

## Section 2 Community Description





## 2.1 LOCATION, GEOGRAPHY AND HISTORY

The city of Portland, with a population of 582,130 (July 1, 2009 Portland State Population Research Center), comprises an area of approximately 145 square miles in northwestern Oregon (134.3 sq mi of land and 11.1 sq mi of water) and sits at an elevation of 50 feet above sea level with hills extending higher than 1,000 feet. Located astride the Willamette River at its confluence with the Columbia River, Portland is the center of commerce, industry, transportation, finance and services for a metropolitan area of more than two million people. Portland is the largest city in Oregon, the seat of Multnomah County and the second largest city in the Pacific Northwest. It is located at approximately 45.52 North Latitude and -122.681944 West Longitude; 179 miles south of Seattle, Washington and 372 miles north of San Francisco, California.

The Columbia River Gorge lies to the east of the city, providing a break in the Cascade Mountain Range. Several large volcanoes are located close to the city, including Mt. St. Helens, Mt. Hood, Mt. Adams and Mt. Jefferson. Portland lies about 78 miles east of the Pacific Coast, bordered on the north by Clark County in the State of Washington, on the west, south and east by Washington, Clackamas and Hood River counties, respectively.

Portland, incorporated in 1851, is a home rule charter city. The City Charter is the basic law under which the City operates and can be amended only by a vote of the people. In 1913, a modified commission form of government was created, which is rare in cities as large as Portland. The City operates under the provisions of the City Charter and City Code, which are consistent with the Oregon Constitution and state law (the Oregon Revised Statutes).

**Figure 2-1a Map of Portland and Multnomah County**



Portland is in the marine west coast climate zone. Summers are warm and dry with clear skies, with July averaging 68.2 degrees Fahrenheit (°F). Winters can be mild to chilly and very moist, with January averaging 39.6 °F. The rainfall averages 36.3 inches per year. The city averages 152 days of measurable precipitation a year. Snow accumulations occur infrequently, however the city can experience major snow and ice storms as cold air patterns flow from the Columbia River Gorge. Winter snowfall totals range from negligible to an average of 6.5 inches with wind speeds averaging 7.9 miles per hour (mph). The city's lowest temperature was -2 °F on January 15, 1888; the highest temperature reached 107 °F on July 2, 1942, July 30, 1965 and August 8 and 10, 1981.

## 2.2 MINERALS AND SOILS

Several common natural hazards are related to soil stability and water retention and saturation. These hazards include landslides, erosion, flooding and liquefaction resulting from an earthquake. Mineral and soil compositions are important factors for determining whether Portland is prone to hazards such as landslides.

Soils on the west side of the Willamette River vary from clay loam with low permeability and relatively high erosion potential to gravelly loams, which are relatively well drained and moderately permeable. The flat areas along the west bank of the Willamette River are urban with highly disturbed soil and unstable fill.

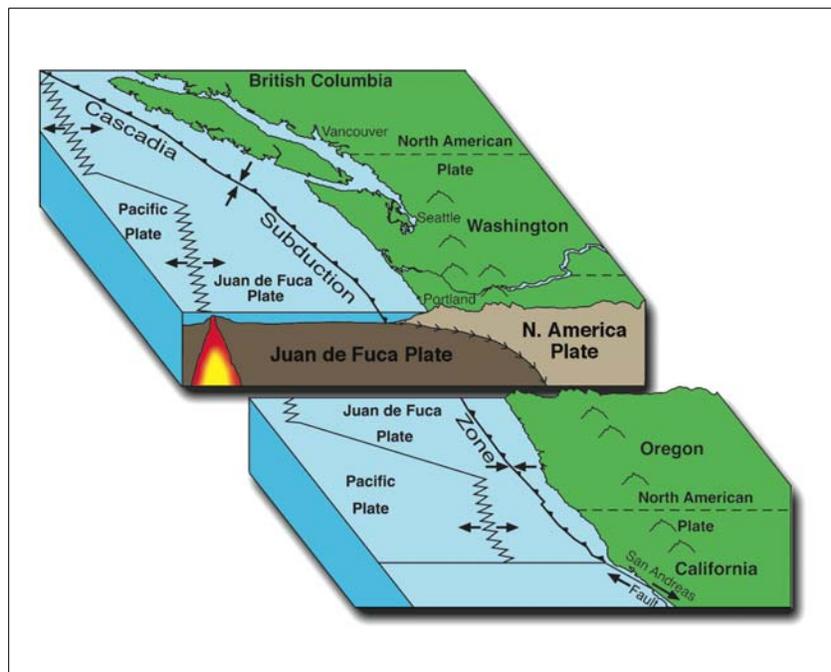
On the east side of the Willamette River soils are highly variable, similar to the west side. Much of the area along the Columbia River has been filled with dredged sand, which drains very well. In undisturbed areas along the Columbia River, percolation (water flow through soil) rates are very slow. In the southeast areas of the city, soils vary from moderate to low permeability. In areas with well-draining soil, it is possible to manage storm water through infiltration practices.

