

US & Canada:
North Pacific Coast (Ch.18)



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States? Provinces?

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What regions border it?

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Overview

- Main volcanic area of US mainland
- Humid, mild
- Significant vegetation
- Significant growth in places
- “Ecotopia”

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Physical setting

- Physical landscape regions parallel region itself
 - Coastal range
 - Interior trough (valley)
 - Inland range

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Coastal range

- Extend from N. Cal.
Thru Coastal Alaska
 - Below US/Canada
border: part of
mainland
 - North: islands
- Glaciated though
elevations not high



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Interior trough

- Above sea level
 - Willamette Valley, Oregon similar to central valley of California
- Submerged
 - Puget Sound and North
 - Inside Passage in B.C.

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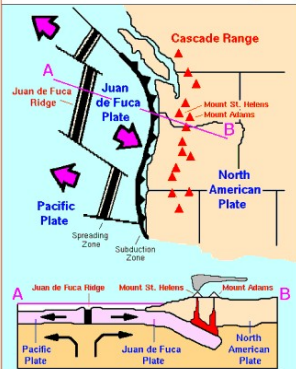
Inland ranges: volcanoes

- Cascades: Mt. Lassen, California to Mt. Garibaldi, BC
 - Up to 14,000'



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Plate Tectonics – Cascade Range



USGS Trask, USGS-CV02, 1995. Modified from: Ting, 1985. Volcanoes: USGS General Interest Publication.

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Natural hazards: eruptions

- Composite volcano, much more violent eruptions than Hawaii
 - Mt. St. Helens (1980)



“Inland” ranges along the mainland coast

- Coast Mountains of BC
- St. Elias Mtns. of Alaska/BC/Yukon
- Mt. Logan (19,850')
- Mt. St. Elias (18,008'): only 30 miles from the ocean



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Alaskan mountains

- Again a split into two
- Inland includes Mt. McKinley (20,320'), tallest in North America
- Rugged coastal mountains



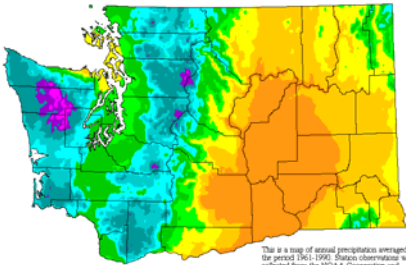
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Climate

- Cloudy
- High precipitation most places
 - Vancouver Island over 250 inches
- Rain shadow in interior trough
- Snowless along coast; incredible amounts of snow on interior mountains
 - Paradise, Mt. Rainier: Over 1,000" in one winter

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Average Annual Precipitation
Washington



This is a map of annual precipitation averaged over the period 1961-1990. Station observations were collected from the NOAA Cooperative and USCA-NWSN (NWSN) networks, plus other state and local networks. The PRISM modeling system was used to create the gridded estimates from which this map was made. The size of each grid pixel is approximately 4x4 km. Support was provided by the NWSN Water and Climate Center.

For information on the PRISM modeling system, visit the NWSN web site at <http://www.oce.noaa.gov/prism>.

The latest PRISM digital data sets created by the NWSN can be obtained from the Climate Source at <http://www.climatesource.com>.

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Climate comparison

	Akron	Eureka, CA	Seattle	Yakutat, Alaska
Jan Temp	33 / 17	53 / 41	44 / 36	30 / 16
Jul Temp	82 / 61	60 / 52	75 / 56	60 / 48
Rainfall	38 in.	39 in.	39 in.	135 in.
Snowfall	45 in.	0 in.	12 in.	204 in.

