



## Briefing Paper

March, 2003

The Wenatchee Forestry Sciences Lab is one of ten field research laboratories of the Forest Service's Pacific Northwest Research Station. In keeping with the Station's **mission**, the Wenatchee Lab generates and communicates knowledge of forest and rangeland ecosystems that helps land managers and various publics to understand and make informed choices about people, natural resources and the environment. Our broad **goals** are to improve fundamental understanding of ecosystems; assess status and trends of ecosystems and natural resources; develop science-based options that enhance management; and communicate science findings to enhance their application.

While the **focus** of much of the Lab's research is on forests and rangelands of the interior Pacific Northwest, our work also is relevant and often extends to ecosystems at broader regional, national and global scales.

### Staffing, Programs and Teams:

Approximately 20 full- and part-time PNW Station employees, including 7 research scientists, currently staff the Wenatchee Lab, plus seasonal employees. We also house and collaborate with a 4-member State & Private Forestry/Forest Health-Protection Team, a 4-member Okanogan-Wenatchee National Forest tree ring analysis team, and a member of the Washington Governor's Salmon Recovery Team. The Lab and its scientists maintain active research partnerships not only with the Okanogan-Wenatchee and Colville National Forests, but also with several regional universities and other state/federal natural resource agencies.

Two of the PNW Station's seven research Programs have Teams stationed at the Wenatchee Lab. The Station's Managing Disturbance Regimes (MDR) Program is headquartered at the Lab, with Dr. Ed DePuit serving as Program Manager and Lab Line Officer. This Program is composed of six distinct research teams at 7 lab locations throughout the region. The MDR Program's Eastside Forest Health Restoration (EFHR) Team is located at Wenatchee, led by Dr. Paul Hessburg and composed of 5 research scientists plus 3 supporting science staff. A second PNW Program, Aquatic and Land Interactions, is represented at Wenatchee by the Aquatic and Land Interaction (ALI) Team, led by Dr. Rick Woodsmith and composed of 3 research scientists. *The co-location of these two teams, EFHR and ALI, at Wenatchee comprises a unique opportunity for research that addresses*



*terrestrial, aquatic and terrestrial-aquatic interface (e.g., riparian) ecosystems in truly integrated fashion.* We are capitalizing on this opportunity through development and implementation of several new jointly sponsored studies.

### **Research Capabilities and Emphases:**

By virtue of current staff expertise and scientific interests, the Wenatchee Lab has particular strengths to pursue research in a diversity of areas – most notably landscape, disturbance (including fire, forest insect and disease and invasive species), restoration, plant and wildlife ecology and management; climate change; aquatic/riparian zone ecology and management; fish ecology/management; and hydrology/watershed science and management. Physical resources of the Lab include an administrative/office/lab complex that includes functioning laboratories for wildlife, aquatic and vegetation research, GIS applications and dendrochronology; plus greenhouse and outdoor plotwork capacity. In addition to these resources, the ALI Team has oversight responsibilities for the Entiat Experimental Forest/Watershed, a tract of over 4,000 acres on the Wenatchee National Forest established in the 1950's for research and demonstration purposes.

Current research of the ALI Team focuses in particular on the following:

- improving knowledge of aquatic and riparian species of concern, including their ecology, management requirements, and interactions with their environment;
- enhancing understanding of the relationships between land management activities and the biodiversity and productivity of aquatic and riparian communities;
- increasing knowledge of hydrologic and geomorphic processes that create, maintain, or modify aquatic and riparian habitats and transport nutrients, sediment, and wood to maintain and replenish these ecosystems;
- improving understanding of effects of different forest practices on these processes and on water quantity and quality; and
- developing or refining methodologies to better measure and assess conditions of aquatic and riparian ecosystems and to better evaluate management options.

Current research areas of the EFHR Team include:

- improving knowledge of managed and natural forest disturbance regimes and landscape dynamics at multiple spatial and temporal scales
- modeling and mapping ecoregions and biophysical environments at multiple spatial scales
- improving knowledge of the landscape and community ecology of eastside forest and rangeland ecosystems
- developing new methods to restore and improve the health of degraded forest and rangeland ecosystems
- improving knowledge of the current and historical fire ecology of eastside forests
- improving understanding of fire management options in current eastside forests
- improving knowledge of the ecology and management of invasive plant species,
- improving knowledge of the ecology of native wildlife species under natural and managed forest disturbance regimes
- improving knowledge of the interactions and dynamics among riverine and riparian ecosystems
- improving knowledge of climate regime and disturbance regime interactions
- improving knowledge of the risks and uncertainties associated with a variety of land management options
- developing decision support systems and landscape evaluation tools to aid land management planning and decision-making

Details on specific current research by the Wenatchee Lab's Teams are available on request.

### **Contact Information:**

Wenatchee Forestry Sciences Lab  
1133 N. Western Avenue  
Wenatchee, WA 98801

Ph.: (509) 662 – 4315  
FAX: (509) 664 - 2742

Program Manager: Ed DePuit, Ph. ext. 222, ejdeput@fs.fed.us  
Admin. Officer: Kristie Forsberg, Ph. ext. 249, kforsberg@fs.fed.us  
EFHR Team Leader: Paul Hessburg, Ph. ext. 221, phessburg@fs.fed.us  
ALI Team Leader: Rick Woodsmith, Ph. ext. 227, rwoodsmith@fs.fed.us