

Background on The Olympic Peninsula



The **Olympic Peninsula** is the large arm of land in [western Washington](#) state of the [USA](#), that lies across [Puget Sound](#) from [Seattle](#). It is bounded on the west by the [Pacific Ocean](#), the north by the [Strait of Juan de Fuca](#), and the east by [Puget Sound](#). [Cape Alava](#), the westernmost point in the contiguous [United States](#), and [Cape Flattery](#), the north-westernmost point, are on the peninsula. The Olympic Peninsula contained many of the last unexplored places in the lower 48. It remained largely unmapped until Arthur Dodwell and Theodore Rixon mapped most of its topography and timber resources between 1898 and 1900.

The Olympic Peninsula is home to [temperate rain forests](#), including the [Hoh](#), [Queets](#), and [Quinault](#). Rain forest vegetation is concentrated primarily in the western part of the peninsula, as the interior mountains create a [rain shadow](#) effect in areas to the east, resulting in a much drier climate in those locales.

The [Olympic mountain range](#) sits in the center of the Olympic Peninsula. This range is the second largest in Washington State. Its highest peak is [Mt. Olympus](#).

Major salmon-bearing rivers on the Olympic Peninsula include, clockwise from the southwest: the [Humptulips](#), the [Quinault](#), the [Queets](#), the [Quillayute](#), [Bogachiel](#), the [Sol Duc](#), the [Lyre](#), the [Elwha](#) (see [Elwha Ecosystem Restoration](#)), the [Dungeness](#), the [Dosewallips](#), the [Hamma Hamma](#), the [Skokomish](#), and the [Wynoochee River](#).

Natural lakes on the peninsula include [Kitsap Lake](#), [Lake Crescent](#), [Lake Ozette](#), [Lake Sutherland](#), [Lake Quinault](#), and [Lake Pleasant](#). Four dammed rivers form the reservoirs of [Lake Aldwell](#), [Lake Mills](#), [Lake Cushman](#), and [Wynoochee Lake](#).

From [Olympia](#), the state capital, [U.S. Route 101](#) runs along the Olympic Peninsula's southern edge and up the western and northern shorelines. Port Angeles, the Peninsula's second largest town, was once designated as The United States Auxiliary Capitol.

Archaeological evidence suggests that the [Pacific Northwest](#) was one of the first populated areas in North America. Animal and human bones 13,000 years old have been found across Washington and evidence of [human habitation](#) in the [Olympic Peninsula](#) dates back to approximately 9,000 BCE, 3,000 to 5,000 years after massive flooding of the [Columbia River](#) which carved the [Columbia Gorge](#).

Anthropologists estimate there were 125 distinct Northwest tribes and 50 dialects in existence before the arrival of Euro-Americans in this region. Throughout the [Puget Sound](#) region, coastal tribes made use of the region's abundant natural resources, subsisting primarily on salmon, halibut, shellfish, and whale. [Cedar](#) was an important building material and was used by tribes to build both longhouses and large [Canoes](#). Clothing was also made from the bark of cedar trees.

The principal tribes of the coastal areas include the [Chinook](#), [Lummi](#), [Quinault](#), [Makah](#), [Quileute](#), and [Snohomish](#). The Plateau tribes include the [Cayuse](#), [Nez Percé](#), [Okanogan](#), [Palouse](#), [Spokane](#), [Wenatchee](#), and [Yakima](#). Today, Washington contains more than 20 Indian reservations, the largest of which is for the Yakima.

At [Ozette](#), in the northwest corner of the state, an ancient village was covered by a mud slide, perhaps triggered by an earthquake about 500 years ago. More than 50,000 well-preserved artifacts have been found and cataloged, many of which are now on display at the Makah Cultural and Research Center in [Neah Bay](#). Other sites have also revealed how long people have been there. Thumbnail-sized quartz knife blades found at the Hoko River site near Clallam Bay are believed to be 2,500 years old.

The first European record of a landing on the Washington coast was in 1774 by Spaniard [Juan Pérez](#). One year later, Spanish Captain Don [Bruno de Heceta](#) on board the *Santiago*, part of a two-ship flotilla with the *Sonora*, landed near the mouth of the [Quinault River](#) and claimed the coastal lands up to the Russian possessions in the north.

In 1778, the British explorer Captain James Cook sighted [Cape Flattery](#), at the entrance to the Strait of Juan de Fuca. But the strait itself was not found until [Charles William Barkley](#), captain of the *Imperial Eagle*, sighted it in 1787. Barkley named it for [Juan de Fuca](#). The Spanish-British [Nootka Conventions](#) of the 1790s ended Spanish exclusivity and opened the Northwest Coast to explorers and traders from other nations, most notably Britain, Russia, and the fledgling United States. Further explorations of the straits were performed by Spanish explorers [Manuel Quimper](#) in 1790 and [Francisco de Eliza](#) in 1791 and then by British Captain [George Vancouver](#) in 1792. Captain Vancouver claimed the sound for Britain and named the waters south of the [Tacoma Narrows Puget's Sound](#), in honor of [Peter Puget](#), then a lieutenant accompanying him on the [Vancouver Expedition](#). The name later came to be used for the waters north of Tacoma Narrows as well. Vancouver and his expedition mapped the coast of Washington from 1792 to 1794.

Seattle is the northernmost [major city](#) in the [contiguous United States](#), and the largest city in the [Pacific Northwest](#) and the state of [Washington](#). It is a major [seaport](#) situated on a narrow [isthmus](#) between [Puget Sound](#) (an arm of the [Pacific Ocean](#)) and [Lake Washington](#), about 114 miles (183 km) south of the [Canada – United States border](#), and it is named after [Chief Sealth "Seattle"](#), of the [Duwamish](#) and [Suquamish native tribes](#). Seattle is the center of the [Seattle–Tacoma–Bellevue metropolitan statistical area](#)--the [15th largest metropolitan area in the United States](#), and the largest in the [northwestern United States](#). The 2010 census found that Seattle is home to 608,660 residents within a [metropolitan area](#) of some 3.4 million inhabitants. The [Port of Seattle](#), which also operates [Seattle–Tacoma International Airport](#), is a major gateway for trade with Asia and cruises to Alaska, and is the 8th largest port in the United States in terms of container capacity.

The Seattle area has been inhabited for at least 4,000 years, but European settlement began only in the mid-19th century. The first permanent European-descended settlers were [Arthur A. Denny](#) and his group of travelers, subsequently known as the [Denny Party](#), who arrived November 13, 1851. Early settlements in the area were called "New York-Alki" ("Alki" meaning "by and by" in [Chinook Jargon](#)) and "Duwamps". In 1853, [Doc Maynard](#) suggested that the main settlement be renamed "Seattle", an [anglicized](#) rendition of the name of Sealth, the chief of the two local tribes. From 1869 until 1982,

Seattle was known as the "Queen City". Seattle's current official nickname is the "Emerald City", the result of a contest held in 1981; the reference is to the lush evergreen forests of the area. Seattle is also referred to informally as the "Gateway to Alaska", "Rain City", and "Jet City", the last from the local influence of [Boeing](#). Seattle residents are known as [Seattleites](#).

Seattle is the birthplace of [rock](#) legend [Jimi Hendrix](#) and the rock music style known as "[grunge](#),"^[16] which was made famous by local groups [Nirvana](#), [Soundgarden](#), [Alice in Chains](#), and [Pearl Jam](#). In more recent years, Seattle has been known for [indie rock](#) music. The city has a reputation for heavy [coffee consumption](#); coffee companies founded or based in Seattle include [Starbucks](#), [Seattle's Best Coffee](#),^L and [Tully's](#).

Researchers at [Central Connecticut State University](#) consistently rank Seattle and [Minneapolis](#) as the two most [literate cities among America's largest cities](#). Additionally, survey data from the [United States Census Bureau](#) indicate that Seattle has a higher percentage of college graduates than any other major American city, with approximately 53.8% of residents aged 25 and older holding a bachelor degree or higher.

In terms of [per capita income](#), a study by the U.S. Bureau of Economic Analysis ranked the Seattle metropolitan area 17th out of 363 metropolitan areas in 2006. Seattle has particularly strong information technology, aviation, architecture and recreational industries. It is particularly known as a hotbed of "green" technologies, stemming in part from the strong and relatively non-controversial stances its public leaders have taken on policies regarding urban design, building standards, clean energy and climate change (Seattle in February 2010 committed itself to becoming North America's first "climate neutral" city, with a goal of reaching zero net per capita greenhouse gas emissions by 2030).

Seattle is ranked as one of the most car-congested cities in the United States, and efforts to promote



compact development and transportation choices are perennial policy issues. The railways and streetcars that once dominated its transportation system were largely replaced with an extensive network of bus routes for those living near the city center, and the city's outward growth caused automobiles to become the main mode of transportation for much of the population in the middle to late 20th century. However, efforts to reverse this trend at the municipal and state levels have resulted in new [commuter rail service](#) that connects Seattle to [Everett](#) and [Tacoma](#), a regional [Link Light Rail](#) system that extends south from the [city core](#) to SeaTac Airport,^[28] and an inner-city [South Lake Union Streetcar](#) network which extends from downtown to the [South Lake Union](#) area.

