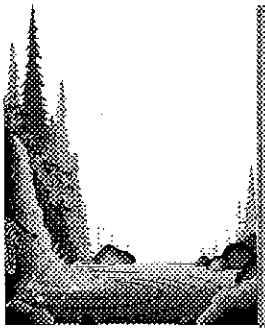


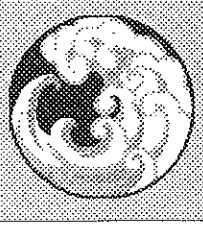
Curry Currents

Winter 2000 Volume 2, Issue 1

Editor's Note

This publication was produced & supported by grant funding from the Oregon Watershed Enhancement Board (OWEB).

Each issue of *Curry Currents* has a theme. The theme for this issue is Curry County's estuaries. According to the Random House Dictionary, Estuary means "1. that part of the mouth or lower course of a river in which the river's current meets the sea's tide."



Watershed Council Discusses Estuaries

By Lucie La Bonté

At the December South Coast Coordinating Watershed Council Meeting, the Council had discussions about all of the estuaries that the watershed council is currently working in. What council members found is that there are remarkable similarities between the estuaries in Curry County and similarities of human impacts on our estuaries.

Before settlers came, the estuaries were largely used for fish harvesting by Native Americans. Small groups of Native Americans lived along the ocean and rivers in various places where the rivers met the sea.

From the 1800s, when settlers first came to the area, until the early 1950s impacts were minimal. The estuary areas were used by some for river navigation and ferries crossed the rivers. Fishing was a large industry for the area and the Rogue and Chetco Rivers had working cannery operations. Most of flood plains next to estuaries were used for pasture land.

For the smaller rivers, the greatest impacts seem to have occurred when Highway 101 was constructed in the 1950s. This cut off fish passage in many areas where small streams and rivers entered the ocean and also reduced the size of the estuaries.

The largest impacts on the Chetco and the Rogue were undoubtedly the construction of jetties and harbors in the late 1950's and early 1960s. The jetties and harbors are important for commerce and the communities of Brookings, Harbor and Gold Beach are largely economically dependant on jetty maintenance. Even with the jetties the natural cycle that takes place in all of Curry's river mouths is an accumulation of sand and gravel during periods of low river flow. The accumulation is either dredged by the Army Corps of Engineers or is blown out by high water during rain season.

Inside this Issue...

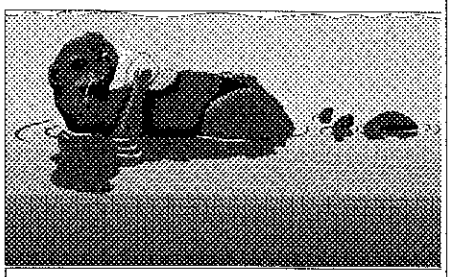
Chetco River Estuary - Port of Brookings Harbor

By Lucie La Bonté

In the very early days of the settlers, there was a Cannery in the Chetco River Estuary and a ferry system that crossed the river.

The development of the Port of Brookings Harbor began in the late 1950s and early 1960s. The McVay family, interested in the fishing industry and commerce, donated and later sold land to form the Port where they once had a dairy farm. Originally the Port lands were used for the fishing canneries, a baseball bat factory and a timber mill. Later wood chips were stock piled and shipped out.

Port development has changed the Chetco River estuary. The land in the estuary area had small streams and ponds through out it. Today it is a busy port, an economic engine of the community. The streams are still there but run through a system of culverts under fill that was placed in portions of the land area during port construction. Two large boat basins were dug out of the land . The boat basins serve as habitat for young fish as they make their way from the river to the sea. It is an active estuary with an abundance of marine life. Harbor seals, river otters, birds, crab and fish all live at the Port. They are part of the attraction to the thousands of tourists that visit the Port of Brookings Harbor in the Chetco River estuary. Jetties were constructed by the Army Corps of Engineers (ACOE) and are still maintained by the ACOE. The river mouth is dredged through a federal maintenance dredging program



River Otters Play in The Chetco

Port Manager Russ Crabtree has worked to improve the water quality in the estuary and maintain the habitat for the living creatures that frequent the port. The focus has been on improvement of water quality and turbidity of the Port's boat basins and the Chetco River. To accomplish that goal, Russ has worked continually on two Army Corps of Engineer projects; a Section 1135 Water Quality Project , and a Surge Suppression Project called a Section 107.

