18 agencies) and works with allied agencies on a regional basis to include the Olympic Peninsula Narcotics Enforcement Team

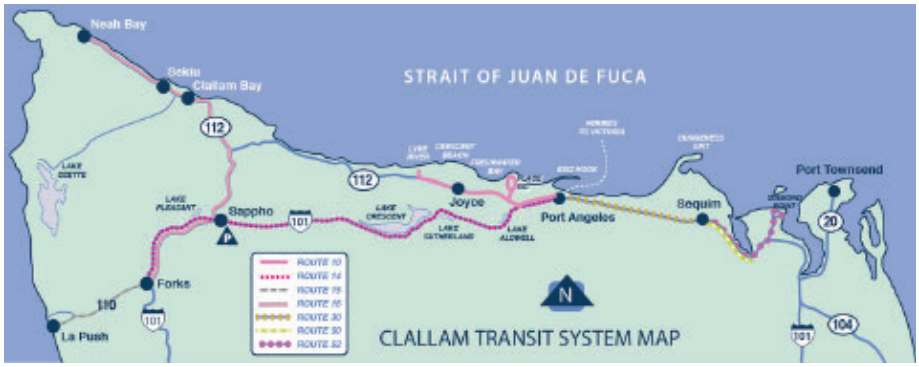


Figure A.15 – *The Clallam Transit system provides service covering large portions of the county. Four routes circulate within Port Angeles' city limits.*

(OPNET), police k-9 response and the Major Incident Response Team (MIRT). The police department provides patrol, crime prevention, community policing, a school resource officer, police k-9, crisis negotiators and criminal investigation services. The police operations headquarters and PenCom are located at City Hall. The Department has 62 personnel, which includes 32 authorized commissioned officers, 1 parking enforcement officer, 6 records specialists, 20 communications officers, 1 administrative coordinator and an additional 25 civilian police volunteers. The PenCom manager is a contracted position with Jefferson County 911.

Fire

The Port Angeles Fire Department provides fire response and advanced life support emergency medical services within the city limits of Port Angeles. The Fire Department headquarters station is located at 5th and Laurel Streets. The Department has 23 career personnel, including 21 firefighters who are cross-trained as emergency medical technicians, with 11 certified as paramedics. In addition to career personnel, the Department has an active volunteer component that is consolidated with the adjoining fire district.

Figure A.18 – *The Port Angeles Police Department also operates 911 dispatch services for police and fire operations across Clallam County.*

City Parks & Recreation Facilities

The City Parks and Recreation Department maintains over 114 acres of developed park land, another 81.5 acres of undeveloped land reserved for future park development, and 91.8 acres of undeveloped lands set aside for protection as open space. The Parks Department maintains 14 playground equipment sites, 13 baseball and/or softball fields, 9 football and/or soccer fields, and 12 tennis courts. Approximately 10 acres are taken up by community facilities. The Senior and Community Services Center and the Vern Burton Community Center provide a wide range of year-around recreational services.

Civic Field provides a full athletic complex for soccer, football and baseball, with lighting for nighttime activities, concessions, covered stadium seating, and locker rooms. The Carnegie Library has been converted to a museum leased by the Lower Elwha Klallam Tribe and neighbors the City's former fire hall. The City owns and operates the 41 acre Ocean View Cemetery.

Other city facilities include the Feiro Marine Life Center, located in City Pier Park, and a traditional native long house, the Loomis Building and several other log structures at Lincoln Park. The Port Angeles Fine Arts

Center is located in Webster Woods Park. Two public walkways connecting the downtown area with the residential area at the top of the bluff are owned and maintained by the City. One of those walkways terminates at the Conard Dyar Memorial Fountain in downtown. The City operates a boat launch ramp and floats for boat moorage on the eastern end of Ediz Hook. The City pier also provides moorage for transient boaters.

The City maintains the Olympic Discovery/ Waterfront Trail from Morse Creek to the Coast Guard Base entry on Ediz Hook and through the city to the western city limits at Lower Elwha Road.

Water Utility

The City of Port Angeles water service area includes the land within the city boundaries, along with services within Clallam County PUD No. 1, 52 Dry Creek customers, 5 Black Diamond customers, and one government account outside the city limits. The City also provides wholesale water to Clallam County PUD No. 1, subject to certain conditions consistent with GMA. In the City's 2002 Comprehensive Water Plan, the future service area limit was from Morse Creek to the Elwha River and bordered on the south by the Olympic National Park.

The current water supply for the City is from the Elwha River. The Elwha River Ranney Well System with a minimum yield of 11 million gallons was originally constructed in 1977 with major renovations made during the Elwha Dam removal project started in 2010. This source provides for domestic and commercial and some industrial needs of the City. There is also a separate industrial water supply line serving the McKinley Paper Co. Mill.

Figure A.19 – *Lincoln Park is one of Port Angeles' most diverse activity-oriented parks, including disc golf, a BMX track, a dog park, event facilities, fairground areas, wetlands and play fields. (Image: Studio Cascade, Inc.)*