Puget Sound is a complex [estuarine](#) system of interconnected marine waterways and basins, with one major and one minor connection to the [Strait of Juan de Fuca](#) and the [Pacific Ocean](#) — [Admiralty Inlet](#) being the major connection and [Deception Pass](#) being the minor. Flow

through Deception Pass accounts for about 2% of the total tidal exchange between Puget Sound and the Strait of Juan de Fuca. Puget Sound extends approximately 100 miles (160 km) from Deception Pass in the north to [Olympia, Washington](#) in the south. Its average depth is 205 feet (62 m) and its maximum depth, off Point Jefferson between [Indianola](#) and [Kingston](#), is 930 feet (280 m). The depth of the main basin, between the southern tip of [Whidbey Island](#) and [Tacoma, Washington](#), is approximately 600 feet (180 m). The term "Puget Sound" is used not just for the body of water but also the [general region](#) centered on the sound.

[George Vancouver](#) explored Puget Sound in 1792. Vancouver claimed it for [Great Britain](#) on 4 June 1792, naming it for one of his officers, [Lieutenant Peter Puget](#). After 1818 Britain and the United States, which both claimed the [Oregon Country](#), agreed to "joint occupancy", deferring resolution of the [Oregon boundary dispute](#) until the 1846 [Oregon Treaty](#). Puget Sound was part of the disputed region until 1846, after which it became US territory.

In 1853 [Washington Territory](#) was formed from part of [Oregon Territory](#). In 1888 the [Northern Pacific](#) railroad line reached Puget Sound, linking the region to eastern states.

Geology and Formation of Puget Sound Region. Continental [ice sheets](#) have repeatedly advanced and retreated from the Puget Sound region. The most recent [glacial period](#), called the [Fraser Glaciation](#), had three phases, or [stades](#). During the third, or [Vashon Glaciation](#), a lobe of the [Cordilleran Ice Sheet](#), called the Puget Lobe, spread south about 15,000 years ago, covering the Puget Sound region with an ice sheet about 3,000 feet (910 m) thick near Seattle, and nearly 6,000 feet (1,800 m) at the present Canada-US border. Since each new advance of ice scours away much of the evidence of previous ice ages, the most recent Vashon phase has left the clearest imprint on the land. At its maximum extent the Vashon ice sheet extended south of [Olympia](#) to near [Tenino](#), and covered the lowlands between the Olympic and Cascade mountains. About 14,000 years ago the ice began to retreat. By 11,000 years ago it survived only north of the Canadian border.^[22]

The Vashon Glaciation scoured the land, creating a [drumlin field](#) of hundreds of aligned [drumlin](#) hills. [Lake Washington](#) and [Lake Sammamish](#) (which are [ribbon lakes](#)), Hood Canal, and the main Puget Sound basin were carved out by glacial forces. As the ice retreated, vast amounts of [glacial till](#) were deposited throughout the Puget Sound region.^[22] The soils of the region, less than ten thousand years old, are still characterized as immature.

As the Vashon glacier receded a series of [proglacial lakes](#) formed, filling the main trough of Puget Sound and inundating the southern lowlands. [Glacial Lake Russell](#) was the first such large recessional lake. From the vicinity of Seattle in the north the lake extended south to the [Black Hills](#), where it drained south into the [Chehalis River](#).^[23] Sediments from Lake Russell form the blue-gray clay identified as the Lawton Clay. The second major recessional lake was [Glacial Lake Bretz](#). It also drained to the Chehalis River until the [Chimacum Valley](#), in the northeast [Olympic Peninsula](#), melted, allowing the lake's water to rapidly drain north into the marine waters of the Strait of Juan de Fuca, which was rising as the ice sheet retreated.

The depth of the basins is a result of the Sound being part of the [Cascadia subduction zone](#), where the [terranes](#) accreted at the edge of the [Juan de Fuca Plate](#) are being [subducted](#) under the [North American Plate](#). There has not been a [major subduction zone earthquake](#) here since the [magnitude nine Cascadia](#)

[Earthquake](#); according to [Japanese](#) records, it occurred 26 January 1700. Lesser Puget Sound [earthquakes](#) with shallow [epicenters](#), caused by the fracturing of stressed oceanic rocks as they are subducted, still cause great damage. The [Seattle Fault](#) cuts across Puget Sound, crossing just north of [Vashon Island](#) and dipping under the city of Seattle. To the south, the existence of a second fault, the [Tacoma Fault](#), has buckled the intervening strata in the Seattle Uplift.

Typical Puget Sound profiles of dense glacial till overlying permeable glacial outwash of gravels above an impermeable bed of silty clay may become unstable after periods of unusually wet weather and slump in landslides.

In 1792 [George Vancouver](#) spent several days with his ship [HMS Discovery](#) anchored off Restoration Point at the southern end of Bainbridge Island while boat parties surveyed other parts of Puget Sound. Vancouver spent a day investigating Rich Passage, Port Orchard, and Sinclair Inlet. He failed to find Agate Passage and so his maps show Bainbridge Island as a peninsula. Vancouver named Restoration Point on May 29, the anniversary of the [English Restoration](#), in honor of [King Charles II](#).^[3]

In 1841, [U.S. Navy](#) Lieutenant [Charles Wilkes](#) visited Bainbridge Island while surveying the Northwest. Lt. Wilkes named the island after Commodore [William Bainbridge](#), commander of the [frigate U.S.S. Constitution](#) in the [War of 1812](#). Bainbridge Island was originally a center for the [logging](#) and [shipbuilding](#) industries. The island was known for huge and accessible cedars, which were especially in demand for ships' masts. The original county seat of Kitsap County was at [Port Madison](#) on the north end of the island.

The first generation of Japanese immigrants, the Issei, came in 1883. During World War II, [Japanese-American](#) residents of Bainbridge Island were the first to be sent to [internment camps](#). They were held by the U.S. government through the duration of the war for fear of espionage. Many Filipinos who assisted the Japanese farmers were left to operate the strawberry fields, which they did successfully. Filipino farmers went north to locate [First Nations](#) families to work in the fields. Many romances arose from the berry fields and the birth of the Indo-Pinos emerged.

The city of Bainbridge Island has occupied the entire island since February 28, 1991, when the former [City of Winslow](#) (around 1.5 square miles (3.9 km²) of land on [Eagle Harbor](#), incorporated August 9, 1947) annexed the rest of the island. Since the 1960s, Bainbridge Island has become an increasingly affluent [bedroom community](#) of [Seattle](#), a 35-minute ride away on the [Washington State Ferries](#). The community has been especially concerned with preserving green space and keeping a tight control over

development, both residential and commercial. The Bainbridge Island Land Trust, city and park district are instrumental in maintaining island open space.



The **Agate Pass Bridge** is a [structural steel truss cantilever bridge](#) spanning [Agate Pass](#), connecting [Bainbridge Island](#) to the [Kitsap Peninsula](#). It was built in 1950, and it replaced a car ferry

service which dated from the 1920s. The bridge provides a direct route along [Washington State Route 305](#) between [Seattle](#), via the [Seattle-Bainbridge Island ferry](#), and the [Kitsap Peninsula](#).

The Agate Pass Bridge is 1,229 feet (375 m) long and is 75 feet (23 m) above the water and has a channel clearance of 300 feet (91 m) between piers.

The original construction cost \$1,351,363 of was paid out of the motor vehicle fund, and operated as a [toll bridge](#) from October 7, 1950 until October 1, 1951, when costs were repaid by a [bond issue](#) passed by the [Washington State Legislature](#). The [Washington Toll Bridge Authority](#) managed the bridge during the year it took to repay the bond.

The Agate Pass Bridge is listed on the [National Register of Historic Places](#).

The **Port Gamble Historic District** is a U.S. [National Historic Landmark](#). It is a popular tourist destination, due to its location near [Bremerton](#), [Port Townsend](#), [Bainbridge Island](#), and [Seattle](#) and its downtown. Port Gamble is also home to the grave of Gustave Englebrecht, the first [U.S. Navy](#) sailor to die in the Pacific.



The body of water near Port Gamble was named by the Wilkes Expedition in 1841 after U.S. Navy Lt. Robert Gamble. The community, originally known as Teekalet, was founded as a company town by Josiah Keller, William Talbot, and Andrew Pope's Puget Mill

Company in 1853.

