



# Curry Currents

Summer 2005

Volume 6, Issue 2

## Watershed Restoration in Curry County

### Restoration in Action

At the Watershed Council office not all seasons were created equal, for only in summer can we turn our in-stream restoration ideas into action. Besides the long days and dry conditions, summer is the preferred project time because it is during the months of July, August and September that juvenile salmonids are at their least vulnerable stage, and adult fish are not yet in the system. The one exception is in the estuaries and lower mainstems, where juveniles that summer over have taken up residence. In these areas the “in-stream work period” established by the Oregon Department of Fish and Wildlife (ODFW) extends from October to May. For most of our projects, however, summer is the time to schedule the heavy equipment. This summer we are gearing up for a moderately active project schedule. The following is a brief summary of those sites that are in the queue:

#### Cedar Creek Large Wood Placement

Cedar Creek is a tributary to the lower Elk River. Over the past 7 years the landowner, Councils and ODFW have fenced and planted the stream, restored riparian wetlands, added large wood, and upgraded a fish passage site. This season approximately 10 whole spruce trees (rootwads and branches) will be added to the stream and wetlands to increase cover for juvenile salmonids, who use the stream for rearing in both the summer and winter months. The spruce trees will be donated by the landowner, and an Oregon Watershed Enhancement Board (OWEB) grant will cover equipment costs. The contractor is Valentine Construction, of Langlois.

#### Hubbard Creek Fish Passage

Located just south of Port Orford, Hubbard Creek is a low gradient coastal stream that supports all four species of salmonids. This summer we will replace a culvert road crossing with a railcar bridge to open up 2.4 miles of moderate to high quality low gradient habitat. Downstream of the crossing approximately 10 pieces of large wood will be placed in the channel to capture sediment currently trapped upstream of the crossing. A driveway bridge located in the large wood project area will also be replaced to insure that the new streambed elevation does not compromise the road access. The large wood is being donated by Crook Timberlands, and the bridge decking for the main crossing is being donated by Moore Mill Company. Other expenses will be paid for through an OWEB restoration grant. The contractor is Valentine Construction.

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# Watershed Restoration continued

## **Floras Off-Stream Watering**

This project is located on a ranch in lower Floras Creek, where the Councils have worked with the landowner in the past with fencing, planting, and bank stabilization projects. A gravity fed water system is being developed through an OWEB small grant to insure that livestock have water and the riparian plantings survive. When completed, the system will deliver water under pressure to over 4500 ft of line, which will be used to supply livestock troughs and drip irrigation. The work is being done by the landowner and the Councils' Riparian Specialist, Steve DiCicco.

## **Willow Creek Bridge and Large Wood Placement**

This project is located on a ½ mile segment of Willow Creek, which is the tributary to Floras Creek that crosses HWY 101 at the hamlet of Denmark. Over the past 8 years the Councils have fenced and planted the area, added rock habitat structures, and added approximately 40 whole trees to create 3 logjam "drifts". This summer an undersized bridge will be removed so that the channel can respond to the large wood placements. In exchange, a 90 ft railcar bridge will be placed at a location outside the large wood project areas, where the channel is partially constricted naturally by bedrock. Approximately 15 whole trees will also be added to the stream to create a fourth logjam. The landowner will contribute the bridge decking and some of the whole trees. The remaining expenses will be covered by an OWEB restoration grant, an OWEB small grant, and an Oregon Department of Environmental Quality (DEQ) grant. The contractor is Valentine Construction.

## **Bethel Creek Channel Relocation**

This summer the final phase of a project to relocate Bethel Creek from a straight ditch channel into a more sinuous, higher quality channel will be completed. Bethel Creek is a tributary to New River, and like most of the New River streams, is a strong producer of coho. The new channel location will offer better habitat, more shade and cover, large wood, and active floodplains, which benefit both juvenile and adult salmon. In addition to better habitat, the new location will be nearly twice as long as the section that is being retired. As part of the project the site will be fenced and planted, and large wood added. Funding for the project will come from the landowner, and through private donations.