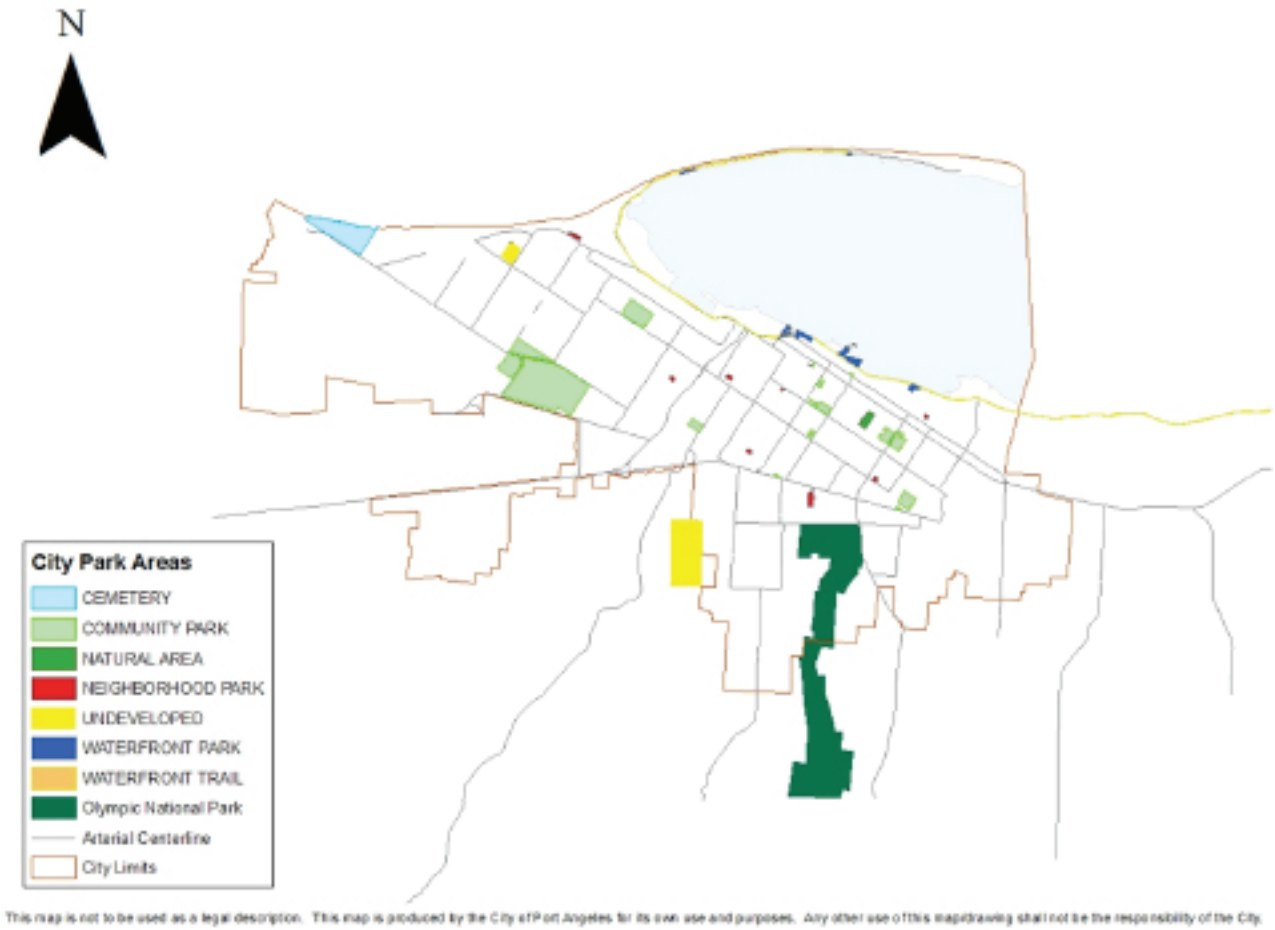
Stormwater Management

The City maintains all public storm sewers, culverts, and stormwater facilities, including the WSDOT conduits, culverts, and stormwater facilities along the US 101 corridor within the

city limits. The City is currently making a major shift in its approach to stormwater management, moving away from the more traditional system of hard surfaces draining to catch basins and being piped to the nearest water body to a more natural acting system of allowing stormwater to be absorbed into the earth through the installation of rain gardens and enhancing vegetative cover, including vegetated roof systems.

Wastewater Utility

The City's wastewater system includes a wastewater treatment plant (WWTP) built in 1968-69 as a primary treatment facility, and upgraded to a secondary wastewater treatment plant built in 1994. The plant is the trickling filter/solids contact treatment system. Biosolids are hauled to the City's composting facility where it is composted and sold for beneficial reuse. The sewer conveyance system includes 119 miles of sanitary and combined sewer pipe ranging from 4 to 36 inches in diameter, 17 pump stations, and two marine out-falls. The treatment



This map is not to be used as a legal description. This map is produced by the City of Port Angeles for its own use and purposes. Any other use of this map/drawing shall not be the responsibility of the City.

Figure A.20 – *Park and open-space areas in Port Angeles.*

Figure A.22 – *Port Angeles is working to diversify its local economy, growing marine trades and industries as well as activities related to the city's spectacular natural setting. (Image: Studio Cascade, Inc.)*

plant was modified most recently in 2014, when the first phase of the CSO Reduction program was completed. Modifications included a 4.9 million gallon storage tank for temporary storage of peak flows of sewage diluted by stormwater (combined sewage) during rain events, a refurbished deep water marine outfall providing improved dispersion of WWTP effluent, improvements to the trickling filters and headworks, and associated elements. The wastewater treatment plant (WWTP) located at the west end of Ennis Creek road, has a treatment capacity expected to be adequate beyond 2021. The wastewater treatment plant (WWTP) is rated at 10.8 million gallons per day (MGD) maximum month design flow, and can handle peak combined sewer flows of up to 20 MGD. The WWTP treated an average of 2.5 MGD of domestic sewage in 2014. Peak system flow capacities average 3.3 MGD (dry weather) with a maximum peak flow of 13.4 MGD. The peak system flow for 2014 was 9.86 MGD.

The second and final phase of the CSO Reduction program is under construction, and scheduled for completion in 2016. When complete, combined sewer overflows to Port Angeles harbor will be reduced to less than once per year per outfall location. By design, overflows will occur at the 8000 foot long refurbished marine outfall before they occur at the two near-shore outfalls. One outfall location will be eliminated entirely. This represents a significant reduction, from an average of over 70 overflow events per year, and is a big pollution control achievement for the City.

The Utility serves unincorporated areas of Clallam County (the Eastern and Western Urban Growth areas, and the Lower Elwha reservation land) and treats 2 million gallons annually of septage generated in Clallam and Jefferson County that is trucked to the WWTP. The WWTP treats about 0.5 million gallons of leachate generated by the COPA landfill and the Rayonier Mount Pleasant landfill annually.

The sewer system serves approximately 3,700 acres in Port Angeles. The city has mostly 8-inch local sanitary sewers and even some small 6-inch. However, the city's original collection system was designed as a combined sewer system with storm water. There were no storm sewers in the city until the 1950s. The existing storm sewer system grew in bits and pieces as individual renovation projects and Local Improvement Districts (LID) responded to local problems. The storm

sewers are 6" and 8" diameter due to the steep terrain of the city. The existing storm sewers run primarily in the north/south "short block" orientation picking up catch basins, which happen to be at the east/west "long block" intersections. In summary, the old downtown has combined sewers and the rest of the city has varying degrees of partially separated sewers.

The Wastewater Utility employs a Source Control Specialist as part of the Pretreatment program, to better control what comes to the WWTP and to provide education and technical assistance to business owners. Several sources of grease and oils have been identified and remedied to relieve sewer backups.

The Wastewater Utility staff operates, inspects, maintains and repairs the sewer conveyance system, the pump stations, and the WWTP. The Utility funds an organized program of Capital Improvement projects that is approved by City Council each year and includes a six-year plan for future projects.