In 1856, the [USS Massachusetts](#) was sent from [Seattle](#) to Port Gamble, [Washington Territory](#) on [Puget Sound](#), where indigenous raiding parties from British and Russian territories had been raiding and enslaving local [Native Americans](#). When the warriors refused to hand over those among them who had attacked the Puget Sound Native American communities, *Massachusetts* landed a shore party and a battle ensued in which 26 natives and 1 sailor were killed. In the aftermath of this, [Colonel Isaac Ebey](#), the first settler on [Whidbey Island](#), was shot and beheaded on August 11, [1857](#) by a [Haida](#) raiding party in revenge for the killing of a native chief during similar raids the year before. British authorities demurred on pursuing or attacking the northern tribes as they passed northward through British waters off Victoria and Ebey's killers were never caught.

The **Hood Canal Bridge** (officially **William A. Bugge Bridge**) is a [floating bridge](#) located in the [U.S.](#) state of [Washington](#) that carries [Washington State Route 104](#) across [Hood Canal](#) and connects the [Olympic](#) and [Kitsap](#) Peninsulas. At 7,869 feet (2,398 m) long, it is the longest floating bridge in the world located in a saltwater tidal basin, and the third longest floating bridge overall. First opened in 1961, it was the second concrete floating bridge constructed in Washington. Since that time, it has become a vital link



for local residents, freight haulers, commuters, and recreational travelers. The convenience it provides has had a major impact on economic development, especially in eastern [Jefferson County](#).

The bridge is officially named after the director of the Department of Highways, [William A. Bugge](#) (1900–1992), from 1949 to 1963 who was a leader in the planning and construction of the bridge. The bridge, however, has continued to be popularly known as the Hood Canal Bridge.

The design and planning process for the Hood Canal Bridge took nearly a decade amid criticism from some engineers throughout that time. Critics questioned the use of floating [pontoons](#) over salt water, especially at a location where tide fluctuations vary as much as eighteen feet and the funneling effect of the Hood Canal might magnify the intensity of winds and tides. The depth of the water, however, made construction of support columns for other bridge types prohibitively expensive.

The pontoons for the bridge were fabricated in the [Duwamish Waterway](#) in [Seattle, Washington](#). During fabrication two of the pontoons sank. When they were attached for the first time, and then towed into place and anchored, sea conditions in the Hood Canal were too severe and the pontoons were returned to a nearby bay until a better method of attaching could be devised. The architects and the contractor decided the design was faulty. A new contractor was hired and the design modified. It was decided to use a large rubber dam between each of the two pontoons as they were attached, clean the concrete surfaces of all marine growth, [epoxy](#), and tension them with a number of cables welded to a variety of attachment points. This system seemed to work from when the bridge opened in 1961 until the disaster of 1979.

The Hood Canal Bridge suffered [catastrophic failure](#) during the [February 13, 1979 Windstorm](#). During the night the bridge had withstood sustained winds of up to 85 mph (137 km/h) and gusts estimated at 120 mph (193 km/h), and finally succumbed at about 7:00 a.m., February 13.^[2] The western drawspan and the pontoons of the western half had broken loose and sunk, despite the drawspan being opened to relieve lateral pressure.

At the time of the failure, the bridge had been closed to highway traffic and the tower crew had evacuated; no casualties resulted. Evidence points to blown-open hatches allowing flooding of the pontoons as the cause of the sinking.

Efforts to repair the bridge began immediately and Washington Secretary of Transportation William A. Bulley secured a commitment of federal emergency relief money for the project. On June 15, 1979 actual work began with the removal of the west truss and transport for storage. The Washington State Department of Transportation attempted to mitigate the impact of the disaster by redirecting traffic to [US Highway 101](#) to drive around the 50 mile (80 km) [Hood Canal](#) and by re-establishing the [Washington State ferry](#) run between Lofall and South Point across the canal just south of the bridge. This route had been discontinued after the 1961 bridge opening and the state needed to re-acquire access to and restore operational conditions on both landings. During the course of the closure an additional ferry route was temporarily added between [Edmonds](#) and [Port Townsend](#).

The Hood Canal Bridge re-opened to vehicular traffic on October 25, 1982. The west-half replacement had been designed and constructed in less than three years using \$100 million in federal emergency bridge replacement funds at a total cost of \$143 million.

The bridge re-opened as a [toll bridge](#), but tolls were lifted in 1985 after a court ruling that the insurance settlement constituted repayment of the construction bonds, and since federal funds were used in re-constructing the bridge, the Washington State Department of Transportation could not charge tolls after the bonds were retired.

In a project that lasted from 2003 to 2009, WSDOT replaced the east-half floating portion of the bridge, the east and west approach spans, the east and west transition spans, and the west-half electrical system. The total cost of the project, about \$471 million, is being paid by state, federal and agency funds. The project required the bridge to close to traffic for five weeks to allow the old pontoons of the east-half to be cut away and the new pontoons floated into position, cabled together and connected by cables to large anchors on the sea floor. The transition spans and center draw span were also replaced during this closure. The bridge reopened June 3, 2009. [\[3\]\[4\]](#)

The pontoons and anchors for the bridge could not be built at the bridge site due to space and facility limitations. WSDOT evaluated different sites at which to build during a site selection process. The Port Angeles graving dock was chosen for its accessibility to water and land as well as the work force. Before purchase, the National Historic Preservation Act required archaeologists to perform a review of the historical site. At that time, “there was no evidence of historic properties or cultural resources” (NEPA Re-evaluation Consultation, FHWA) and WSDOT was able to purchase the site and begin construction.

Within the first two weeks of construction, artifacts were found from an ancestral burial ground from an ancient village called [Tse-whit-zen](#). WSDOT stopped all work on the site, and a government-to-government consultation process began among the [Lower Elwha Klallam Tribe](#), WSDOT, the Federal Highway Administration, the Army Corps of Engineers, and the State Historical Preservation Office. On August 14, 2006, WSDOT agreed to donate the site to the Lower Elwha Klallam tribe, rebury all remains uncovered, and pay \$2.5 million in damages.

It is believed that this discovery may be documentation of the first time that Natives and non-Natives began to interact on this shore. These historical findings will be investigated thoroughly by the Lower Elwha Klallam Tribe and archaeologists.

On December 21, 2004, Governor Locke and Secretary MacDonald announced that WSDOT would stop pontoon and anchor construction at the Tse-whit-zen site in Port Angeles and begin searching for a more suitable place to build. Many sites were considered but the best option to be found by WSDOT was in Tacoma, Wash. at Concrete Technology.

Construction began on the new east-half floating pontoons at Concrete Technology in April 2006. Fourteen pontoons will be built in four cycles at the site. Completed pontoons will be floated out of the graving dock in Tacoma and transported to Seattle for outfitting at Todd Shipyards. Outfitting includes adding all electrical and mechanical parts, connecting the pontoons into sections and building the roadway on top of the pontoons. Another three pontoons, built during the west-half bridge replacement in the early 1980s, will be retrofitted in Seattle.

- The east approach span weighs more than 3,800 tons (3,400 tonnes) and the west approach span weighs more than 1,000 tons (907 tonnes)

- Peak volumes reach 20,000 vehicles on summer weekends.
- The water depth below the pontoons ranges from 80 to 340 feet (24 to 104 m). In its marine environment, the bridge is exposed to tide swings of 16.5 feet (5 m).
- During inclement weather, the draw span is retracted (closing the bridge to vehicle traffic) when winds of 40 miles per hour (64 km/h) or more are sustained for 15 minutes.

Port Ludlow. The [United States Exploring Expedition](#), under [Charles Wilkes](#), entered Puget Sound in 1841. Wilkes bestowed many patriotically American place names; at the time the sovereignty of the [Oregon Country](#) was yet to be resolved between Britain and the United States. Many of Wilkes's names commemorated American heroes and victories during the [War of 1812](#). Port Ludlow was one of these, honoring [Augustus C. Ludlow](#), a War of 1812 American naval hero.

Early explorers of the [Pacific Northwest](#) often named sheltered inlets with names beginning with "Port". Communities which subsequently developed often adopted inlet's name. Today Port Ludlow is both the name of the inlet and the community on its shore.¹ To avoid confusion the inlet is sometimes called Port Ludlow Bay.

The first shipments of timber from the Puget Sound to [San Francisco, California](#) in 1851 stimulated interest in the business potential of building sawmills on Puget Sound. [John R. Thorndike](#) and [W. P. Sayward](#) sailed to Puget Sound in 1852 and found the environs of Port Ludlow promising. Thorndike filed a timber claim of 318 acres (1.29 km²) and they started building a mill there. The initial mill housed two sash saws capable of producing 3,000 feet (910 m) of lumber daily. The trees along the banks of the bay were logged first and then oxen and horses were used to bring more distant logs to the mill. The mill was leased in 1858 to the Amos & Phinney Company, of which [A. Phinney](#) became the resident manager.