The Port of Brookings Harbor also participates in Chetco Watershed Council and Salmon Trout Enhancement Program activities. As part of the Oregon Plan, the Port has identified and inventoried all of the culverts and ponds with a point of demarcation into the Chetco River and the boat basins.

Eight years ago the Port enacted a Covenants and Standards Procedures for over the water work. All heavy construction and over the water work takes place under stringent guidelines and only after issuance of state and federal permits for each project.

Watershed Council Meetings

Floras Creek - *1st Tues. 7 PM - Langlois School*
Chetco River - 1st Weds. 7PM, 555 5th St Forest Service Building, Brookings
South Coast Coordinating Council - *1st Thurs. 7 PM, Extension Service Building, Fairgrounds, Gold Beach*
Lower Rogue - 2nd Thurs. 7PM, Extension Service Building, Gold Beach
Port Orford - *3rd Weds. 7PM, City Hall*
Elk / Sixes - 4th Weds. 7PM
Hunter Creek/Pistol - *4th Thurs. 7PM, Extension Service , Gold Beach*

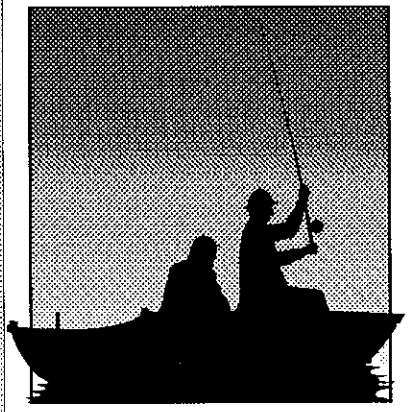
Recreational fishing is a popular activity in the Rogue River Estuary. Boats line up during Chinook season in the estuary. Much of the Gold Beach economy is generated from recreational and commercial fishing. Because of the good health of the fish populations in the Rogue River, fishers still can catch Chinook, Steelhead and tagged Coho. Neither Chinook or Steelhead are listed under the Endangered Species Act. There are restrictions on wild Steelhead.

Rogue River Estuary: A Water Quality Mystery Solved

by Cindy Ricks

In the fall of 1997, the Lower Rogue Watershed Council received funding to install "flushing culverts" in the jetty to improve the mixing of water from the river to the harbor area. But no one seemed to know whether the water in the harbor was stagnant or needed improvement.

With the help of local volunteers, Moku and Herb Gazeley, Oregon Department of Fish and Wildlife, and Curry Anadromous Fishermen, the Watershed Council Monitoring Program began to investigate temperature, turbidity, salinity, and dissolved oxygen levels.



Estuary sites on both sides of the jetty were sampled, four in the harbor and one in the river. We sampled water quality conditions after the harbor entrance was relocated upstream in the summer of 1998 and 1999.

Water quality conditions in the estuary vary by time of day, by tidal height, and by season. Between early July and mid-September, water temperatures are high on both sides of the jetty. In the freshwater layer at the surface, maximum temperatures are greater than 70 degrees F, well above the 64 degrees F standard for juvenile salmonids. Even the daily minimum temperatures are frequently greater than 64 degrees F. Fortunately, surface mixing from the wind raises dissolved oxygen levels to above the 6.5 mg/l standard.

Salt water is heavier tahn fresh water and forms a layer on the bottom of the channel. The depth to the saltwater layer varies with the tides. The mixing zone between fresh and salt water was typically from 1-3 feet thick. The saltwater layers generally had temperatures in the mid-to low fifties (degrees F). Maximum salinity levels ranging from 28 to 33 ppt were measured at all five sites.

We measured dissolved oxygen levels that were sub-standard at four of our five sites, and readings were lowest in the morning. The lowest dissolved oxygen level, 5.6 mg/l, was measured at the boundary between fresh and salt water.

In the river, surface fresh water is warmer than in the harbor. In the river, deep salt water appears to have as little dissolved oxygen as the harbor. However, our lowest values were measured in the morning, so earlier sampling would be needed to determine how low the dissolved oxygen levels get. Some parts of the river side of the estuary may be better mixed and have better dissolved oxygen at depth than the single site we sampled.

Because of its isolation behind jetties, the harbor water is generally less turbid (dirty) than the Rogue River, but we noted muddy storm water runoff from local sources.

We conclude that aquatic life is subjected to poor water quality conditions in both the river and harbor sides of the estuary during the warmest part of the summer. There would be no advantage to mixing more water between the river and the harbor. In the freshwater layer, water temperatures are well above optimum although dissolved oxygen levels are adequate. In the cooler, deeper salt water, dissolved oxygen is limiting in many places, particularly in the morning.