Solid Waste Utility

The Solid Waste Utility operated by the Port Angeles Public Works and Utilities Department provides solid waste services. Residential customer's waste is picked up weekly or biweekly and collection is mandatory. Commercial customers are picked up 6 days a week. Curbside yard waste and recycling is offered and provided by a private contractor. Current participation in the curbside recycling program is 80% per cent of the residential customers. Curbside participation in the yard waste program is around 50% per cent of the residential customers.

The City of Port Angeles owns and operates the Port Angeles transfer station. The Port Angeles Regional Transfer Station began operation in 2007 after conversion from a landfill. The landfill conversion was mandated by the Federal Aviation Administration because of the potential for scavenger birds at the landfill interfering with air traffic from the adjacent airport. This site accepts municipal solid waste from residential, commercial, and industrial customers throughout Clallam County. The Port Angeles Regional Transfer Station does not accept out-of-county waste. Recycling drop boxes are provided and accept glass, aluminum, and paper. Used oil, antifreeze, and batteries are also accepted at the site. Municipal solid waste is transported to regional landfills in Eastern Washington or Oregon.

A second issue related to the landfill has been the release of buried refuse onto the beach as normal bluff erosion continued. Two major projects have been undertaken by the City to relocate waste materials and stabilize the bluff erosion to resolve the problem.

A composting facility for managing green yard waste received from the public, curbside yard waste pick-up and biosolids from the wastewater treatment plant at the facility. Yard waste and biosolids are processed then tested and becomes finished compost available for sale to the public.

Electric Utility

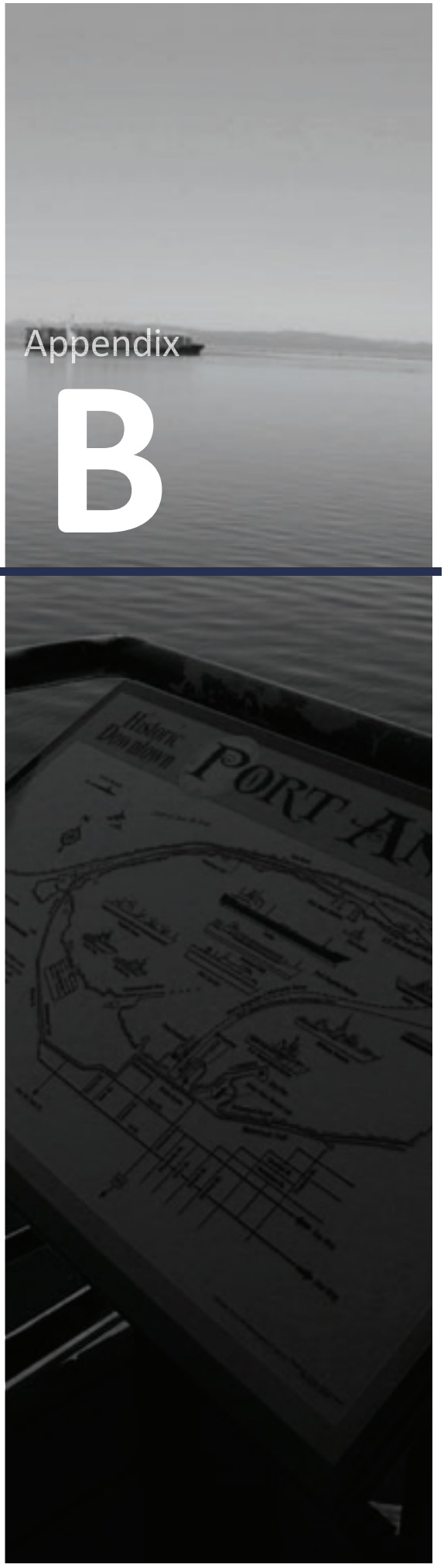
The Light Division of the City of Port Angeles Public Works and Utilities Department is the electric power provider within the city limits. Clallam County PUD is the electric power provider for the unincorporated areas surrounding Port Angeles. The Bonneville Power Administration (BPA) via its transmission lines delivers the power used by both the City of Port Angeles and Clallam County PUD The PUD has one substation within the Eastern UGA at Monroe Street, and another in the Western UGA near Benson Road and Highway 101. There are 7 electrical substations owned by the City of Port Angeles within the City limits.

Appendix

B

Definitions

The following definitions are for terms, which are used in this document and are provided for clarification purposes in the interpretation and implementation of the various goals and policies.



A

Action (Previously Objective)

A more specific subset of goals providing measurable and budgetable strategy.

Adequate Public Facilities

Facilities, which have the capacity to serve development without decreasing levels of service below locally, established minimums.

Affordable Housing

The adequacy of the community's housing stock to fulfill the housing needs of all economic segments of the population.

Accessory Residential Unit

A residential unit, which is subordinate in area, extent, or purpose to a principal residential unit and is located on the same zoning lot as the principal residential unit.

Available Public Facilities

That facilities or services are in place or that a financial commitment is in place to provide the facilities or services within a specified time.

B

Best Available Science

That scientific information prepared by local, state or federal natural resource agencies, a qualified scientific professional or team of qualified scientific professionals, that is consistent with criteria established in WAC 365-195-900 through WAC 365-195-925.

Best Management Practices

Methods or techniques found to be the most effective and practical means in achieving an objective (such as preventing or minimizing pollution) while making the optimum use of available resources.

Bio-retention BMP

Engineered facilities that store and treat stormwater by passing it through a specified soil profile, and either retain or detain the treated stormwater for flow attenuation. Refer to Chapter 7 of Volume V of the Department of Ecology's SWMMWW (2014) for Bio-retention BMP types and design specifications.

C

City

The City of Port Angeles, Washington.

Climatic Change

A change in global or regional climate patterns, especially a change due to an increase in the average atmospheric temperature. Climatic change may be attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels, but may also result from natural events such as volcanic eruption or earth quake

Cluster Commercial Development

Retail or other commercial uses, usually arranged in a group of buildings, that create a node of uses with a cohesive design plan and shared access points on an arterial street. Cluster commercial development is characterized by a cohesive design plan that includes at least two of the following elements: (1) pedestrian connections, (2) shared parking concepts, (3) buildings arranged in groups to create a node of commercial uses without individual street access points rather than along the linear pattern of a strip commercial development, and (4) common building design features and signage.

Community Services

Cultural, social and recreational services necessary to enhance the quality of life, such as libraries, parks and recreation services, fine arts, and festivals.

Concurrency

That adequate public facilities are available when the impacts of development occur. This definition includes the two concepts of "adequate public facilities" and of "available public facilities" as defined above.