The [U.S. Federal Census of 1860](#) designated Port Ludlow as one of the three enumeration districts in [Jefferson County, Washington Territory](#). The census tally portrays the make-up of a young logging and sawmill community: Of the 124 people counted, 117 (94%) were adults between the ages of 20 and 50, and the remaining 7 were children. Of the adult population 112 (96%) were men and only 5 women, of which 3 were residing with husbands. 53 (47%) of the men were listed as lumbermen and 14 (13%) as sawyers. Of the total population, 94 (76%) were born in the United States, and of those all were born in the eastern half of the nation but two — a two-year-old born in California and a one-year-old born in Washington Territory. Of the 30 (24%) who were foreign-born, 8 were born in England, 8 in [Ireland](#), 6 in [Canada](#), 4 in Germany, 2 in [Norway](#), and one each in [Australia](#) and [Denmark](#).¹⁶¹ The [indigenous peoples](#) were not counted in the 1860 census.

Port Townsend is a city in [Jefferson County, Washington, United States](#), approximately 40 miles (64 km) north-northwest of [Seattle](#). The population was 9,113 at the [2010 census](#) an increase of 9.3% over the 2000 census. It is the [county seat](#) and only incorporated city of [Jefferson County](#).¹³¹ In addition to its natural scenery at the northeast tip of the [Olympic Peninsula](#), the city is also known for the many [Victorian](#) buildings remaining from its late 19th-century heyday, numerous annual cultural events, and as a maritime center for independent boatbuilders and related industries and crafts. The **Port Townsend Historic District** is a U.S. [National Historic Landmark District](#).

The bay was originally named "Port Townshend" by [Captain George Vancouver](#) (for his friend the [Marquis of Townshend](#)) in 1792. It was immediately recognized as a good, safe harbor although strong south winds and poor holding ground often make small craft anchorage problematic off the town's waterfront. The bay is now home to Naval Magazine Indian Island, the US Navy's primary munitions handling dock on the Pacific coast.

The official settlement of the city of the same name took place on the 24th of April, 1851. American Indian tribes located in what is now Jefferson County in the mid-19th century included the [Chimakum](#) (or Chemakum), Hoh (a group of the Quileute), Klallam (or Clallam), Quinault and Twana (the Kilcid band — Anglicized: Quilcene).

Port Townsend is also called the "City of Dreams" because of the early speculation that the city would be the largest harbor on the west coast of the United States.

By the late 19th century, Port Townsend was a well-known seaport, very active and banking on the future. Many homes and buildings were built during that time, with most of the architecture ornate Victorian. During this period, in 1888, the Port Townsend Police Department was established.

Railroads were built to reach more areas in the 1870-1890s and Port Townsend was to be the northwest extension of the rail lines. Its port was large and frequented by overseas vessels, so shipping of goods and timber from the area was a major part of the economy. Many of the buildings were built on the speculation that Port Townsend would become a booming shipping port and major city. When the depression hit, those plans lost the capital to continue and rail lines ended on the east side of Puget Sound, mainly in [Tumwater](#), [Tacoma](#) and [Seattle](#). With the other [Puget Sound](#) ports growing in size, Port Townsend saw a rapid decline in population when the [Northern Pacific Railroad](#) failed to connect the city to the eastern [Puget Sound](#) city of Tacoma. By the late 1890s, the boom was over. Without the railroad to spur economic growth, the town shrank and investors looked elsewhere to make a good return.

Over the decades that followed, Port Townsend maintained its economic stability in a variety of ways, including the development of [artillery fortifications](#) at [Fort Worden](#). Many people left the area and many buildings were abandoned. Port Townsend's economy was very weak until the 1920s when a [paper mill](#) was built on the edge of the town.

The town experienced a renaissance beginning in the 1970s as new residents, including many retirees, moved to town. Currently, it is most famous economically for the jazz workshop that is held there every summer. As part of the workshop, famous jazz musicians play all week in the Port Townsend clubs and bars, drawing many tourists to the area.

Because of the speed at which the economy fell in the 1890s and the non-existence of any industry or economy to replace it, none of the Victorian buildings were torn down or built over in the intervening period. They were, in essence, preserved as time capsules for the next 100 years when the value of keeping them intact was appreciated and fostered.

The [Port Townsend Historic District](#), an area including many Victorian era buildings, was listed on the [National Register of Historic Places](#) in 1976, and further was declared a [National Historic Landmark](#) in 1977



Port Townsend is noted for a vast collection of Victorian homes and significant historical buildings. The city has more than a dozen larger buildings that are well preserved, including the Carnegie Library, the Federal Building (now commonly known simply as the city's post office), the Rose Theatre and the Elks Lodge, which now houses Silverwater Cafe. There is also Fort Worden with its pre-World War I architecture including the publicly accessible Olympic Youth Hostel. Perhaps the most stunning historical structure in Port Townsend is the Jefferson County Courthouse, a spectacular representation of the Richardsonian Romanesque architectural style with a 125 foot bell tower.

In 1976, the Downtown waterfront and parts of Uptown were designated a Registered Historic District. Later, [Fort Worden](#) (now part of [Fort Worden State Park](#)) and the City of Port Townsend were designated National Historic Landmarks. The city is further recognized as one of only three Victorian seaports on the [National Register of Historic Places](#).



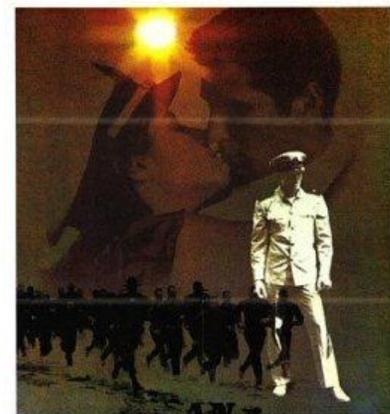
The Bell Tower on the bluff above downtown is one of two known towers of this type in the United States. It was used from 1890 to the 1940s to call volunteer firefighters. It was restored in 2003 by the Jefferson County Historical Society. The second bell tower is located in Helena, Montana, and was also used to summon volunteers and alert townspeople of any fires during late 19th century early gold rush days.

[The Rose Theatre](#) is a cinema downtown which shows contemporary American and foreign films.

There is also the Uptown Theater, showing more family-

oriented films, and a nearby drive-in theater is open during the summer months.

The film *An Officer and a Gentleman* was shot in late 1981 on the Olympic Peninsula of Washington state, at Port Townsend and Fort Worden. The U.S. Navy did not permit filming at NAS Pensacola in western Florida, the traditional site of the Aviation Officer Candidate School. Port Townsend stood in for the real NAS (Naval Air Station) in the Puget Sound area, Whidbey Island, which is still an operating NAS today.



PARAMOUNT PICTURES PRESENTS
A LORIMAR-MARTIN ELFAND PRODUCTION A TAYLOR HACKFORD FILM
RICHARD GERE DEBRA WINGER
AN OFFICER AND A GENTLEMAN
Also starring DAVID KEITH and LOUIE LOUGHEE, Jr. in "Stars" Written by DOUGLAS DAY STEWART
Produced by MARTIN ELFAND Directed by TAYLOR HACKFORD A PARAMOUNT PICTURE
R
© 1982 Paramount Pictures

A real motel, The Tides Inn, located in Port Townsend was used for the film. Today, there is a plaque outside the room commemorating this. Some early scenes of the film were filmed in [Bremerton](#), with ships of the [Puget Sound Naval Shipyard](#) in the background.

The **Olympic Discovery Trail** is a designated non-motorized, multi-use trail spanning the north end of the [Olympic Peninsula](#) in [Washington](#). The route spans 120 miles between [Port Townsend, Washington](#) and [La Push, Washington](#). As of 2011, 40 miles of this trail are complete between the towns of Blyn and Port Angeles. The remainder of the route can be ridden using a combination of public roads. The trail was the brainchild of three area cyclists who formed the Peninsula Trails Coalition for the purpose of developing the trail across a derelict railroad grade. The railroad was sold off fairly quickly so the coalition has been working with a number of agencies to build a cohesive trail system along a similar route.

Sequim is a city in [Clallam County, Washington, United States](#). The 2010 US Census counted a population of 6,606 residing within the city limits. Approximately 20,000 additional residents live in the Dungeness Valley immediately surrounding the city. Sequim is located along the [Dungeness River](#) near the base of the [Olympic Mountains](#). The city has been increasing in population dramatically in recent years due to the influx of retirees from the Puget Sound region and California.

Sequim lies within the [rainshadow](#) of the Olympic Mountains and receives an average of less than 15 inches (380 mm) of rain per year—about the same at [Los Angeles](#), California. Yet the city is fairly close to some of the wettest [temperate rainforests](#) of the [contiguous United States](#). This climate anomaly is sometimes called the blue hole of Sequim. Fogs and cool breezes from the [Juan de Fuca Strait](#) make Sequim's environment more humid than would be expected from the low average annual precipitation. Some places have surprisingly luxuriant forests dominated by [Douglas-fir](#) and [western red cedar](#). [Black cottonwood](#), [red alder](#), [bigleaf maple](#), [Pacific madrone](#), [lodgepole pine](#) and [Garry oak](#) can also be large. Historically, much of the area was an open oak-studded prairie supported by somewhat excessively drained gravelly sandy loam soil, though agriculture and development of the Dungeness valley have changed this ecosystem. Most soils under Sequim have been placed in a series which is named after the city. This "Sequim series" is one of the few [Mollisols](#) in western Washington and its high [base saturation](#), a characteristic of the Mollisol order, is attributed to the minimal leaching of bases caused by low annual rainfall. Mollisols are a soil order in [USDA soil taxonomy](#). Mollisols form in semi-arid to semi-humid areas, typically under a [grassland](#) cover.

