Priest River Experimental Forest (PREF_ID_NRM)

Contact Person: John Marshall, 208-885-6695. Email: jdm@uidaho.edu
Web Page: http://www.fs.fed.us/rm/main/expfor/priestriver.html

History: PREF has a long history of research complementary to the objectives of many national research facilities. Most recently, university cooperators have conducted research on carbon, water, and nitrogen budgets in mountainous terrain. Prior to that, the forest was the site of research on forest fire, hydrology, silviculture, and timber production. There are continuous long-term records of daily weather (1911), snowpack characteristics (1937), tree growth (1914), and streamflow (1938).

Key Characteristics: The Priest River Experimental Forest (PREF) is located at latitude N 48°, 21', longitude W 116°, 50', on the west slope of the Selkirk Mountains in northern Idaho. PREF contains approximately 2,758 ha of mountainous forestland, with small areas of talus and alpine grassland. Within the PREF boundaries is a diversity of forest communities. *In fact, the site was originally chosen because it contained forests dominated by each of the major tree species in the northern Rocky Mountains*. These include species that are not found in the southern part of NoRMEO, e.g., western larch, western red-cedar, and western hemlock, as well as species that are more widely distributed, e.g., ponderosa pine, Douglasfir, Engelmann spruce, lodgepole pine and subalpine fir. This diversity occurs in part because of the elevation gradient on the forest, from 671 to 1798 m. The snowpack on the forest is uniquely "at-risk." The maritime influence on the west side of the Rockies leads to substantial snow accumulations, but at temperatures close to 0ºC. As a consequence, a relatively small change in temperature is projected to result in a highly variable transitory snowpack at elevations that have historically had a steady snow accumulation. The snowpack is particularly important in these ecosystems because of the pronounced lack of summer rainfall.

Existing Infrastructure: Gaging station on Benton Creek, meteorological station at headquarters, snowcourses at high and low elevation, good road access throughout, line power at the residences, LIDAR coverage, a T-1 line scheduled for installation early next year. PREF has a substantial record of terrestrial ecosystem process research, focused mostly on carbon and water budgets, published over the last decade.

Facilities: The facilities include a residential site with office/lab, conference building, bunkhouse with commercial kitchen, lodge, cabins and a fenced 4-ha site formerly used as a seedling nursery. An eddy flux tower could be placed on the flat terrain marked with an X below.