Consistency

Requires that no feature of a plan or regulation is incompatible with any other feature of a plan or regulation. Consistency is indicative of a capacity for orderly integration or operation with other elements in a system.

County

Clallam County, Washington.

D

District

A portion of a planning area, which is defined by the primary uses located in that portion of the planning area.

Development

Any activity which would alter the elevation of the land, remove or destroy plant life, cause structures of any kind to be installed, erected, or removed, divide land into two or more parcels, or any use or extension of the use of the land.

Development Rights

A broad range of less-than-fee-simple-ownership interests.

Domestic Water System

Any system providing a supply of potable water, which is deemed adequate pursuant to RCW 19.27.097 for the intended use of a development.

E

Essential Public Facilities

Public capital facilities of a county-wide or state-wide nature which are typically difficult to site. Essential public facilities include the following:

- *Airports*
- *Hazardous waste facilities*
- *State education facilities*
- *State or regional transportation facilities*
- *State and local correctional facilities*
- *Solid waste handling facilities*
- *In-patient facilities including*
- *Substance abuse facilities*
- *Mental health facilities*
- *Group homes*
- *Regional Transit Authority facilities.*

Emergency Services

Services, which are a City responsibility, and consists of provisions for police, fire, emergency medical and disaster services.

Environmentally Sensitive/Critical Areas

Environmentally Sensitive Areas means any of the following areas and their associated buffers:

- *Aquifer recharge areas*
- *Streams or Stream corridors*
- *Frequently flooded areas*
- *Geologically hazardous areas:*
- *Erosion hazard areas*
- *Landslide hazard areas*
- *Seismic hazard areas*
- *Habitat areas for priority species and species of concern*
- *Locally unique features*
- *Ravines*
- *Marine bluff*
- *Beaches and associated coastal drift processes*
- *Wetlands.*

F

Facility

Something designed, built, installed or utilized for the specific purpose of providing a service.

Financial Commitment

That sources of public or private funds or combinations thereof have been identified which will be sufficient to finance public facilities necessary to support development and that there is reasonable assurance that such funds will be timely put to that end.

G

Goal

A general expression or broad statement of desired outcome in the City.

Growth Management Act

The Growth Management Act as enacted in Chapter 17, Laws of 1990 1st ex. sess., and chapter 32, Laws of 1991 sp. sess., State of Washington.

I

Impact Fees

Payments to the city for the acquisition and development of new infrastructure or facilities, i.e., parks, schools, transportation systems, etc., based on a per unit (impact) assessment.

Imprecise Margin

The area between land use designations is called an imprecise margin. The margin is used to provide flexibility in determining the boundary between various zones. When determining appropriate zoning designations for an area near a margin, the goals, policies and objectives of the Land Use Element should take precedence.

L

Level of Service (LOS)

An established minimum capacity of public facilities or services that must be provided per unit of demand or other appropriate measure of need.

Low Impact Development (LID)

A stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration be emphasizing conservation, use of on-site natural features, site planning and distributed stormwater management practices that are integrated into a project design.

M

Manufactured Home

A factory built, single-family structures that meet the National Manufactured Home Construction and Safety Standards Act (42 U.S.C. Sec. 5401), commonly known as the HUD (U.S. Department of Housing and Urban Development) Code.

Manufactured homes placed in Port Angeles must also meets the following requirements:

1) Consists of two or more fully enclosed parallel sections each of not less than 12 feet wide by 36 feet long
2) Bears an insignia issued by the appropriate federal agency indicating compliance with the construction standards of the U.S. Department of Housing and Urban Development (HUD) as amended and as approved by the State of Washington
3) Is placed on an on-grade permanent foundation or on footings and piers or on blocks in accordance with HUD's specifications for the specific home with skirting installed so no more than one foot of the skirting is visible above grade
4) Has all travel appurtenances removed
5) Is served by underground electrical power
6) Was originally constructed with and now has a composition or wood shake or shingle, coated metal, or similar roof of not less than 3:12 pitch.

Medical Services

Licensed professional medical services and retail services directly related to medical services, such as hospitals, physicians' clinics, and pharmacies.

Mixed-use

A type of urban development that blends residential, commercial, cultural, institutional, or industrial uses, where those functions are physically and functionally integrated, and that provides pedestrian connections.

N

Neighborhood

An area located within a district or planning area where people live, and is defined by the primary type and/or density of the residential units located in that particular area of the district.

P

Permeable Pavement

Pervious concrete, porous asphalt, permeable pavers or other forms of pervious paving material intended to allow passage of water through the pavement section. It often includes an aggregate base that provides structural support and acts as a stormwater reservoir.

Planning Area

A large geographical area of the City which is defined by physical characteristics and boundaries.

Policy

A topic-specific statement providing guidelines for current and future decision making.

Public Capital Facilities

Existing, new or expanded physical facilities, which are owned, licensed or sanctioned by a public entity, are large in size and serve a county-wide or statewide population. Public capital facilities of a county-wide or state-wide nature may include but are not limited to the following:

- *Airports*
- *State educational facilities*
- *State and federal transportation facilities*
- *Regional transportation facilities*
- *State correctional facilities*
- *Local correctional facilities*
- *Solid waste handling, disposal and storage facilities*
- *In-patient facilities including:*
  - *Abuse facilities*
  - *Mental health facilities*
  - *Group homes*
- *National, state and regional parks and recreational facilities*
- *Marine terminals*
- *Libraries*
- *Fairgrounds*
- *Hospitals*
- *County courthouse.*

Public Services

Includes fire protection and suppression, law enforcement, public health, education, recreation, environmental protection, and other governmental services.

Public Facilities

Includes streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, and schools.

R

Rain garden

A non-engineered shallow, landscaped depression, with compost-amended native soils and adapted plants. The depression is designed to pond and temporarily store stormwater runoff from adjacent areas, and to allow stormwater to pass through the amended soil profile.

Regional Transportation Plan

The transportation plan for the regional designated transportation system, which is produced by the regional transportation planning organization.

Regional Transportation Planning Organization

The voluntary organization conforming to RCW 47.80.020, consisting of local governments within a region containing one or more counties, which have common transportation interests.

Regulatory Reform Act

Engrossed Substitute House Bill, ESHB 1724 was enacted in 1995 to establish new approaches to make government regulation more effective, and to make it easier and less costly for citizens and businesses to understand and comply with requirements. ESHB 1724 amended a number of laws, including the Growth Management Act (GMA), Shoreline Management Act (SMA), and State Environmental Policy Act (SEPA). Commonly referred to as the Regulatory Reform Act, ESHB 1724 amended the Growth Management Act and State Environmental Policy Act to more thoroughly integrate the SEPA process into the planning process. Appeals of SEPA determinations or permits must also be consolidated so that only one public hearing is held. ESHB 1724 is codified by the City of Port Angeles in Chapter 18.02 PAMC.