## **Euchre Creek Large Wood**

Whole trees with rootwads will be pulled over from adjoining slopes and placed in the mainstem of Euchre Creek, upstream of the bridge that marks the end of the county road. Unlike most of the county's low gradient streams with active floodplains, this section of Euchre Creek is not being used for pasture or residential dwellings, which makes it ideal for large wood. Within the project area Euchre Creek averages 61 ft in width during the winter, making it the largest stream to date where the Councils have added large wood. Placements will extend 1/3 of the way into the channel, and will rely on rootwads, tree length and existing riparian vegetation to hold them in place. They will benefit juvenile salmonids (chinook, coho, steelhead, and cutthroat are present) through increased cover and greater pool area. South Coast Lumber Company is the landowner, the funding is through the Siskiyou Resource Advisory Committee (RAC), and the contractor is Blue Ridge Timber Cutting out of Coos Bay.

## **Riparian Trial Plots**

As part of the Councils on-going Riparian Monitoring program, two trial plots will be developed to test the cost/benefit aspects of irrigating plantings using an automated system. Our monitoring data has continuously shown that lack of water is a primary cause of mortality, and a major limiting factor to growth. The trial plots will be located on the Chetco River, and on a tributary to New River. Water will be supplied through drip irrigation lines that are fed from gravity, solar pumping, or conventional pumping. The plots are funded through the DEQ, and will be developed by our monitoring crew.

## Watershed Restoration continued

### N. Langlois Creek Fencing and Large Wood Placement

North Langlois Creek is a tributary to New River that runs through pasture west of HWY 101. Approximately 3200 ft of the stream will be fenced and planted with willow, shore pine, and spruce this winter. Whole trees will be added to increase cover for juvenile rearing in the summer, and to increase resting opportunities for adult spawners in the winter. The stream is used by steelhead and trout, and is a major coho producer. The landowner will place the large wood and construct the fence, and materials and labor will be covered by OWEB and DEQ funding.

In addition to the above-mentioned projects, which are funded and ready to go for the summer, two other projects are in the queue and awaiting a decision from the US Fish and Wildlife Service. These projects are located in **Ranch Creek (Lower Rogue)**, and in the **estuary of Sixes River**. Large wood will be added to Ranch Creek, and gully stabilization, fencing and planting, and livestock crossings will be implemented in Sixes River estuary. If the grants are awarded, these projects will be implemented in the fall of 2005.

## Curry SWCD's Education and Outreach

### A Year of Success

The first year of Curry Soil & Water Conservation District's new Education & Outreach program has been a great success. The southern Oregon coast is getting a new taste of Watershed Education, with a variety of programs being offered, teachers from throughout the county expressing interest and showing support, as well as landowner cooperation with project sites.

The 2-year Watershed Education program, funded by OWEB, incorporates a variety of methods to provide young people with a solid understanding of what it takes to be a watershed steward. The program is geared toward kids in grades 3-8. Components of the first year included restoration projects, presentations to community organizations, a series of 10 watershed lessons, and the implementation of Adopt-a-Stream programs. During the first year, 14 teachers and their classes (over 400 people) were involved in the above activities.

In the fall of 2004, Driftwood Elementary School (Port Orford) teachers Beth Mitchell and Georgia Weinblatt brought their classes to the Wahl Ranch Wetland Restoration Project to learn about wetlands. The students (2<sup>nd</sup>-5<sup>th</sup> graders), with trowels and boots, were able to plant over 200 wetland plants.

Throughout the winter and spring 2005, classes from Gold Beach and Brookings (ranging from 3<sup>rd</sup> to 6<sup>th</sup> grade) learned about Riparian Ecology, Noxious Weeds, Native Plants & Trees, Forestry, Macroinvertebrates, Mapping Streams, and Water Quality. They were excited to get outside during the watershed lessons, and ended the 10 sessions armed with a lot more knowledge about the natural world than they had started with. In Brookings and Gold Beach, Adopt-a-Stream projects were begun on several smaller creeks. Students cleared blackberries, planted trees, and assessed water quality. They were able to recognize the vegetation in the riparian zone, and they also made recommendations on how to better care for the creeks in order to preserve or create salmon habitat.