The city and the surrounding area are particularly known for the commercial growth of [lavender](#), supported by the unique climate: it makes Sequim the "Lavender Capital of North America", rivaled only in [France](#). The area is also known for its [Dungeness crab](#).

Sequim is pronounced as one syllable, with the *e* elided: "skwim". The word comes from the [Klallam](#) language. It can be broken down into multiple sounds, that mean "reason, thing or place for", "shoot" and "go to" which translates to "place for going to shoot" referring to the numerous elk and fowl resources in the area.

Discovery Bay. Native people – the [Klallam](#) (locally: S'Klallam) people – have occupied the lands around the [Strait of Juan de Fuca](#) for millennia, including locations on Discovery Bay. Most native

populations on the [Olympic Peninsula](#) were relocated to reservations during the 19th and early 20th centuries, leaving only scattered individuals of native descent still residing on the bay.

The Spanish explorers [Manuel Quimper](#) (hence: [Quimper Peninsula](#)) and [Gonzalo López de Haro](#) in the [Princesa Real](#) are the first known Europeans to find and map the bay of Port Discovery. They were sent to explore the Strait of Juan de Fuca by [Francisco de Eliza](#) in 1790. The Spanish named the bay *Puerto Quadra*, after [Juan Francisco de la Bodega y Quadra](#).^[3]

In 1792, [George Vancouver](#)'s exploration of the area provided names for Discovery Bay and [Port Discovery](#).

In 1858, the S. L. Mastick Company of [San Francisco](#) established the Port Discovery Mill on the western shore of the bay, at what today is called "Mill Point." The old growth timber on the steep hillsides above the mill were felled, slid down to the sawmill, milled into lumber and loaded from the wharf to ships for other ports. A village grew around the mill to house its employees. The peak population of the community, in the late 19th century, was in the hundreds. [Port Discovery, Washington](#) remained an important coastal port well into the 20th century, and was visited by many Pacific Ocean vessels.

The [U.S. Federal Census of 1860](#) designated Port Discovery as one of three enumeration districts in [Jefferson County](#). The [indigenous people](#) were not counted for this census. The total population was 70 and all but one were males between the ages of 20 and 52 years old. The one female was married to a cook and the only non-[white](#) person counted was an [African-American](#) male cook. Two thirds of the population were American-born, all of which had migrated west from other states. Of the third that were foreign born, all but one were from [England](#), [Ireland](#), [Wales](#), or [Canada](#). The exception was born in [Sweden](#).

Port Angeles is a city in and the [county seat](#) of [Clallam County, Washington, United States](#). The population was 19,038 at the [2010 census](#), making it the largest city on the [Olympic Peninsula](#). The area's [harbor](#) was dubbed *Puerto de Nuestra Señora de los Ángeles* (Port of Our Lady of the Angels) by [Spanish](#) explorer [Francisco de Eliza](#) in 1791, but by the mid-19th century the name had been shortened and partially [anglicized](#) to its current form, [Port Angeles Harbor](#).

Port Angeles is home to [Peninsula College](#) and is the birthplace of football hall of famer [John Elway](#). The city is served by [William R. Fairchild International Airport](#), and ferry service is provided across the [Strait of Juan de Fuca](#) to [Victoria, British Columbia, Canada](#) on the [M/V Coho](#) or [Victoria Express](#).

The coordinates of Port Angeles are 48°06'47"N 123°26'27". (48.112969, -123.440713).^[6] According to the [United States Census Bureau](#), the city has a total area of 63.1 square miles (163.3 km²), of which 10.1 square miles (26.1 km²) is land and 53.0 square miles (137.2 km²) (84.00%) is water.

The city is situated on the northern edge of the [Olympic Peninsula](#) along the shore of the [Strait of Juan de Fuca](#). It features a long and narrow natural sandspit named [Ediz Hook](#) that projects north-easterly nearly three miles into the Strait, creating a large, natural deep-water harbor shielded from the storms and swells that move predominantly eastward down the Strait from the [Pacific Ocean](#). The harbor is

deep enough to provide anchorage for most kinds of ocean-going ships. The south shore of [Vancouver Island](#) and the city of [Victoria, British Columbia](#) are visible across the Strait to the north.

Port Angeles is located in the [rain shadow](#) of the [Olympic Mountains](#), which means the city gets significantly less rain than other areas of western Washington. The average annual precipitation total is approximately 25 inches, compared to Seattle's 38 inches. Temperatures are heavily modified by the maritime location, with winter lows rarely below 25 degrees, and summer highs rarely above 80 degrees. However, in winter the city can be vulnerable to windstorms and Arctic cold fronts that sweep across the [Strait of Juan de Fuca](#). Port Angeles receives about 4 inches of snow each year, but it rarely stays on the ground for long.

Port Angeles is also the location of the headquarters of [Olympic National Park](#), which encompasses most of the Olympic Mountains, and was established by President [Franklin D. Roosevelt](#) in 1938.

The **Strait of Juan de Fuca** (called **Juan de Fuca Strait** in Canada) is a large body of water about 95 miles (153 km) long^[2] that is the [Salish Sea](#) outlet to the [Pacific Ocean](#). The [international boundary](#) between the [United States](#) and [Canada](#) runs down the centre of the Strait. It was named in 1787 by the [maritime fur trader Charles William Barkley](#), captain of the [Imperial Eagle](#), for [Juan de Fuca](#), the Greek navigator who sailed in a Spanish expedition in 1592 to seek the fabled [Strait of Anián](#). Barkley was the first non-indigenous person to find the strait, unless Juan de Fuca's dubious story was true. The strait was explored in detail between 1789 and 1791 by [Manuel Quimper](#), [José María Narváez](#), [Juan Carrasco](#), [Gonzalo López de Haro](#), and [Francisco de Eliza](#).

Olympic National Park is located in the [U.S. state](#) of [Washington](#), in the [Olympic Peninsula](#). The park can be divided into four basic regions: the [Pacific](#) coastline, alpine areas, the west side [temperate rainforest](#) and the forests of the drier east side. [U.S. President Theodore Roosevelt](#) originally created Mount Olympus National Monument in 1909 and after [Congress](#) voted to authorize a re-designation to [National Park](#) status, President [Franklin Roosevelt](#) signed the legislation in 1938. In 1976, Olympic National Park became an [International Biosphere Reserve](#), and in 1981 it was designated a [World Heritage Site](#). In 1988, Congress designated 95 percent of the park as the [Olympic Wilderness](#).

The coastal portion of the park is a rugged, sandy beach along with a strip of adjacent forest. It is 73 miles (117 km) long but just a few miles wide, with native communities at the mouths of two rivers. The [Hoh River](#) has the [Hoh](#) people and at the town of [La Push](#) at the mouth of the [Quileute River](#) live the [Quileute](#).

The beach has unbroken stretches of wilderness ranging from 10 to 20 miles (16 to 32 km). While some beaches are primarily sand, others are covered with heavy rock and very large boulders. Bushy overgrowth, slippery footing, tides and misty rain forest weather all hinder foot travel. (Times to hike should typically be doubled.) The coastal strip is more readily accessible than the interior of the Olympics; due to the difficult terrain, very few backpackers venture beyond casual day-hiking distances.

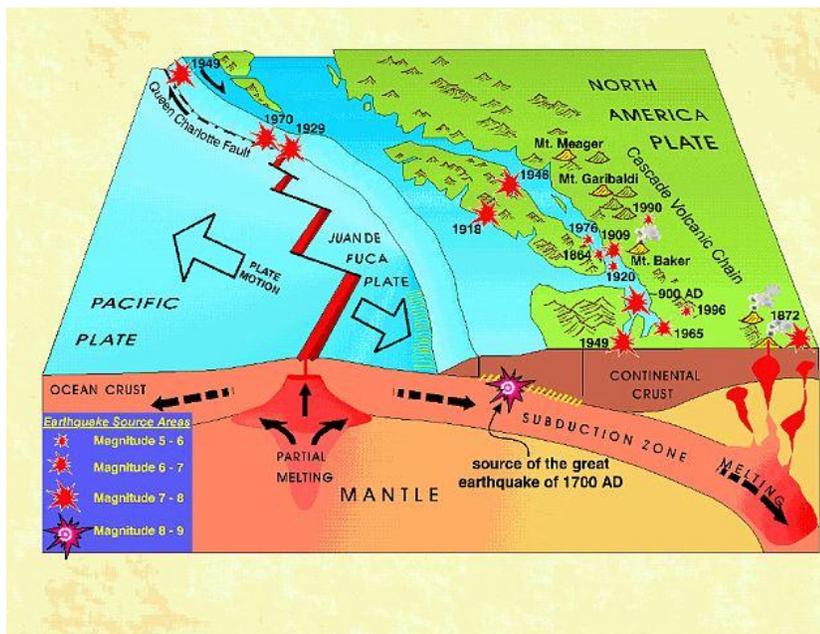
The most popular piece of the coastal strip is the 9-mile (14 km) Ozette Loop. The Park Service runs a registration and reservation program to control usage levels of this area. From the trailhead at [Ozette Lake](#), a 3-mile (4.8 km) leg of the trail is a boardwalk-enhanced path through near primal coastal [cedar](#) swamp. Arriving at the ocean, it is a 3-mile walk supplemented by headland trails for high tides. This

area has traditionally been favored by the [Makah](#) from [Neah Bay](#). The third 3-mile leg is enabled by a boardwalk which has enhanced the loop's popularity.