Residential Care Services

The providing of residential care on a daily or live-in basis including special needs housing such as group homes, adult-care homes and day-care facilities.

S

Sanitary Sewer Systems

All facilities, including approved on-site disposal facilities, used in the collection, transmission, storage, treatment, or discharge of any waterborne waste, whether domestic in origin or a combination of domestic, commercial, or industrial waste.

School District

The Port Angeles School District No. 121.

Service

The supplying or providing of utilities, commodities, accommodations and/or activities.

Shall

Means the statement is mandatory, and the action so stated is required to be done without discretion by decision-makers. The use of "shall" in a statement indicates that the action is imperative and ministerial.

Should

Means the statement ought to be done, but the action so stated is not required to be done by decision-makers. The use of "should" in a statement indicates that discretion may be used in deciding whether or not to take action. The use of "should" is intended to give decision-makers discretion in matters where exceptions are warranted by such factors as physical hardships and special circumstances or when funding must be taken into consideration.

Solid Waste Handling Facility

Any facility for the transfer or ultimate disposal of solid waste, including landfills, waste transfer stations and municipal incinerators.

Social Services

Those services necessary to support life and health, such as food banks, hospices, home health, congregate care, and day care services.

Strip Commercial Development

Retail or other commercial uses, usually one-story high and one-store deep, that front on an arterial street with individual access points. Strip commercial development differs from central business districts, shopping centers, or other cluster commercial developments in at least two of the following characteristics:

1) There are no provisions for pedestrian access between individual uses
2) The uses are only one-store deep
3) The buildings are arranged linearly with individual street access points rather than clustered, and
4) There is no design integration among the buildings.

T

Transfer of Development Rights

The conveyance of development rights by deed, easement, or other legal instrument to another parcel of land and the recording of that conveyance.

Transportation Facilities

Facilities related to air, water, or land transportation.

Transportation Systems Management

The use of low capital expenditures to increase the capacity of the transportation system. TSM strategies include but are not limited to signalization, channelization, and bus turnouts.

U

Urban Growth

Refers to growth that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of the land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources. When allowed to spread over wide areas, urban growth typically requires urban governmental services. "Characterized by urban growth" refers to land having urban growth located on it, or to land located in relationship to an area with urban growth on it as to be appropriate for urban growth.

Urban Growth Area

Those areas designated by the County to accept future urban population densities with the intent of future annexation into the city pursuant to RCW 36.70A

Urban Services

Services that are normally available in an urban environment which include provisions for sanitary waste systems, solid waste disposal systems, water systems, urban roads and pedestrian facilities, transit systems, stormwater systems, police and fire and emergency services systems, electrical and communication systems, school and health care facilities, and parks.

Utilities

Enterprises or facilities serving the public by means of an integrated system of collection, transmission, distribution, and processing facilities through more or less permanent physical connections between the plant of the serving entity and the premises of the customer. Included are systems for the delivery of natural gas, electricity, telecommunications services, and water, and for the disposal of sewage.

W

Will

The statement is an action decision-makers intend to do to implement plan goals and policies. The use of "will" in a statement indicates that the outcome can be measured.

Work/live space

A living arrangement where the residential use and living area is subordinate in size to the work space.

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Appendix

C

GMA Requirements

The following pages list the minimum requirements for the various elements as listed in the State of Washington Revised Code of Washington (RCW) and Washington Administrative Code (WAC). Included with the requirements for each mandated element is a table, which shows how this comprehensive plan meets these requirements.

Requirements for the Land Use Element

This element shall contain at least the following features:

a) A future land use map showing city limits and urban growth area (UGA) boundaries. [RCW 36.70A.070(1), RCW 36.70A.110(6) and WAC 365-196-400(2), WAC 365-196-405(2)(i)(ii)]

b) Consideration of urban planning approaches that increase physical activity. [RCW 36.70A.070(1), WAC 365-196-405(2)(f)]

c) A consistent population projection throughout the plan which should be consistent with the Office of Financial Management forecast for the county or the county's sub-county allocation of that forecast. [RCW 43.62.035; WAC 365-196-405(2)(i)]

d) Estimates of population densities and building intensities based on future land uses, [RCW 36.70A.070(1); WAC 365-196-405(2)(i)]

e) Provisions for protection of the quality and quantity of groundwater used for public water supplies [RCW 36.70A.070(1)]

f) Identification of lands useful for public purposes such as utility corridors, transportation corridors, landfills, sewage treatment facilities, stormwater management facilities,

Table C.01 - *GMA Requirements for the Land Use Element*

Legislative Requirement	How requirements are addressed
1a	Land Use Element text
1a	Land Use Map, GIS database
1b	Community profile text
1b	Appendix A, EIS and addenda
1b	Land Use Element text
1b	Land Use Map, GIS database
1c & d	Community profile text
1e	Conservation Element: goals, policies and objectives
1d	Appendix A, EIS and addenda
1j	Conservation Element: goals, policies and objectives
1i	Shoreline Master Program
1j	Appendix E: Stormwater Management Plan
1k	PAMC 15.20: Environmentally Sensitive Areas Protection Ordinance
1k	Conservation Element: goals

recreation, schools, and other public uses. [RCW 36.70A.150; WAC 365-196-340]

1) Identification of open space corridors within and between urban growth areas, including land useful for recreation, wildlife habitat, trails, and connections of critical areas. [RCW 36.70A.160, WAC 365-196-335]

2) Policies, land use designation (and zoning) to discourage the siting of incompatible uses adjacent to general aviation airports. [RCW 36.70A.510, RCW 36.70A.547; WAC 365-196-475]

3) Policies, land use designation, and consistent zoning to discourage the siting of incompatible uses adjacent to military bases. [RCW 36.70A.530(3); WAC 365-196-475]

4) A review of drainage, flooding, and stormwater run-off in the area and nearby jurisdictions, and provide guidance for corrective actions to mitigate or cleanse those discharges that pollute water of the state. [RCW 36.70A.70(1), WAC 365-196-405(2)(c)]

5) Policies to designate and protect critical areas including wetlands, fish and wildlife habitat protection areas, frequently flooded areas, critical aquifer recharge areas and geologically hazardous areas. [RCW 36.70A.030(5), RCW 36.70A.172; WAC 365-195-900 through 925, WAC 365-190-080]