During summer of 2005, Watershed Education programs will be available through Brookings' Summer Recreation Program, Port Orford Art Council's Summer Arts Program, and through the local libraries. Kids may sign up to participate in classes about salmon habitat, watershed explorations, and watershed art, among other things.

With the support and enthusiasm that has been shown thus far, the second year of Watershed Education is bound to be even better. Administrators and teachers alike are clamoring for more of the programs to cover even more classes and ages, and the community is developing an awareness for the stewardship that will keep our streams and rivers healthy for years to come.

# Riparian Shade Along Curry County Streams

## Riparian Shade Along Curry County Streams

One of the many functions provided by riparian vegetation is the shading of streams. Conifers and hardwoods differ in the quality of shade they provide, related to tree height, shade density, overhanging or leaning and distance of the tree from the stream. In order to understand the characteristics of shade-producing vegetation, we visited 310 representative field sites, selected to be representative of different channel widths, vegetation size classes, and geographic distribution.

Shading vegetation during the period of maximum summer water temperature (approximately August 1<sup>st</sup>) was identified by a reflective dome and a solar path chart on a "Solar Pathfinder" instrument

Seven species of conifers, ten species of hardwoods, and 14 species of shrubs were identified as providing shade. Douglas fir was the most frequent shading conifer, while red alder was the most frequent shading hardwood within the private and BLM-managed lands that we sampled. For sites sampled on National Forest in the Sixes River Watershed (Dry Creek and South Fork Sixes), western hemlock was the most frequent conifer, while bigleaf maple and myrtlewood were the most frequent hardwoods in the shade zone.

Port Orford cedar was found in association with western hemlock and bigleaf maple at several sites in the Sixes River watershed and at one site in the Pistol River watershed. Where grand fir was present, it was one of a diverse mix of three-five other species including Port Orford cedar, Douglas fir, Sitka spruce, red alder, bigleaf maple, myrtlewood and tanoak. Along Pistol River, wherever tanoak was present (11 sites), red alder was absent. Coast redwood provided shade at two sites along the Chetco River, but no Port Orford cedar was present. Canyon live oak and madrone provided shade at several sites along Hunter Creek, Pistol River, and Chetco River.

Tree heights were measured on trees considered to represent site potential (potential growth along the streamside area). Western hemlock tree heights were more variable than other species'. In Hunter Creek, four western hemlock trees averaged 208 feet tall. Sitka spruce also had variable heights which could be separated into groups: growing under exposed conditions (76 feet) and under sheltered conditions (147 feet).

Hardwoods, dominated by red alder, typically occupy the zone closest to the stream. Disturbance adjacent to stream channels appears to favor hardwood establishment and survival. Conifers are less tolerant of flooding, but also may be less able to compete with hardwoods colonizing flood deposits or may be more susceptible to physical damage during floods. Distances from the edge of the active stream channel to conifers, averaged by watershed, varied from 11-25 feet. These distances were widest along active floodplains.

Tree Species	Average Height (ft)	# measured
Coast redwood	215	2
Douglas fir	182	47
Port Orford cedar	121	16
Tanoak	81	7
Bigleaf maple	81	65
Red Alder	75	114
Myrtlewood	66	46

*The riparian assessment completed for the South Coast Watershed Assessment was funded by OWEB, Oregon DEQ and Coos Bay District BLM.*

# Riparian Shade continued

## Historic Vegetation along Riparian Areas and Wetlands

When evaluating potential shade characteristics and appropriate types of vegetation to plant, we need to consider landforms and habitats which were not historically forested. The Government Land Office Surveys of the late 1800's included notes about vegetation encountered by the surveyors. The Oregon Natural Heritage program compiled these notes for the coastal zone (5-12 miles wide) and classified 63 distinct vegetation types in Curry County.