## 2.3 SIGNIFICANT GEOLOGICAL FACTORS

Most of the Pacific Northwest lies within the Cascadia Subduction Zone (Figure 2-3a), where the Juan de Fuca and North American plates meet. The convergence of these tectonic plates puts most areas from western British Columbia to southern

California at risk for a catastrophic earthquake with a potential magnitude of 9.0 or higher (Modified Mercalli Intensity Scale). Portland lies in this area of risk. There are the three crustal fault lines that run through Portland: the Portland fault, the East Bank fault and the Oatfield fault, each capable of generating moderately large (6.8) earthquakes. As a result of the subduction zone, there are active volcanoes nearby, including Mt. St. Helens in southwest Washington and Mt. Hood. Major eruptions of these volcanoes may cause significant ash fall in the Portland area.

Figure 2-3a Cascadia Subduction Zone



## 2.4 DEMOGRAPHICS

Table 2-4a Profile of Portland's Citizens

General Characteristics	2000	2007
City population	529,121	550,795
Male	261,565	270,567
Female	267,556	280,228
Median Age (years)	35.2	37.8
Under 5 years	32,000	35,401
25 years and older	363,106	389,821
65 years and older	61,163	55,595
Race/Ethnic Distribution		
One race		
White	412,241	431,419
Black or African American	35,115	35,002
American Indian & Alaskan Native	5,587	9,938
Asian	33,470	35,163
Native Hawaiian and other Pac. Is	1,993	2,896
Some other race	36,058	46,836
Two or more races		
Hispanic or Latino (of any race)	36,058	46,836
Household population	514,129	534,523
Total Housing Units	237,307	253,971

Source: US Census Bureau, 2007 American Community Survey

## 2.5 ECONOMY

Portland's economy has slowly diversified over the past decades. Steady growth in nontraditional sectors, such as the manufacture of electrical equipment, instruments and related products, has helped Portland's economy adapt to national and global trends. Semiconductor manufacturers, such as Intel and Wacker Siltronic, have established major facilities in the region. Tektronix, Nike, health systems Providence, Kaiser Permanente and Legacy, as well as retailers Safeway, Albertsons and Fred Meyer are some of the other major private sector employers in the Portland metropolitan area. Major public employers include Oregon Health and Science University (OHSU) and Portland State University.

The Port of Portland, the governmental unit responsible for air and marine port facilities, offers outstanding opportunities for expanding export industries, investments, business and travel. Portland's deep water location on the Columbia River gives it substantial geographic and economic advantages for freight shipping. The Columbia River shipping channel is maintained at a depth of 40 feet from the Portland harbor to the Pacific Ocean, 110 mile downstream. Portland is the largest wheat export port in the country. The Port also manages Portland International Airport (PDX). The airport is served by 14 passenger carriers providing more than 260 scheduled passenger flights daily to over 100 cities in the U.S. and Canada, as well as daily flights to Mexico, Germany and Japan. PDX is also served by 11 air-cargo carriers, including Air China, which provides nonstop cargo links to Asia.

**Table 2-5a City of Portland Occupations**

Occupations (figures indicate number of employees)	2000	2007
Management, professional and related occupations	102,760	120,718
Service occupations	41,444	45,348
Sales and office occupations	73,250	69,057
Farming, fishing and forestry	679	2,070
Construction, extraction and maintenance occupations	19,405	17,612
Production, transportation and material moving occupations	38,456	33,725
Median household income (dollars)*	\$40,146	\$47,143
Median family income (dollars)*	\$50,271	\$61,419

Source: US Census Bureau, 2007 American Community Survey

\* adjusted for inflation