Requirements for the Housing Element

This element shall contain at least the following features:

a) Goals, policies, and objectives for the preservation, improvement, and development of housing. [RCW 36.70A.070(2)(b); WAC 365-196-410(2)(a)]

b) An inventory and analysis of existing and projected housing needs. (RCW 36.70A.070(2)(a); WAC 365-196-410 (2)(b) &(c)]

c) Identification of sufficient land for housing, including, but not limited to, government-assisted housing, housing for low-income families, manufactured housing, multifamily housing, and group homes and foster care facilities [RCW 36.70A.070(2)(c)]

d) Adequate provisions for existing and projected housing needs of all economic segments of the community. [RCW 36.70A.070(2)(d); WAC 365-196-410]

e) Identification of land use designation within a geographic area where increased residential development will assist

Table C.02 - *GMA Requirements for the Housing Element*

Legislative Requirement	How requirements are addressed
2a	Community profile text
2a	Appendix A, EIS and addenda
2a	Appendix C, *Measuring Housing Need: A Data Toolkit for Clallam County*
2a	Housing Element: goals, policies, and objectives
2b	Community profile text
2c	Community profile text
2c	Land Use Map, GIS database
2c	Appendix A; EIS and addenda
2d	Housing Element: goals, policies and objectives
2d	Land Use Map, GIS database
2e	Land Use Map, GIS database
2f	Land Use Element, Policy C6

achieving local growth management and housing policies. [RCW 36.70A.540; WAC 365-196-870]

f) Policies so that manufactured housing is not regulated differently than site built housing. [RCW 35.21.684, 35.63.160, 35A.21.312 &36.01.225]

Requirements for the Capital Facilities Element

This element shall contain at least the following features:

a) Policies or procedures to ensure capital budget decisions are in conformity with the Comprehensive Plan. [RCW 36.70A.120]

b) An inventory of existing capital facilities owned by public entities showing the locations and capacities of the capital facilities. [RCW 36.70A.070(3)(a); WAC 365-196-415(2)(a)]

c) A forecast of the future needs for such capital facilities. [RCW 36.70A.070(3)(b); WAC 365-196-415(b)]

d) The proposed locations and capacities of expanded or new capital facilities. [RCW 36.70A.070(3)(c); WAC 365-196-415(3)(C)]

e) At least a six-year plan identifying sources of public money to finance planned capital facilities. [RCW 36.70A.070(3)(d) &36.70A.120; WAC 365-196-415]

f) A policy or procedure to reassess the Land Use Element if probable funding falls short of meeting existing needs and to

Table C.03 - *GMA Requirements for the Capital Facilities Element*

Legislative Requirement	How requirements are addressed
3a	Capital Facilities Element: goals and policies
3b	Community Profile
3b	Appendices: E - Stormwater Management Plan; F - Comprehensive Water System Plan 2010; G - Transportation Services and Facilities Plan; H - Facility Plan for Port Angeles Secondary Level Wastewater treatment Facilities
3b	GIS database
3c	Appendix A; EIS and addenda
3d	Appendix A; EIS and addenda
3e	Capital Facilities Plan
3f	Capital Facilities Element: goals and policies

ensure that the Land Use Element, Capital Facilities Element, and financing plan within the Capital Facilities Element are coordinated and consistent. [RCW 36.70A.070(3)(e); WAC 365- 196-415]

Requirements for the Utilities & Public Services Element

This element shall contain at least the following features:

a) The general location, proposed location, and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines, and natural gas lines. [RCW 36.70A.070(4); WAC 365-196-420]

Table C.04 - *GMA Requirements for the Utilities and Public Services Element*

Legislative Requirement	How requirements are addressed
4a	Capital Facilities Element: Goals, policies and objectives
4a	Appendices: E - Stormwater Management Plan; F - Comprehensive Water System Plan; G - Transportation Services and Facilities Plan; H - Facility Plan for Port Angeles Secondary Level Wastewater Treatment Facilities; I. Capital Facilities Plan.
4a	GIS database

Requirements for the Transportation Element

This element shall contain at least the following features:

a) An inventory of air, water, and land transportation facilities and services, including transit alignments, state owned transportation facilities, and general aviation airports, to define existing capital facilities and travel levels as a basis for future planning.

b) Adopted levels of service (LOS) standards for all arterial streets, transit routes and highways to serve as a gauge to judge performance of the system. These standards should be regionally coordinated. [RCW 36.70A.070(6)(a)(iii)(B); WAC 365-196-430]

c) Identification of specific actions to bring locally-owned transportation and services to established Levels of Service (LOS). [RCW 36.70A.070(6)(iii)(D); WAC 365-196-430]

d) A forecast of traffic for at least ten years including land use assumptions used in estimating travel. [RCW 36.70A.070(6)(a)(i), 36.70A.070(6)(a)(iii)(E); WAC365-196-430(2)(f)]

e) A projection of state and local system needs to meet current and future demands. [RCW 36.70A070(6)(a)(iii)(F); WAC 365-196-430(2)(F)]

f) f) A pedestrian and bicycle component. [RCW 36.70A.070(6)(a) (vii); WAC 365-196-430(2)(k)(iv)]

g) A description of any existing and planned Transportation Demand Management (TMD) strategies, such as High-Occupancy Vehicle (HOV) lanes or subsidy programs, parking policies, etc. [RCW 36.70A.070(6)(a)(vi); WAC 365-196-430(2)(k)(iv)]

h) An analysis of future funding capability to judge needs against probable funding resources. [RCW 36.70A.070(6)(a)(iv) (A); WAC 365-196-430(2)(k)(iv)]

i) A multi-year financing plan based on the needs identified in the comprehensive plan, the appropriate parts of which shall serve as the basis for the six-year street, road, or transit program. [RCW 35.77.010 & RCW 36.70A.070(6)(a)(iv)(B); WAC 365-196-430(2)(k)(ii)]

j) If probable funding falls short of meeting identified needs, a discussion of how additional funding will be raised or how land use assumptions will be reassessed to ensure that level of service standards will be met [RCW 36.70A.070(6)(iv)(C); WAC 365-196-430(2)(L)(ii)]

k) A description of intergovernmental coordination efforts, including an assessment of the impacts of the transportation plan and land use assumptions on the transportation systems of adjacent jurisdictions and how it is consistent with the regional transportation plan. [RCW 36.70A.070(6)(a)(v); WAC 365-196-430(2)(a)(iv)]