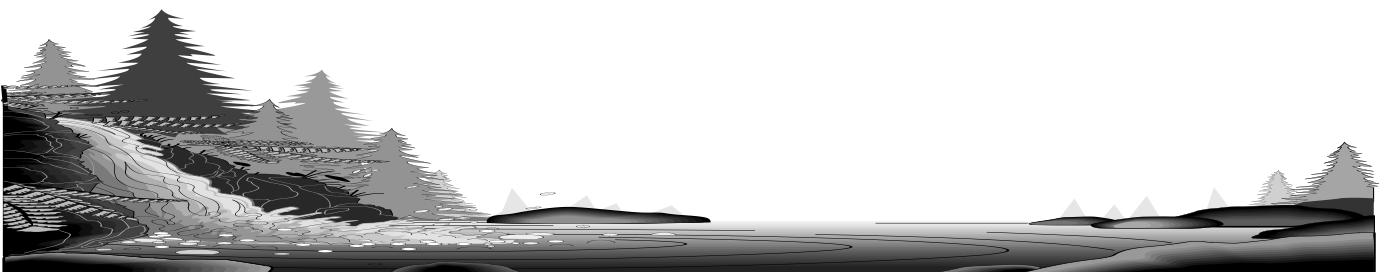
Three riparian forest types were interpreted from the surveyors notes. Riparian Sitka spruce forest was associated with various combinations of Douglas fir, grand fir, western hemlock, red cedar, cottonwood, bigleaf maple, ash, and myrtle (in our area). The understory of salmonberry, salal, vine maple, willow, and thimbleberry was described as "dense." The southern mixed riparian forest type was found throughout the county and included various combinations of oak, ash, bigleaf maple, myrtle, willow, alder, Douglas fir, grand fir, and white fir. Scattered patches of the red alder-mixed conifer riparian forest type included grand fir, Douglas fir, western hemlock, bigleaf maple, and sometimes ash. The largest patches of this type were located between Crystal and Edson Creeks on the Sixes River, and across from Ranch Creek (approximately river mile 2) on the Rogue River.

Many streams flow through vegetation types that were not mapped specifically as riparian. For example, Sitka spruce forest covered extensive areas north of Port Orford. The spruce forest community included the same species as the riparian type, and included red alder, but excluded ash and myrtle. The spruce forest had large burned patches just inland from Floras Lake north to Fourmile Creek. Shore pine forests were located on sandy soils, including marine terraces and stabilizing dunes. The redwood forest type was located over eight miles upstream on the Chetco River.

Wetlands were typically described by their dominant species, such as ash-alder-willow swamp, cedar swamp, Sitka spruce swamp, crabapple swamp, and willow swamp. The Sitka spruce swamp type was found along lower Floras Creek, Sixes River, and Elk River.

Other wetland types did not specify species, but indicated general non-forest communities: shrub swamp ("brushy swamp", "marshy thicket", and "swampy thicket"), prairie (including wet), seasonally wet prairie ("prairie marsh" and "swamp prairie"), "grass marsh", marsh or "wet meadow", tidal marsh ("tidal prairie" and "grass tide marsh"), and wetland ("swale" in forest or shrubland). Brush fields or thickets were also described on bottomlands or wet terraces. Surveyors noted tidal marshes along the lower Rogue River and along Pistol River.

Having this historical perspective of past conditions and changes over more than a century will help us set realistic expectations for vegetation communities and functions in our riparian areas and wetlands.



# Riparian Shade continued

## A Case Study: Lobster Creek, Lower Rogue River Watershed

Riparian vegetation has been removed along streams throughout Curry County for a variety of management practices and also naturally, through streambank erosion. Historically, many riparian areas in our watersheds contained large conifers that were harvested before regulations were in place to protect them and replanting requirements were in effect. In a study by Niernberg and Hibbs (2000), riparian areas in the Coast Range that had not been logged or burned for 145 years were dominated by shrubs rather than trees in 52% of the areas evaluated. Without disturbances, tree recruitment in some riparian areas is limited so that stands of trees seldom become dominant or self-sustaining in the riparian zone.

In Lobster Creek, many riparian areas have few conifers present. While hardwood stands provide shade, nutrients, and other riparian functions, the conversion from conifers has changed the shade levels and microclimates around the stream, reduced the supply of future large woody debris, and reduced the habitat complexity in the riparian zone.

