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THUMBNAIL HUMAN HISTORY OF THE COLUMBIA RIVER GORGE

- 14,000 yr ago First documented humans in Pacific Northwest
- 10,000 yr ago Evidence of salmon fishery at the head of Five Mile Rapids near The Dalles
- 3,000 to 150 yr ago Dozens of Native American villages along Columbia River, notable population centers in the Celilo/Five Mile Rapids area near The Dalles, the Portland Basin, and, after about 500 yr ago, Cascade Rapids
- ~300-150 yr ago First European contact, development of equestrian culture, vast reductions of Native American populations by smallpox and other communicable diseases
- August 1775 Bruno de Hezeta discovers mouth of Columbia River (and names it Rio de San Roque)
- May 11, 1792 Captain Robert Gray enters river and gives it the name "Columbia River"
- October 1792 Lieutenant William Broughton (of Vancouver expedition) sails upstream to near Sandy River confluence
- Oct.-Nov. 1805 Lewis and Clark travel through the Columbia River Gorge on the way to Pacific, running Five Mile Rapids, but portaging around Cascade Rapids; measure first tide at Beacon Rock; return through Gorge April 1806
- March 1811 Contingent sent by John Jacob Astor establishes Astoria as fur trading post
- July 1811 David Thompson explores entire route of Columbia River
- 1825 Hudson's Bay Company established at Fort Vancouver
- 1841 Wilkes Expedition maps Columbia River channel; James Dwight Dana first geologist in PNW
- 1842 First Oregon Trail emigrants reach end of the trail at The Dalles, forced to take to the river for final 100 km
- 1851 "the clearing" on west bank of Willamette incorporated as 'Portland' (instead of as 'Boston')
- 1855 Abbot Railroad surveys, includes doctor/geologist John Strong Newberry
- 1856 First portage railway constructed around Cascade Rapids
- 1860s Oregon Navigation Company runs sternwheelers between Portland and Lewiston, Idaho
- 1860-1910 First Coast and Geodetic Surveys of Columbia River channel and floodplain
- 1870s First wagon road from Sandy to The Dalles
- 1879 Beginning of continuous stage measurements of the Columbia River (at Cascade Locks)
- 1882-1883 Union Pacific railroad completed on Oregon side by E.H. Harriman
- 1880-1900 Fish wheels, gill nets, and hooks annually extract up to 3 million pounds of salmon from the Columbia
- 1890s First dredging and pile dike construction by U.S. Army Corps of Engineers
- 1896 Cascade Locks completed, allowing ship travel past Cascade Rapids
- 1905 First USGS topographic quadrangles of Columbia River Gorge area
- 1912 James J. Hill completes Spokane, Portland & Seattle Railway on north bank of the Columbia
- 1915 Columbia River Scenic Highway opens between Troutdale and The Dalles
- 1915 Completion of Celilo Canal, allowing ship traffic past Five Mile Rapids and Celilo Falls
- 1938 Completion of Bonneville Dam; drowning of Cascade Rapids
- 1957 Completion of The Dalles Dam, drowning of Five Mile Rapids and Celilo Falls
- 1950-1980 Construction of Interstate 84, destruction of parts of the Columbia River Scenic Highway
- 1986 Columbia River Gorge National Scenic Area Act

THUMBNAIL GEOLOGIC HISTORY OF THE COLUMBIA RIVER GORGE

(prepared by Jim O'Connor and Richard Waitt, U.S. Geological Survey; revised October, 2009)

50 m.y.	Birth of the Cascade Range volcanic arc
17-12 m.y.	Voluminous Columbia River Basalt Group lava flows vent from eastern Oregon, eastern Washington, and western Idaho. 175,000 cubic kilometers of basalt bury the landscape; dozens of flows passed through ancestral Columbia River valleys to the Pacific
12-2 m.y.	Substantial Cascade Range volcanism produces broad aprons of sediment (Dalles/Rhododendron Formation). Local vents pour lava flows into Columbia River valley and build up 100s of small cones (Boring Lavas); Stocks intrude from below (Wind Mountain, Shellrock Mountain); Portland Basin forms
3-2 m.y.	Beginning of glacial ages, capture of the Snake River, cutting of Hells Canyon
2-1 m.y.	Modern Cascade Range warps up; present stratovolcanoes (Hood, Adams, Saint Helens) form; Columbia River cuts present gorge; landslides push river against south gorge wall, forming south-wall waterfalls
1 m.y.	Basalts of Haystack and Gordon Buttes in eastern gorge
340,000 yr ago	Lava flow descends Wind River and down Columbia River, damming deep lake
200,000 yr ago	Mount Tabor pokes through Portland basin; one of several during last 1 m.y.
130,000 yr ago	Rocky Butte erupts, forming high-value view property in east Portland
100,000 yr ago	Mount Hood volcano partly collapses; resulting debris flow buries present site of Hood River, dams Columbia
55,000 yr ago	Beacon Rock volcano pushes through Columbia valley
25-12,000 yr ago	Last glacial age; dozens of great floods from Glacial Lake Missoula repeated sweep down Columbia River gorge, as deep as 300 m, volumes as great as 2500 km ³ , and with discharges as great as 10 million m ³ /s; windblown silt (loess) coats landscape; sea level 120 m lower, and Columbia River 90 m below present level at Portland; major eruptions of Mount St. Helens
12-5,000 yr ago	Sea level rises rapidly to present level; Columbia River keeps up by depositing ~90 m of sand and silt
7,500 yr ago	Mount Mazama (Crater Lake) erupts 50 km ³ of magma; Columbia River channel filled with up to 5 m of pumice and ash
5,000-60 yr ago	Large sand dunes grow along Columbia River valley bottom
1,500 yr ago	Eruptions of Mt. Hood send multiple lahars down the Sandy River to the Columbia, build out Sandy River delta
1420-1460 AD	Bonneville Landslide blocks Columbia River at "Bridge of the Gods," resulting lake breaches landslide dam, sending ~200,000 m ³ /s down the Columbia River. Cascade Rapids is the remnant landslide dam, impounding Columbia River 15 m above pre-landslide level
Jan. 26, 1700	Giant Cascadia earthquake shakes entire Pacific Northwest, sends tsunami across Pacific
1781 AD	Mount Hood erupts, sending "Old Maid" lahars down Sandy River Dec. 1861 Regional rain-on-snow flooding in the Pacific Northwest, largest floods of last several thousand years on many Columbia River tributaries (Willamette, Deschutes, John Day)
June 7, 1894	Largest historic flood on the Columbia River, 34,000 m ³ /s from snowmelt
June 1, 1948	Vanport flood on the Columbia River, 28,600 m ³ /s
May 18, 1980	Mount St. Helens erupts, sending ~34 million m ³ of sediment into the Columbia River near Longview
Feb. 6-10, 1996	Massive debris flows during regional rain-on-snow event bury houses, Interstate 84, and railway in Dodson/Warrendale area; Columbia River and tributaries achieve maximum stages since 1964
Nov. 28, 2001	Debris flow buries I-84 MP 35 exit ramp
Nov. 2007	Hood River delta builds out from Mount Hood debris flow sediment