Table C.05 - *GMA Requirements for the Transportation Element*

Legislative Requirement	How requirements are addressed
5a	Appendix A, EIS and addenda
5a	Appendix G: Transportation Services and Facilities Plan
5a	GIS database
5b	Capital Facilities Element: Goals, policies and objectives
5b	Transportation Element: Goals, policies and objectives
5b	Appendix A; EIS and addenda
5b	Appendices: E - Stormwater Management Plan; F - Comprehensive Water System Plan; G - Transportation Services and Facilities Plan; H - Facilities Plan for Port Angeles Secondary Level Wastewater Treatment Facilities, I - Capital Facilities Plan
5c	Capital Facilities Element: Goals, policies and objectives
5c	Appendices: E - Stormwater Management Plan; F - Comprehensive Water System Plan; G - Transportation Services and Facilities Plan, H - Facilities Plan for Port Angeles Secondary Level Wastewater Treatment Facilities; I - Capital Facilities Plan
5d	Transportation Element: Goals, policies and objectives
5e	Transportation Element: Goals, policies and objectives

Requirements for Siting Public Facilities

The Comprehensive Plan shall be consistent with the following:

a) A process or criteria for identifying essential public facilities. (EPF). [RCW 36.70A.200; WAC 365-196-550(d)]

b) Policies or procedures that ensure the Comprehensive Plan does not preclude the siting of essential public facilities. [RCW 36.70A.200(5); WAC 365-196-550(3)]

Table C.06 - *GMA Requirements for Siting Public Facilities*

Legislative Requirement	How requirements are addressed
6a	Definitions
6b	Capital Facilities Element: Goals, policies and objectives

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Appendix

D

Transportation Analysis

The following pages present a detailed analysis of Port Angeles' transportation system, evaluating system performance and likely impacts to it as a result of this comprehensive plan's adoption and implementation.

This memorandum summarizes an intersection and roadway segment level of service (LOS) assessment, supplemental to Port Angeles Comprehensive Plan Transportation Element, for state highways within the City of Port Angeles. This assessment includes a discussion data sources, traffic growth forecasts, existing and future year (2035) LOS, and how LOS deficiencies will be addressed by the Transportation Element.

DATA COLLECTION

Existing traffic data including weekday PM peak hour intersection counts and average daily traffic (ADT) along roadway segments was compiled from the following sources:

- Port Angeles Waterfront and Transportation Improvement Plan (2012)
- Lauridsen Boulevard Bridge Replacement Project (2014)
- Nippon Paper Industries USA Company Biomass Cogeneration Project EIS (2010)
- WSDOT Traffic Data GeoPortal (ADT counts current to 2015)

Additionally, a weekday PM peak hour intersection count at E 1st Street (US 101) / E Front Street / S Golf Course Road count was conducted in April 2017.

TRAFFIC GROWTH FORECAST

The Growth Management Act requires a city's Transportation Element to include traffic forecasts that are consistent with Land Use Element growth assumptions and describe conditions at least

10 years into the future. Previously, Fehr & Peers developed a citywide travel model for the Port Angeles Waterfront and Transportation Plan that includes existing and 2035 forecasting scenarios. For the 2035 scenario, it was assumed that existing land uses and regional trip-making would grow at a rate of 1.5% per year. These growth assumptions are in line with the Comprehensive Plan local population growth projections, which also estimate annual growth between 2010 and 2035 to occur at 1.5% per year (Pg. 30, Table 7). However, it should be noted that between 2010 and 2015, the City population grew from 19,038 to an estimated 19,448, a rate of 0.4% per year. Because growth has been somewhat lower than projected, the traffic growth forecasts developed from the citywide travel model may be considered conservative.

INTERSECTION LEVEL OF SERVICE ANALYSIS

The following intersections were analyzed for PM peak hour under existing and forecasted 2035 conditions:

1. US 101 / SR 117
2. US 101 (E Lauridsen Boulevard) / S Lincoln Street
3. US 101 (S Lincoln Street) / E 8th Street
4. US 101 (N Lincoln Street) / E 1st Street
5. US 101 (N Lincoln Street) / E Front
6. US 101 (E 1st Street) / S Race Street
7. US 101 (E Front Street) / S Race Street
8. US 101 (E 1st Street & E Front Street) / Golf Course Road
9. SR 117 / Marine Drive

Level of service (LOS) and average intersection delay was calculated for each intersection by the methods described in the following sections.

Signalized Intersection Methodology. Traffic operations at signalized intersections are evaluated using the LOS method described in Chapter 16 of the Highway Capacity Manual (HCM). A signalized intersection's LOS is based on the weighted average control delay measured in seconds per vehicle and includes initial deceleration delay, queue move-up time, stopped delay, and final

acceleration. Table 1 summarizes the relationship between the control delay and LOS for signalized intersections.

Unsignalized Intersection Methodology. Traffic conditions at unsignalized intersections are evaluated using the method from Chapter 17 of the HCM. With this method, operations are defined by the average control delay per vehicle (measured in seconds) for each movement that must yield the right-of-way. For all-way stop-controlled intersections, the average control delay is calculated for the intersection as a whole. At two-way or side street-controlled intersections, the control delay (and LOS) is calculated for each controlled movement, the left turn movement from the major street, and the entire intersection. Table 1 summarizes the relationship between delay and LOS for unsignalized intersections.

TABLE 1: INTERSECTION LEVEL OF SERVICE CRITERIA

Level of Service	Description	Average Control Delay (seconds per vehicle)	
		Signalized Intersection	Unsignalized Intersection
A	Little or no delays	< 10.0	< 10.0
B	Short traffic delays	> 10.0 to 20.0	> 10.0 to 15.0
C	Average traffic delays	> 20.0 to 35.0	> 15.0 to 25.0
D	Long traffic delays	> 35.0 to 55.0	> 25.0 to 35.0
E	Very long traffic delays	> 55.0 to 80.0	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 80.0	> 50.0

Source: *Highway Capacity Manual 5th Edition (Transportation Research Board, 2010)*

LOS Standards. The Capital Facilities Element of the Port Angeles Comprehensive Plan states that "all arterial streets shall function at an average daily Level of Service (LOS) of D or better." In addition, it notes that Highways of Statewide Significance (US 101) should function at LOS D or better, per the WSDOT and the Peninsula Regional Transportation Planning Organization.

LOS Results. Traffic operations were analyzed using the Synchro 9 software package. Synchro calculations are based on procedures outlined in the HCM and described in the preceding sections for signalized and unsignalized intersections. Table 2 shows the LOS results for the

existing and forecasted 2035 weekday PM peak hour. Under existing conditions, all intersections operate at LOS C or better. Under the 2035 forecast conditions, several intersections along the US 101 corridor would degrade to LOS D operations, but none would exceed the LOS D threshold established by WSDOT and the Peninsula Regional Transportation Planning Organization.