Lobster Creek enters the Lower Rogue River at river mile 11. The watershed has 69 square miles with 64% in federal ownership, 1% in state and county ownership, and 35% in private ownership. The majority of the private lands are managed for timber harvest. Lobster Creek supports coho and Chinook salmon, steelhead, searun and resident cutthroat trout, and resident Rainbow trout. Lobster Creek is the largest producer of Fall Chinook within the Lower Rogue system.

Temperatures in sections of Lobster Creek did not meet the state water quality standards all of the time. As a result, a water quality management plan (WQMP) was written and approved by the state in 2002. The plan included an estimate of the existing and potential shade on perennial streams.

The Lobster Creek Partnership—consisting of representatives from the Oregon Department of Fish and Wildlife, the US Forest Service Gold Beach Ranger Station, Menasha Log Company, and the Lower Rogue Watershed Council—has been working through a grant from the Department of Environmental Quality to monitor and treat riparian vegetation on some of the reaches identified in the WQMP. Four stream reaches were selected in the watershed for evaluation, and baseline shade measurements and riparian forest characteristics data have been collected. Half of the riparian area on each reach will be treated by creating openings in the hardwood canopy to allow a minimum of 40% sunlight. Shade-tolerant western red cedar, western hemlock and Douglas-fir will be planted this winter. The challenge will be to control competing vegetation to allow the conifers to grow.

The data are providing important information for comparison to the previous shade modeling effort. Information gathered thus far indicates that shade is lower than the model predicted on one of the reaches and higher than predicted on the other three. Shade and riparian forest characteristics will be re-measured in five and/or ten years, depending on the size of the stream.

Nierenberg, T.R. and D.E. Hibbs. 2000. A characterization of unmanaged riparian overstories in the central Oregon Coast Range. *Forest Ecology and Management*. 129:195-206.



# Curry County Weed Advisory Board!

The Curry Soil and Water Conservation District was recently re-recognized by the County Commissioners as the Curry County Weed Advisory Board. A committee of members and advisors has been working to collect a weed inventory of the county, conduct educational events such as the Curry County Fair booth, assist landowners with weed identification and control options, and seek funding. We will soon be adding a “noxious weed” resource area to the watershed council website at <http://www.currywatersheds.org>.

The weed board is interested in working with landowners around the Harris Beach State Park in Brookings to assist in gorse removal and technical assistance for controlling gorse in the future. The purpose of the project is to assist homeowners in maintaining a defensible perimeter in case of fire, and limit the further distribution of gorse in the area. The high oil content of gorse makes it a dangerous plant to have around structures.

A noxious weed management area in the Sixes River drainage is in the process of forming. Noxious weeds appear to be relatively minimal in the drainage and this is an opportunity to organize landowners and land managers to maintain rights-of-ways and lands to be mostly weed free. Each landowner would participate as best fits their management goal using integrated weed management methods that best fit their operation.