There are thick groves of trees adjacent to the sand, which results in chunks of timber from fallen trees on the beach. The mostly unaltered Hoh River, toward the south end of the park, discharges large amounts of naturally eroded timber and other drift, which moves north, enriching the beaches. The removal of [driftwood](#) - logs, dead-heads, tops and root-wads from streams and beaches was a major [domestication](#) measure across North America. Even today driftwood deposits form a commanding presence, biologically as well as visually, giving a taste of the original condition of the beach viewable to some extent in early photos. Drift-material often comes from a considerable distance; the Columbia River formerly contributed huge amounts to the Northwest Pacific coasts.

The smaller coastal portion of the park is separated from the larger, inland portion. President Franklin D. Roosevelt originally had supported connecting them with a continuous strip of park land.

Within the center of Olympic National Park rise the [Olympic Mountains](#) whose sides and ridgelines are topped with massive, ancient [glaciers](#). The mountains themselves are products of [accretionary wedge](#) uplifting related to the Juan De Fuca Plate [subduction zone](#). The geologic composition is a curious [mélange](#) of basaltic and oceanic sedimentary rock. The western half of the range is dominated by the peak of [Mount Olympus](#), which rises to 7,965 feet (2,428 m). Mount Olympus receives a large amount of [snow](#), and consequently has the greatest glaciation of any non-volcanic peak in the contiguous United States outside of the North Cascades. It has several glaciers, the largest of which is the [Hoh Glacier](#), nearly five kilometers in length. Looking to the east, the range becomes much drier due to the rain shadow of the western mountains. Here, there are numerous high peaks and craggy ridges. The tallest summit of this area is [Mount Deception](#), at 7,788 feet (2,374 m).



In [geology](#), **subduction** is the process that takes place at [convergent boundaries](#) by which one [tectonic plate](#) moves under another tectonic plate, sinking into the [Earth's mantle](#), as the plates converge. These 3D regions of mantle downwellings are known as "Subduction Zones". A subduction zone is an area on [Earth](#) where two tectonic plates move towards one another and one slides under the other. Rates of subduction are typically measured in centimeters per year, with the average rate of convergence being approximately 2 to 8 centimeters per year (about the rate a fingernail grows).

Plates can be formed from either oceanic [lithosphere](#) or continental lithosphere. Stable subduction zones involve an [oceanic plate](#) sliding beneath either a [continental plate](#) or another oceanic plate (that is, the

subducted plate is always oceanic while the subducting plate may or may not be oceanic). Subduction zones are often noted for their high rates of [volcanism](#), [earthquakes](#), and [mountain building](#). [Continental collision](#) results where a continental plate is subducted.

The north-west coast of the U.S. could be devastated by a huge movement of undersea plates known as a 'megathrust' earthquake, scientists say. A review of the dangers posed by the Juan de Fuca plate released in the wake of the Japanese quake has raised fears that the Pacific seaboard could be similarly ravaged. The horrifying possibilities have been brought to light by data researched by the Active Tectonics and Seafloor Mapping Laboratory at Oregon State University. 'Megathrusts' are the world's largest earthquakes, and happen in a 'subduction zone', a region where one of the earth's tectonic plates is thrust under another. The last one involving Cascadia was estimated at magnitude 9 on the Richter scale, according to Natural Resources Canada.

The Juan de Fuca plate is being forced under the North America plate along the Cascadia fault and, as large parts of the plates are locked together, stress is being built up until an eventual breakage causes a massive earthquake.

Professor Chris Goldfinger, director of the Laboratory at Oregon State University, told the newspaper that their information showed an increase in pressure at the plates: 'It's loading a spring for a future earthquake, there's no doubt about that.'

And geologist Jeffrey Park, director of the Yale Institute for Biospheric Studies, said in a recent - separate - article: 'History tells us that more megathrust earthquakes could occur in the next decade, but we have no evidence that the recent rate of nearly one megathrust per year will persist for longer than that.'

Cascadia, which stretches from Vancouver island to northern California, has been dormant for over 300 years but scientists now believe there is a 45 per cent probability of an earthquake of an 8.0 magnitude or higher in the next 50 years. They add there is a 15 per cent chance of magnitude 9 or more.

All six earthquakes with a 9.0 magnitude or higher since 1900 have been megathrust quakes. The March 11 earthquake in Japan has been classed as a 9.0 quake and can be called a megathrust. The 2004 Boxing Day tsunami, which killed over 230,000 people, was caused by a 'megathrust'.

Such a quake could produce a massive tsunami and engulf the Pacific Northwest coast, affecting Oregon, Washington state and Vancouver Island, according to The Times, with a tsunami with waves of up to 30metres high and potentially reaching Japan.

The threat is all the more serious as several cities in the north-west of the U.S. are not adequately prepared for the type of devastation a 'megathrust' quake could wreak.

The western side of Olympic National Park is mantled by a temperate rain forest, including the Hoh Rain Forest and Quinault Rain Forest, which receive annual precipitation of about 150 inches (380 cm), making this perhaps the wettest area in the continental United States (the island of Kauai in the state of Hawaii gets more rain).

Because this is a temperate rainforest, as opposed to a tropical one like the [Amazon Rainforest](#) in [South America](#), it is dominated by dense [coniferous](#) timber, including [Sitka Spruce](#), [Western Hemlock](#), [Coast Douglas-fir](#) and [Western redcedar](#) and [mosses](#) that coat the bark of these trees and even drip down from their branches in green, moist tendrils.

Valleys on the eastern side of the park also have notable old-growth forest, but the climate is notably drier. Sitka Spruce is absent, trees on average are somewhat smaller, and undergrowth is generally less dense and different in character. Immediately northeast of the park is a rather small [rainshadow](#) area where annual precipitation averages about 16 inches.

Because the park sits on an isolated peninsula, with a high mountain range dividing it from the land to the south, it developed many [endemic](#) plant and animal species (like the [Olympic Marmot](#) and [Piper's bellflower](#)). The southwestern coastline of the Olympic Peninsula is also the northernmost non-glaciated region on the Pacific coast of North America, with the result that - aided by the distance from peaks to the coast at the [Last Glacial Maximum](#) being about twice what it is today - it served as a refuge from which plants colonized glaciated regions to the north.

It also provides habitat for many species (like the [Roosevelt elk](#)) that are native only to the Pacific Northwest coast. Because of this importance, scientists have declared it to be a [biological reserve](#), and study its unique species to better understand how plants and animals evolve.

The park contains an estimated 366,000 acres (572 sq mi; 1,480 km²) of [old-growth forests](#).

Prior to the influx of European settlers, Olympic's human population consisted of [Native Americans](#), whose use of the peninsula was thought to have consisted mainly of fishing and hunting. However, recent reviews of the record, coupled with systematic archaeological surveys of the mountains (Olympic and other Northwest ranges) are pointing to much more extensive tribal use of especially the subalpine meadows than seemed formerly to be the case. Most if not all Pacific Northwest indigenous cultures were more or less severely adversely affected by European diseases (often decimated) and other factors, well before ethnographers, business operations and settlers arrived in the region, so what they saw and recorded was a much-reduced native culture-base. Large numbers of cultural sites are now identified in the Olympic mountains, and important artifacts have been found.

When settlers began to appear, extractive industry in the [Pacific Northwest](#) was on the rise, particularly in regards to the harvesting of [timber](#), which began heavily in the late 19th and early 20th centuries. Public dissent against [logging](#) began to take hold in the 1920s, when people got their first glimpses of the clear-cut hillsides. This period saw an explosion of people's interest in the outdoors; with the growing use of the [automobile](#), people took to touring previously remote places like the Olympic Peninsula.

The formal record of a proposal for a new national park on the Olympic Peninsula begins with the expeditions of well-known figures Lieutenant Joseph O'Neil and Judge [James Wickersham](#), during the 1890s. These notables met in the Olympic wilderness while exploring, and subsequently combined their political efforts to have the area placed within some protected status. Following unsuccessful efforts in the Washington State Legislature in the early 1900s, President Theodore Roosevelt created Mount

Olympus National Monument in 1909, primarily to protect the subalpine calving grounds and summer range of the [Roosevelt elk](#) herds native to the Olympics.