TABLE 2: INTERSECTION OPERATIONS SUMMARY – PM PEAK HOUR

#	Intersection	Control	Existing Conditions		2035 Forecast	
			Delay[3]	LOS[3]	Delay[3]	LOS[3]
1	US 101 / SR 117	SSSC[1]	19	C	24	C
2	US 101 (E Lauridsen Boulevard) / S Lincoln Street	Signal	11	B	14	B
3	US 101 (S Lincoln Street) / E 8th Street	Signal	34	C	44	D
4	US 101 (N Lincoln Street) / E 1st Street	Signal	25	C	36	D
5	US 101 (N Lincoln Street) / E Front	Signal	28	C	45	D
6	US 101 (E 1st Street) / S Race Street	Signal	21	C	47	D
7	US 101 (E Front Street) / S Race Street	Signal	10	A	11	B
8	US 101 (E 1st Street & E Front Street) / S Golf Course Road	Signal	11	B	17	B
9	SR 117 / Marine Drive	Signal	16	B	27	C

Notes:
1. Signal = signalized intersection
2. SSSC = side-street stop-controlled intersection
3. Traffic operations results include LOS (level of service) and delay (seconds per vehicle). LOS is based on delay thresholds published in the *Highway Capacity Manual 5th Edition* (Transportation Research Board, 2010).

Source: Fehr & Peers, May 2017.

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

The following roadway segments were analyzed for PM peak hour under existing and forecasted 2035 conditions:

1. SR 117 from Marine Drive to US 101
2. US 101 from Cameron Road (West City Limits) to SR 117

3. US 101 from SR 117 to E Lauridsen Boulevard / S Lincoln Street
4. US 101 from S E Lauridsen Boulevard / S Lincoln Street to E 1st Street / E Front Street
5. US 101 (E Front Street) from S Lincoln Street to S Golf Course Road
6. US 101 (E 1st Street) from S Lincoln Street to S Golf Course Road
7. US 101 from S Golf Course Road to N Baker Street (East City Limits)

Level of service (LOS) was calculated for each intersection by the methods described in the following sections.

Roadway Segment LOS Methodology. Roadway segment LOS can be measured by comparing bi-directional traffic volume to Maximum Service Volume (MSV). For this analysis, each study segment is assigned a maximum PM peak hour service volume, or capacity. If the actual two-way PM peak hour volume on the segment exceeds the MSV, then the segment does not meet the LOS standard. WSDOT does not maintain a protocol for selecting MSVs for state routes, so a set of tables developed by the Florida Department of Transportation (FDOT) based on the *Highway Capacity Manual 5th Edition* (Transportation Research Board, 2010) was used to assign MSVs to the roadway segments and determine grade A – F LOS thresholds. These FDOT tables can be found in Appendix A. The MSV threshold is determined by factors such as area type (urban or rural context), number of lanes, presence of median, speed, and presence of turn lanes.

LOS Standards. The Capital Facilities Element of the Port Angeles Comprehensive Plan states that "all arterial streets shall function at an average daily Level of Service (LOS) of D or better." In addition, it notes that Highways of Statewide Significance (US 101) should function at LOS D or better, per the WSDOT and the Peninsula Regional Transportation Planning Organization.

LOS Results. The calculation of roadway segment MSV thresholds and LOS grades is summarized in Table 3. Under existing conditions, all roadway segments operate at LOS D or better. Under the 2035 forecast conditions, one roadway segment (US 101 from S Golf Course Road to N Baker Street) would operate at LOS F, exceeding the LOS D threshold established by WSDOT and the Peninsula Regional Transportation Planning Organization. As discussed in the following section, the Port Angeles Transportation Element and Capital Facilities Element contain several policies and objectives that would address congestion and capacity on this corridor. All other roadway segments would operate at LOS D or better under 2035 conditions.

TABLE 3: ROADWAY SEGMENT OPERATIONS SUMMARY – PM PEAK HOUR

#	Roadway Segment	Existing Conditions			2035 Forecast		
		Bi-directional Volume	MSV[1]	LOS	Bi-directional Volume	MSV[1]	LOS
1	SR 117 from Marine Drive to US 101	610	2,170	B	780	2,170	C
2	US 101 from Cameron Road (West City Limits) to SR 117	1,200	2,170	C	1,470	2,170	C
3	US 101 from SR 117 to E Lauridsen Boulevard / S Lincoln Street	980	1,330	D	1,280	1,330	D
4	US 101 from S E Lauridsen Boulevard / S Lincoln Street to E 1st Street / E Front Street	840	1,330	D	990	1,330	D
5	US 101 (E Front Street) from S Lincoln Street to S Golf Course Road	1,500	1,927	D	1,730	1,927	D
6	US 101 (E 1st Street) from S Lincoln Street to S Golf Course Road	1,600	1,927	D	1,840	1,927	D
7	US 101 from S Golf Course Road to N Baker Street (East City Limits)	3,100	3,580	C	3,970	3,580	F

Notes:
1. MSV = maximum service volume, as determined by Florida Department of Transportation generalized service volume tables (Appendix A)
Source: Fehr & Peers, May 2017.

MITIGATION MEASURES

As discussed in the previous section, the roadway segment of US 101 from S Golf Course Road to N Baker Street would operate at LOS F, exceeding the established LOS D threshold. The Port

Angeles Transportation Element and Capital Facilities Element contain several policies and objectives that would address this deficiency through planning and inter-agency coordination:

- **Transportation Element, Goal B, Policy 3** – *The City should facilitate an additional route for local cross-town traffic across White's Creek ultimately connecting with US 101.*
- **Transportation Element, Goal B, Policy 19** – *The City should work with other jurisdictions to identify and protect a right-of-way for a second street accessing the City from the East.*
- **Transportation Element, Goal B, Objective 5** – *The City will prepare a study to evaluate options for easterly access across Whites and Ennis Creeks in the vicinity of Golf Course Road.*
- **Transportation Element, Goal B, Objective 19** – *The City will coordinate with the County, RTPO, and State and Federal agencies in the study of a possible future US 101 corridor including the Heart of the Hills Parkway and Coastal Corridor concepts. East of Race Street, the alternate local cross-town route (along Lauridsen Boulevard) will not be considered as a future US 101 corridor.*
- **Capital Facilities Element, Goal A, Policy 7** – *The comprehensive service and facilities plan for streets, bikeways, and pedestrian walkways should include a future US 101 corridor to meet long-term local and regional transportation needs.*