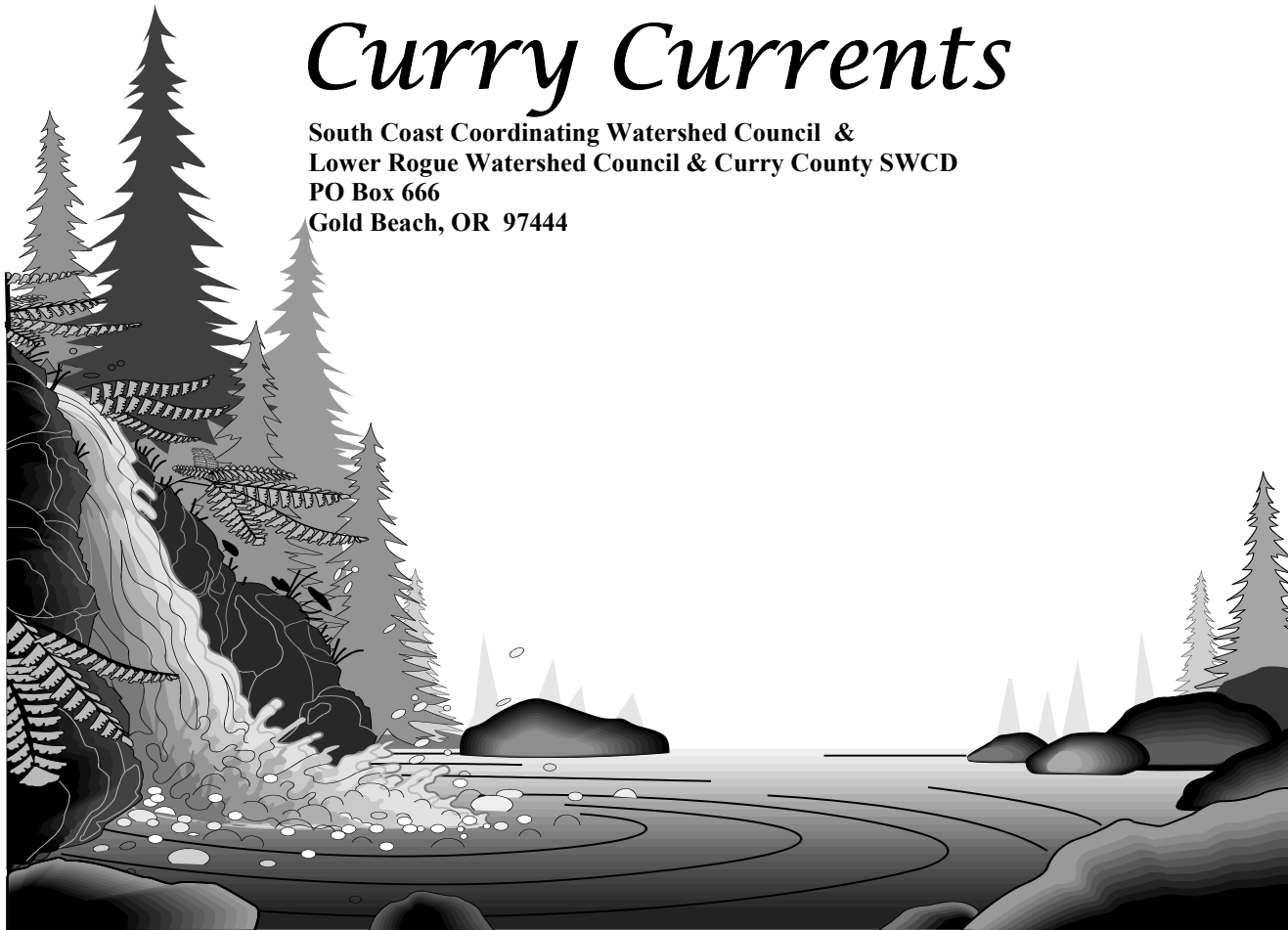
## Curry County Weed List

**The Curry County Weed List was compiled by the Curry County Weed Advisory Committee as the top weeds that require public education, eradication, and/or are providing economic impacts. This list is not intended to be inclusive of all weeds occurring or likely to occur in Curry County.**

Common Name	Scientific Name
Butterfly Bush	Buddleia (Buddleja) davidii
Cape Ivy	Delairea odorata
English Ivy	Hedera helix
Gorse	Ulex europaeus
Himalayan Blackberry	Rubus discolor (procerus)
Japanese Knotweed	Polygonum cuspidatum
Jubata Grass/ Pampas Grass	Cortaderia jubata/ Cortaderia selloana
Poison Hemlock	Conium maculatum
Purple Loosetrife	Lythrum salicaria
Tansy Ragwort	Senecio jacobaea
Meadow Knapweed	Centaurea pratensis
THISTLES	
Bull Thistle	Cirsium vulgare
Canada Thistle	Cirsium arvense
Italian Thistle	Carduus pycnocephalus
Purple Starthistle	Centaurea calcitrapa
Yellow Starthistle	Centaurea solstitialis
Woolly Distaff Thistle	Carthamus lanatus L.
BROOMS	
French Broom	Genista monspessulanas
Portuguese Broom	Cytisus striatus
Scotch Broom	Cytisus scoparius
Spanish Broom	Spartium junceum

# Curry Currents

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Joe Brown - Chair Floras Creek Watershed Council

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