

Hoh River Valley - Olympic National Park (ONP)

Domain name: PNW NEON – Domain 16

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Location: (124° 00'36" W, 47° 50' 00" N)

Ecological Themes:: Research at this site can address national ecological observatory themes related to Climate; Land Use (pollution, land use change), Invasives (plants, animals, pests, and pathogens); Disturbance (long distance air pollution, wind storms, and debris flows); and Aquatic (stream and river).



Site History and Characteristics: The Hoh River Valley site in ONP is located on the west side of the Olympic Peninsula of Washington close to the Pacific Ocean. ONP was designated as a national park in 1938 (<http://www.nps.gov/olym>), an International Biosphere Reserve in 1976, and a UNESCO World Heritage Site in 1981. There is a history of atmospheric, aquatic and terrestrial research in the Hoh River Valley conducted by researchers from the Park Service, Forest Service, NOAA, Univ. Wash. and Oregon State Univ. Vegetation is tall old-growth temperate rain forest and annual precipitation averages 350 cm. Permanent vegetation plots have been established in the Twin Creeks Natural Area with emphasis on carbon cycling. There is high species diversity for numerous taxonomic groups including vascular plants, bryophytes, fungi, insects and salamanders. National ecological observatory sites represent low and mid elevation forest ranging in elevation from 180 to 850 m. Away from the river terraces terrain is steep and includes a number of small watersheds. A NADP (National Atmospheric Deposition Program) site was established in 1980 at the Hoh Ranger Station. A monitoring program was established as part of NAPAP (National Acidic Precipitation Assessment Program) in 1984 in the 58 ha West Twin Creek Watershed. Data on hydrology, precipitation and stream chemistry, vegetation and biomass changes, carbon and nutrient cycling, and soil and coarse woody debris invertebrates have been collected.

Gradients and Themes: In a large and highly heterogeneous domain, the Hoh River Valley represents an extremely high precipitation site in a well preserved section of coastal temperate rainforest. Extensive previous studies and long-term records make this site ideally suited to addressing ecological research themes. The site is well-suited to intensive studies of influence of climate change on biogeochemistry and hydrology. Closeness to the coast also makes this an excellent site for examining the influence of trans Pacific pollution and invasives.

Existing facilities include offices, classrooms, dormitories, apartments, and laboratories (including computer and GIS) at the College of Forest Resources, University of Washington's, Olympic Natural Resources Center (ONRC). <http://www.onrc.washington.edu> with a 6 FTE science staff. Housing is available for 40 people; meeting space includes a 70 person lecture hall and a social hall that seats 64 diners. Additional facilities are at the Hoh Ranger Station, including temporary accommodations, a small meeting room, lab, computer facilities and equipment maintenance. Park Service personnel at the Hoh Ranger Station and at the Park Headquarters in Port Angeles assist with science projects in the Hoh River Valley.