

Restoring watersheds and salmon habitat

For Mary Holbert, it's not enough to look at a watershed system on maps and reports and in studies. She needs to have her boots on the ground, and often directly in the river.

That's why the watershed management educator on Oregon's central coast spent much of the summer obtaining permission from landowners, walking the banks of streams, and then visiting with the landowners about ways they can improve their riparian property.

Holbert is one of many Extension Sea Grant agents dedicated to watershed education and stewardship. The others are Derek Godwin, Tara Nierenberg, Frank Burris, Paul Heikkila, and Beth Lambert. In close collaboration with the OSU Extension Service, the Oregon Watershed Enhancement Board, and the Oregon Forest Resources Institute, Extension Sea Grant faculty help Oregon's watershed councils understand how watersheds work and apply this knowledge to watershed assessments, project development, water quality, and habitat monitoring.

Their purpose is to aid in restoring habitat for the region's endangered runs of wild salmon.

Salmon are symbolic of the Pacific Northwest; they are a traditional icon of native peoples and have been a mainstay of the fishing economy for more than a century. But in the last decades of the 20th century, the meaning of the symbol began to change. Overfishing, changing land devel-



Lynn Ketchum, OSU Extension and Experiment Station Communications

Mary Holbert (left) is one of many Extension Sea Grant agents dedicated to watershed education and stewardship.

opment patterns, and a host of little-understood natural changes have turned the once-abundant fish into a symbol of scarcity.

Oregon Sea Grant's Extension agents and specialists have been at the heart of the struggle to understand what is causing the salmon decline and to find ways to reverse the trend and restore the species to ecological health and sustainable harvest levels.

Recognizing that funds for restoration work are not limitless, regardless of how important the work is, Holbert wanted to make sure that the projects undertaken offered the best return for the money invested.

Working with a biologist from the Oregon Department of Fish and Wildlife, she identified five areas spread along the central coast that offered good possibilities for rehabilitation. These are "sixth-field subbasins," a hydrological reference to the area's place in the watershed. A fifth-field basin is about 45,000 acres. A sixth-field subbasin encompasses about 4,000 acres.

"We decided that was a manageable-sized unit to look at," said Holbert. "It's big enough to make a difference, small enough to get your head around."

Having picked the terrain, they contacted every landowner, from

private owners to companies to federal agencies, to get permission to walk the length of the watersheds. After completing those tours, Holbert and the biologist met with the individual landowners to discuss projects that could restore the watersheds and enhance fish runs.

“Private landowners are where we get the most ability to accomplish something,” Holbert said. “We met with one landowner at a time. The consultant and I went out to each person’s property and described what was going to happen elsewhere in the basin and how they might fit in if they chose.”

The results, she said, were encouraging, with 80 percent agreeing to take part in some way. Holbert is now putting together proposals to acquire funding for the work, which she hopes to begin in 2004.

Holbert’s efforts are just one part of the many-faceted effort by Extension Sea Grant and cooperating agencies to restore salmon runs by giving fish a healthy habitat in which to live.

The following are some of Oregon Sea Grant’s additional restoration contributions.

- ▶ Current funding for research projects investigates the effectiveness of breaching dikes, restoring coastal wetlands for salmon habitat, measuring the effects of endocrine disruptors and chemical pollution on juvenile salmon immune systems, and identifying pollution sources in coastal estuaries.
- ▶ The Ecosystem Workforce Project, a collaborative effort

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with the University of Oregon’s Labor Education Research Center, is designed to educate displaced fishers and forest workers in ecosystem restoration. The project trained more than 150 people who went on to complete more than \$6 million in habitat restoration projects.

- ▶ The Watershed Stewardship Education Project, in collaboration with OSU Extension Forestry staff, has developed a curriculum to help local councils form effective partnerships, understand their watersheds, and develop strategies for enhancing or restoring them. Training programs are training watershed councils in all three regions of the Oregon coast. Oregon Sea Grant also worked with sister programs in Louisiana and New York to adapt the curriculum for national use.
- ▶ Jim Good, Extension Sea Grant coastal resources specialist, led a group of state, federal, local, and nonprofit-organization professionals to develop a strategy for better integrating wetland restoration efforts into watershed programs. The working group’s report, *Recommendations for a Nonregulatory Wetland Restoration Program for Oregon*, has raised awareness about the important

role wetlands play in salmon life cycles and has added wetlands to the agenda of local councils and state agencies alike.

- ▶ Extension Sea Grant’s Paul Heikkila began educating landowners long before the need for habitat and stream enhancement was widely recognized. Since the early 1980s, Heikkila has been working with private landowners along Coos County’s Coquille River, the state’s largest coastal watershed, to develop streamside and instream habitat improvement projects to benefit both the fish and the cooperator’s land. When the state legislature funded a watershed health program in 1993, Heikkila helped organize the Coquille Watershed Association and wrote the organization’s first grants, winning \$250,000 in state funds for on-the-ground watershed restoration activities. He drafted landowners large and small to take part in the projects, and helped the new council become one of the first local agents for the federally funded Hire the Fisherman program, which sent out-of-work fishers into the woods to restore salmon habitat.

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