Public desire for preservation of some of the area grew until President [Franklin D. Roosevelt](#) declared ONP a national park in 1938. Even after ONP was declared a park, though, illegal logging continued in the park, and political battles continue to this day over the incredibly valuable timber contained within its boundaries. Logging continues on the Olympic Peninsula, but not within the park. A book detailing the history of the fight for ONP's timber is *Olympic Battleground: The Power Politics of Timber Preservation* by [Carsten Lien](#).

The **Olympic Mountains** is a [mountain range](#) on the [Olympic Peninsula](#) of western [Washington](#) in the [United States](#). The [mountains](#), part of the [Pacific Coast Ranges](#), are not especially high - [Mount Olympus](#) is the highest at 7,962 ft (2,427 m) - but the western slopes of the Olympics rise directly out of the [Pacific Ocean](#) and are the wettest place in the 48 contiguous states. On the wetter end of the spectrum, 140 and 170 inches (3,600 and 4,300 mm) of rain falls on the [Hoh Rainforest](#) annually.^[1] Conversely, areas to the northeast of the mountains, however, are located in a [rain shadow](#) and receive as little as 16 in (410 mm) of precipitation.^[2] Most of the mountains are protected within the bounds of the [Olympic National Park](#).



The Olympics have the form of a cluster of steep-sided peaks surrounded by heavily-forested foothills and incised by deep valleys.

The climax [forests](#) consist of [Sitka spruce](#) and [western hemlock](#). [Douglas fir](#) occurs in groves. Other types of [firs](#) may be seen also. Due to high precipitation, clearings in the forest quickly become covered with [vine maple](#), [slide alder](#), and [devil's club](#), making cross-country travel most challenging.

Another consequence of the high precipitation is the large number of snowfields and [glaciers](#), reaching down to 1,500 m (5,000 ft) above sea level. There are about 266 glaciers crowning the Olympic peaks. The most prominent glaciers are those on [Mount Olympus](#) covering approximately 10 square miles (26 km²). Beyond the Olympic complex are the glaciers of Mount Carrie, the Bailey Range, [Mount Christie](#), and [Mount Anderson](#).^[3]

The Olympics are made up of an obducted [clastic](#) wedge material and oceanic crust. They are primarily Eocene sandstones, [turbidites](#), and [basaltic](#) oceanic crust.^[4] Unlike the [Cascades](#), the Olympic Mountains are not volcanic.

Millions of years ago, vents and fissures opened under the Pacific ocean and lava flowed forth, creating huge underwater mountains and ranges called [seamounts](#). The [plates](#) that formed the ocean floor inched toward North America about 35 million years ago and most of the sea floor went beneath the continental land mass. Some of the sea floor, however, was scraped off and jammed against the mainland, creating the dome that was the forerunner of today's Olympics. Powerful forces fractured, folded, and over-turned rock formations, which helps explain the jumbled appearance of the Olympics.^[3]

In the [Pleistocene](#) era, a vast continental [ice sheet](#) descended from Alaska south through British Columbia to the Olympics. The ice split into the [Juan de Fuca](#) and [Puget](#) ice lobes, as they encountered the resistant Olympic Mountains. A [glacial outwash](#) stream surged around the southern end of the peninsula to the Pacific Ocean. This isolated the Olympic Peninsula from the nearby Cascade Mountains and limited species from entering and exiting the peninsula. When the ice sheet reached the Peninsula, large areas of the continental shelf were also exposed by the lower sea levels since so much water was trapped as ice. This created a [coastal refuge](#). The distance from Mount Olympus to the Pacific Ocean may have been double that of today.^[3]

The low Olympics contains foothills and mountains and rises to an elevation of approximately 4,000 feet (1,200 m). Copious precipitation (up to 200 inches (5,000 mm) per year) supports a lush, [epiphyte-rich rainforest](#) of [Western Hemlock](#), [Western Red Cedar](#), and [Douglas-fir](#). Much of the region is in the third rotation of [logging](#). However, a portion of the region lies within the [Olympic National Park](#) and contains [ancient forests](#).^[5]

The high Olympics contains steep, [glaciated](#) mountains that reach an elevation of almost 8,000 feet (2,400 m). It is characterized by rock outcrops, [tarns](#), persistent snow pack, [alpine glaciers](#), and high-gradient, glacial-fed streams. Its vegetation includes [subalpine Mountain Hemlock](#) and [Pacific Silver Fir](#) forests as well as [alpine meadows](#). [Subalpine fir](#) occurs on the [xeric](#) soils of northeastern rainshadow areas.

The mountains were originally called "Sun-a-do" by the [Duwamish Indians](#), while the first European to see them, the [Spanish](#) navigator [Juan Perez](#), named them "Sierra Nevada de Santa Rosalia", in 1774. But the English captain [John Meares](#), seeing them in 1788, thought them beautiful enough for the gods to dwell there, and named them "Mount Olympus" after the one in [Greece](#). Alternate proposals never caught on, and in 1864 the [Seattle Weekly Gazette](#) persuaded the government to make the present-day name official. Though readily visible from most parts of western Washington, the interior was almost entirely unexplored until the 1890s. Mount Olympus itself was not ascended until 1907, one of the first successes of [The Mountaineers](#), which had been organized in Seattle just a few years earlier. A number of the more obscure and least-accessible peaks in the range weren't ascended until the 1970s.

The [Mount Olympus National Monument](#) was proclaimed by [Theodore Roosevelt](#) in 1909, and made into a park in 1938.



Lake Crescent is a deep [lake](#) located entirely within [Olympic National Park](#) in [Clallam County, Washington, United States](#), approximately 17 miles (27 km) west of [Port Angeles, Washington](#) on [U.S. Route 101](#) and nearby to the small community of [Piedmont](#). At an official maximum depth of 624 feet (190 m), it is officially the second deepest lake in [Washington](#), although unofficial depth measurements of more than 1,000 feet (300 m) have been recorded.

Lake Crescent is known for its brilliant blue waters and exceptional clarity, caused by a lack of [nitrogen](#) in the water which inhibits the growth of [algae](#). It is located in a popular recreational area which is home to a number of trails, including the [Spruce Railroad Trail](#), [Pyramid Mountain](#) trail, and the [Barnes Creek](#) trail to [Marymere Falls](#). The Spruce Railroad Trail follows the grade of what was once the tracks of a

[logging railroad](#) along the shores of the lake. Following this trail on the north side of the lake, one can find the entrance to an old [railroad tunnel](#) as well as "Devils Punch Bowl", a popular swimming and diving area.

The lake was formed when [glaciers carved out](#) deep [valleys](#) during the [last Ice Age](#). Initially, the Lake Crescent valley drained into the [Indian Creek](#) valley and then into [Elwha River](#). [Anadromous fish](#) such as [steelhead](#) and [coastal cutthroat trout](#) migrated into the valley from lower waters.

Approximately 8,000 years ago, a great [landslide](#) from one of the [Olympic Mountains](#) dammed Indian Creek and the deep valley filled with water. Many [geologists](#) believe that Lake Crescent and nearby [Lake Sutherland](#) formed at the same time, but became separated by the landslide.^[1] The results of the landslide are easily visible from the summit of [Pyramid Mountain](#). Eventually, the water found an alternative route out of the valley, spilling into the [Lyre River](#), over the Lyre River Falls, and out to the [Strait of Juan de Fuca](#).

In the early 1960s, the U.S. Navy did a survey of the lake using a Furuno depth sounder. They were not able to verify the maximum depth on their equipment. During a 1970 depth survey conducted by the students of the fisheries program at Peninsula College in Port Angeles, Washington, students used instruments that could not record measurements beyond a depth of 624 feet, which thus became the "official" depth of the lake as recorded by the National Park Service. However, when power cable was being laid in the lake, instruments showed depths in excess of 1000 feet, the maximum range of the equipment used. The actual maximum depth of Lake Crescent remains unknown.

It is not certain whether the lake was named for its crescent shape or for its proximity to Crescent Bay, which was named by [Henry Kellett](#) in 1846. In 1849 two British–Canadian fur trappers, John Sutherland and John Everett, forged inland from Crescent Bay. The two lakes they found became known as [Lake Sutherland](#) and Everett Lake. Later, Everett Lake was renamed Lake Crescent. It has also been known as Big Lake and Elk Lake.

In 1890, while the Port Crescent Improvement Company was promoting its townsite near the lake, M.J. Carrigan started the *Port Crescent Leader* to help boost the town. He wrote of the beautiful lake, which he called Lake Crescent, and the name soon became well established.

Sol Duc Hot Springs is a resort located in [Olympic National Park](#) that is best known for its soaking pools, hot tubs, and a swimming pool that are heated with the nearby hot springs. The resort is situated in a valley carved by the [Sol Duc River](#).