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Natural vegetation: Temperate Rainforest

- Very dense vegetation
- Most trees conifers



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Natural vegetation: outside the forest

- Willamette Valley: Prairie grass with much more limited forest
- Many other locations: Tundra or ice sheet



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Native Settlement

- Numerous tribes
- Among last to be displaced in North America
- Expert wood carvers



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White settlement

- Russians come south
 - Advances from interior Alaska
- Spanish come north
 - Explored as far north as Alaska peninsula
- British / US
 - First by boat: James Cook 1778
 - Later from the west: British (Canadian) and American claims

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More settlement

- 1820s: Russians limited to current Alaska
- 1820s: Spanish limited to California south
- 1846: US and Britain eventually split "Oregon Country" at current border
- 1867: Russians sell Alaska to US

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Reaching the area

- Originally difficult to transport anything
 - Lumber only sent to Hawaii or California
- 1850s: Gold Rush in British Columbia
- 1880s-90s: Railroads connect area to the rest of the continent
 - Settlement began in all low-lying areas
 - Vancouver blooms as "end of the line"
- Turn of 20th century: Alaska Gold Rush

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Present population

- Significant growth in some metro areas
 - Seattle (+20%), Portland (+26%), Anchorage (+16%), Vancouver (+25%)
- Many locations small due to inaccessibility
- Racial composition
 - Mostly white
 - Asian population concentrations in some cities
 - Native populations in Alaska / B.C.

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Population numbers

State/Metro Area	2000	1990	Change
Washington	5894	4866	+21%
Oregon	3421	2842	+21%
British Columbia	3869	3247	+19%
Alaska	626	550	+14%
US & Canada	312,600	276,700	+13%

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Ways of life: Forestry

- Douglas Fir most productive tree for lumber
- Many jobs but cutting and processing wood
 - Lumber
 - Pulp
 - Paper
- Current decline in region's shipments to other parts of North America, but increase to Asia until recent years
- Clearcutting and the spotted owl?

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Agriculture

- Small spatial extent
- Willamette Valley, OR most productive
- Berries
- Cherries
- Dairy
- Grapes
- Horticulture (esp. Canada)

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Fishing

- Salmon, in decline
- Crabs, other shellfish growing
- Alaska #1 fishing state
- British Columbia #1 fishing province

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Oil

- Kenai Peninsula, AK under significant development
- Many resources potentially of Alaskan shore
- Significant environmental concerns realized in 1989 Exxon Valdez disaster

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Tourism

- Remoteness has aided in preservation
- Alaskan cruises
- Skiing in British Columbia
- National Parks: Olympic, Rainier, St. Helens

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Focus on Asia

- Shipping and trade have long focused on Asia
- Business and finance well connected as well
- Greater cultural attachment to Asia
- Larger Asian population here (esp. Vancouver)
- Asian currency crisis in 1999 hit exports significantly (lumber down 40%)

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Seattle - Tacoma

- Major shipping port (deep harbor), especially to Asia
- Originally gateway to Alaska
- Over 3 million people
- Boeing a major employer (80,000)
 - HQ move to St. Louis in 2001



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Portland

- Over 2 million people
- West Coast's only freshwater harbor
- Major lumber and agriculture port
- "Most livable city"



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Anti-urban sprawl

1970-1990: Portland's population grew 50%, land use just 2%

"METRO" Regional Planning Goals

- "Urban Growth Boundary", beyond which little or no development will be allowed.
- Within Urban Growth Boundary, only buildings with high residential densities allowed
- Slow highway growth
- Spend most of transportation money on a light-rail mass transit system
- Banning new shopping malls and stores like Wal-Mart

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Vancouver

- Third-largest metro area in Canada (2M)
- Canada's only main west coast port
- Huge influxes of Chinese, most recently around 1997
- Ranks as one of most livable cities in world
- Large homeless problem



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Anchorage

- Around 300,000 people
- Half of Alaska's total
- Gateway to interior
- Many jobs in petroleum industry



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Juneau

- State Capital
- 30,000 people
- On mainland but cut off
- One of cloudiest cities in country (only 30 sunny days a year)



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Outlook

- Growing but with environmental concerns
- Much more tied to Asian economy than anywhere else
- Main growth to remain in a few cities

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