H.J. Andrews Experimental Forest

Domain name: PNW NEON – Domain 16
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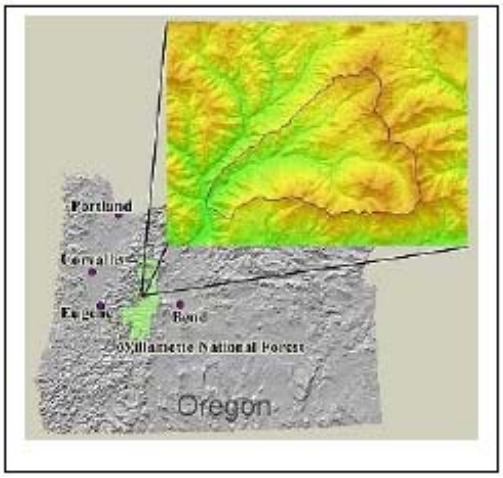
Web page: http://www.fsl.orst.edu/lter

Location: 44.212 N; -122.56 W



Ecological Themes:
Climate; Land Use (land cover change); Invasives (plant, animal); Disturbance (fire, flood, wind); Aquatic (stream, reservoir, river).

Site History and Characteristics. Encompasses the 6,400 ha drainage of Lookout Creek in the central Cascades of western Oregon. Broadly representative of the conifer forests and rugged mountainous landscape of the Pacific Northwest. Federal land managed by USDA Forest Service, PNW Research Station and Willamette National Forest. The H.J. Andrews Experimental Forest was established in 1948 and was an IBP site in the 1960s and 1970s. Records from gauged streams date more than 50 years and some long-term vegetation records run nearly 100 years. LTER site since 1980 and member of many existing research networks including UNESCO Man and the Biosphere Reserves, National Atmospheric Deposition Program, Organization of Biological Field Stations and the Forest Service network of Experimental Forests and Ranges. Close association with the Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI); currently proposed as a core element for a Critical Zone Observatory (CZO). The site is a leader in Information Technology for ecosystem research. This, along with the rich research history and current NSF-funded projects on sensor network development, ecoinformatics (an IGERT program) and influence of mountainous topography on ecosystem metabolic processes help pave the way for national ecological observatory research. See http://www.fsl.orst.edu/geowater/timemaps/lter/?topnav=165 for detailed time map of leadership and research history.

Gradients and Themes. In a large and highly heterogeneous domain, the Andrews Forest is near the geographic mid-point as well as the mid-point of the range of moisture and temperature. Extensive previous studies and long-term records (landscape disturbance; streamflow, ecohydrology; carbon dynamics, biodiversity; biogeochemistry; climate) make this site ideally suited to addressing national ecological observatory questions. The elevation gradient produces strong geographic variation in snowpack: the site is well-suited to intensive studies of influence of climate change on snowpack and associated biogeochemistry and hydrology. The adjacent Blue River Reservoir is a candidate for GLEON; small streams within the Andrews Forest have been nominated by STREON.

Existing facilities Classrooms, laboratories, offices and a library are in two adjoining buildings of about 465 m^2 (5050 ft^2) each. Classrooms include a teaching laboratory with a capacity for 32 students, a lecture hall for 100-plus people, and a library/conference room. Housing consists of 11 relatively new apartments with a total overnight capacity of about 70-85 people. A new dining hall accommodates 80-plus people.