The springs, known to local Indian tribes for their therapeutic value, first came to the attention of settlers in the 1880s. An elaborate resort opened up in 1912, and was characterized as "the most noted pleasure and health resort on the Pacific Coast" until it burned down in 1916. The resort was rebuilt on a much less grand scale in the 1920s, and was operated into the 1970s until it ran into trouble with its thermal spring in the 1970s. These problems were overcome, and the resort was rebuilt in the 1980s. It continues to operate until this day, attracting thousands of visitors a year. Also located in the area is the undeveloped [Olympic Hot Spring](#).



Lake Quinault is a [lake](#) on the [Olympic Peninsula](#) in western [Washington](#) state, [USA](#). It is located in the [glacial](#)-carved Quinault Valley of the [Quinault River](#), at the southern edge of [Olympic National Park](#) in the northwestern United States. One of the most dominant features of Lake Quinault is being located within the [Quinault Rain Forest](#), a temperate rain forest.

Lake Quinault is owned by the [Quinault Indian Nation](#). The area is accessible from [U.S. Route 101](#).

Area activities include fishing (with permit from the Quinaults), scenic

drives (a loop around the lake is longer than 30 miles (48 km)), and hiking. The southern side of the lake features a system of short [hiking](#) trails maintained by the [National Forest Service](#) that are accessible to casual day hikers.

The southern side of the lake is home to the historic [Lake Quinault Lodge](#) and the Rain Forest Resort Village and is encompassed by the [Olympic National Forest](#). The north side of the lake is bordered mainly by private homes and some small resorts located in [Olympic National Park](#).

Lake Quinault receives an average of 332.92 centimeters (131.07 inches) of precipitation per year.

World's Largest Spruce Tree. (Behind the Salmon House restaurant)

Lake Quinault is the “Valley of the Rain Forest Giants©” and the Big Spruce Tree at the Resort is one of them. The tree is the World's Largest Spruce with a circumference of 58 feet, 11 inches, diameter of 18 feet, 9 inches and 191 feet tall for a total of 922 AFA points. A very large tree near Seaside, Oregon claims to be the United States largest spruce tree, it has 902 AFA points. The American Forestry Association declared them close enough to be CO-champions. But a little bigger is still bigger, sorry Seaside.

There is a short trail to the tree just past the resort's general store on South Shore road. You can go to the interactive map to see the trees location at the resort.

Hoquiam (Ho'-kwee-um) or (Ho-kwim, to natives) was incorporated on May 21, 1890. Its name comes from a Native-American word meaning "hungry for wood".

The name **Humptulips** may have come from a local Native American language, meaning 'hard to pole', referring to the difficulty local Native Americans had poling their canoes along the Humptulips River. According to other sources the word means 'chilly region'. Another

possibility is that Humptulips was the name of a band of the [Chehalis](#) tribe.

Aberdeen was incorporated on May 12, 1890. The city is the economic center of [Grays Harbor County](#), bordering the cities of [Hoquiam](#) and [Cosmopolis](#). Aberdeen is called the "Gateway to the [Olympic Peninsula](#)," but it is more famous as being the hometown of [Nirvana](#) members [Kurt Cobain](#) and [Krist Novoselic](#) as well as professional wrestler [Bryan Danielson](#).

Aberdeen was named for a local salmon cannery, a [namesake](#) of [Aberdeen, Scotland](#), because it is situated at the mouth of two rivers just like Aberdeen, Scotland. Although it became the largest and best known city in [Grays Harbor](#), Aberdeen lagged behind neighbors [Hoquiam](#) and [Cosmopolis](#) in the early years. When A.J. West built the town's first sawmill in 1894, the other two municipalities had been in business for several years. Aberdeen and its neighbors vied to be the terminus for [Northern Pacific Railroad](#), but instead of ending at one of the established mill towns, the railroad skimmed through [Cosmopolis](#) and headed west for [Ocosta](#). [Hoquiam](#) and Aberdeen citizens banded together to build a spur; and in 1895, the line connected Northern Pacific tracks to Aberdeen.

By 1900, Aberdeen was considered one of the grittiest towns on the [West Coast](#)^[*citation needed*], with many saloons, [whorehouses](#), and gambling establishments populating the area. Aberdeen was nicknamed "The Hellhole of the Pacific", or "The Port of Missing Men", because of its high murder rate. One notable resident was [Billy Gohl](#), known locally as Billy "Ghoul",^[3] who was rumored to have killed at least 140 men. (Gohl was convicted of 2 murders^{[4][5]})

During the [Great Depression](#), Aberdeen was hit hard, reducing the number of major saw mills from 37 to 9. Mill owners hired Filipino and Jewish immigrants to keep wages low in order to stay in business.^[*who?*] The timber industry continued to boom, but by the late 1970s most of the timber had been logged. Most of the mills were closing down by the 1970s and 1980s.

Aberdeen is also the home port of the tall ship [Lady Washington](#), a reproduction of a smaller vessel used by the explorer Captain [Robert Gray](#), featured in the "[Pirates of the Caribbean](#)" film [The Curse of the Black Pearl](#).

Shelton was officially incorporated in 1890 and once served by a small fleet of steamboats which was part of the [Puget Sound Mosquito Fleet](#). These boats included the [Old Settler](#), [Irene](#), [Willie](#), [City of Shelton](#), [Marian](#), [Clara Brown](#), and [S.G. Simpson](#). The economy was built around logging, farming, dairying and ranching as well as oyster cultivation. The [Simpson Timber Company](#) mill on [Puget Sound](#)'s [Oakland Bay](#) continues to dominate the landscape of the downtown area. Shelton also identifies itself as the "Christmas Tree Capital".

Tacoma is the second-largest city in the Puget Sound area and the [third largest](#) in the state. Tacoma adopted its name after the nearby [Mount Rainier](#), originally called Mount Tahoma. It is known as the "City of Destiny" because the area was chosen to be the western terminus of the [Northern Pacific Railroad](#) in the late 19th century. The decision of the [railroad](#) was influenced by Tacoma's neighboring [Commencement Bay](#). By connecting the bay with the railroad Tacoma's motto became "When rails meet sails." Today Commencement Bay serves the [Port of Tacoma](#), a center of [international trade](#) on the [Pacific Coast](#) and Washington state's

largest port.

Like most central cities, Tacoma suffered a prolonged decline in the mid-20th century as a result of [suburbanization](#) and divestment. Recently the city has been undergoing a renaissance, investing in the downtown core to establish the [University of Washington, Tacoma](#); [Tacoma Link](#), the first modern electric [light rail](#) service in the state; various art and history museums; and a restored inlet, the [Thea Foss Waterway](#).

With a long history of blue-collar [labor](#) politics — from the railroad workers of the 19th century, to the [longshoremens](#) of the 20th century, to the [Labor Ready](#) workers of today — Tacoma has long been known for its rough, gritty image. Tacoma is also known for the odor caused by the Pulp mill, which non-locals call "the aroma of Tacoma." A song about Tacoma, "Thrice All American", by American singer-songwriter and former resident [Neko Case](#), describes it as "a dusty old jewel in the South Puget Sound, where the factories churn and the timber's all cut down".

Tacoma was inhabited for thousands of years by [American Indians](#), predominantly the [Puyallup](#) people, who lived in settlements on the delta of the [Puyallup River](#) and called the area Squa-szucks. It was visited by European and American explorers, including [George Vancouver](#) and [Charles Wilkes](#), who named many of the coastal landmarks.

In 1852 a Swede named Nicolas Delin constructed a sawmill powered by water on a creek near the head of Commencement Bay, but the small settlement that grew up around it was abandoned during the Indian War of 1855-1856. In 1864, pioneer and postmaster Job Carr, a Civil War veteran and land speculator who hoped to profit from the selection of Commencement Bay as the terminus of the Transcontinental Railroad, built a cabin (a replica of Job Carr's cabin, which also served as Tacoma's first post office, was erected in "Old Town" in 2000 near the original site), and later sold most of his claim to developer Morton McCarver (1807–1875), who named his project Tacoma City. The name derived from the indigenous name for the mountain.

Tacoma was incorporated on November 12, 1875. Its hopes to be the "City of Destiny" were stimulated by selection in 1873 as the western terminus of the [Northern Pacific Railroad](#), thanks to lobbying by McCarver, future mayor [John Wilson Sprague](#), and others. The transcontinental link was effected in 1887, but the railroad built its depot on "New Tacoma", two miles (3 km) south of the Carr-McCarver development. The two communities grew together and joined. The population grew from 1,098 in 1880 to 36,006 in 1890. [Rudyard Kipling](#) visited Tacoma in 1889 and said it was "literally staggering under a boom of the boomiest". [George Francis Train](#) was a resident for a few years in the late 19th century. In 1890, he staged a global circumnavigation starting and ending in Tacoma to promote the city. A plaque in downtown Tacoma marks the start/finish line. The discovery of gold in the [Klondike](#) in 1898 led Tacoma's prominence in the region to be eclipsed by the booming development of Seattle.