This project was funded by the Governor's Watershed Enhancement Board with equipment supplied by Curry Anadromous Fishermen, Oregon Department of Fish and Wildlife, and the Department of Environmental Quality.

Hunter Creek Restoration Possibilities

By Bruce Follansbee

The Hunter Creek estuary is currently smaller than it has been at some times in the past. The largest single impact to the estuary was the construction of Highway 101, which restricted the channel to its current position and width. Other estuary reductions resulted from placing fill to create usable flat areas such as the old mill site and a flat area on the north bank. The north bank site is owned by the Oregon Department of Transportation (ODOT) and is currently used as a storage area.

During construction and maintenance of roads, ODOT impacts some wetlands and other protected habitat areas. To mitigate these impacts, ODOT restores habitat either on another portion of the same site (on-site mitigation) or elsewhere on property that they own (off-site mitigation). The Hunter Creek site is being considered by ODOT as an off-site mitigation area for construction projects in other sections of the coastal road system. The mitigation plan would most likely involve removing fill to lower the elevation of most of the site, constructing additional channels, and planting native willows, sedges and other species to restore habitat values to the site.

Euchre Creek Estuary: Conservation Easement Proposed

By Harry Hoogesteger

Exciting things are happening at the Euchre Creek estuary. Bob Shirley is the new owner of land at the mouth of Euchre Creek. Mr. Shirley owns the prominent "bluff" you can see on the ocean side of Highway 101, as well as the lowlands along the creek. He has proposed to the watershed councils placing approximately 35 acres, including all the riparian and wetland areas, into a conservation easement. The conservation easement would be held by a non-profit agency, and would be a deed restriction "in perpetuity" (forever). The purpose of the easement would be to keep the area in its natural state, and provide for education, research and protection of the estuary area. He envisions a field station where students of all ages could come to learn about the ocean, estuaries, salmon, wildlife, and other biological interests.

Currently, Euchre Creek fish runs are rebounding moderately after nearly a decade of critically low numbers. There is also a Euchre Creek herd of resident elk that utilizes the estuary area. "Conservation easements are a long and complicated process," said Harry Hoogesteger, South Coast Watershed Coordinator. "But they are very valuable restoration tools, especially with willing and enthusiastic landowners like Mr. Shirley."

Measure 66 OWEB money may now be used to purchase conservation easements of critical watershed areas, if landowners are agreeable. There are considerable tax benefits that go along with conservation easements, as well as inheritance benefits for landowners' heirs.

The Euchre Creek project is expected to take about two years. Stay tuned.

Elk River Estuary: Private Land

By Harry Hoogesteger

Two long-time Curry County landowners are combining to do restoration projects on the lower Elk River and in the estuary area. Scott McKenzie, and the Wahl family (Pete, Terry, Susie, Buck, and others) have projects going that will restore fish passage, provide shade and nutrients, and enhance the area along the river.

On the McKenzie Ranch, Scott is fencing off the riparian corridor of Cedar Creek, a low-gradient tributary that empties into the Elk just above the mouth. The fencing project continues upstream to the Wahl ranch, where a culvert has been replaced with a flatcar bridge, enhancing fish passage and providing better drainage in wet years. The riparian corridor is being planted with Sitka spruce, shore pine, and some grand fir, under the direction of Cecil Ashdown of the Curry Soil and Water District.

Historically, this area had coho and chum salmon, which prefer the lower, flat bottomlands of river systems. Nowadays, steelhead, cutthroat trout, and chinook utilize this creek.

Another very low tributary of the Elk is Swamp Creek, which also crosses both McKenzie and Wahl land. Projects are being planned to improve fish passage into reservoirs on Swamp Creek and open up a substantial amount of new rearing area that could be utilized by coho, now listed as a "threatened" species, under the Endangered Species Act.

The Elk River estuary itself is little-visited, because it is on private land. This winter's chinook and steelhead runs on the Elk have been strong, according to local sources, with some very nice fish entering the river --- and some even ending up on dinner plates in north Curry County.

Habitat Emphasis on the Sixes River Estuary

By Bruce Follansbee

The Sixes River estuary lies mostly within Cape Blanco State Park with parts of the floodplain on the north bank in private ownership. A trail system allows people to access the river, estuary and dunes from nearby parking. Park personnel have worked with students from the Cape Blanco Middle School to plant spruce and willows trees in the day use area for habitat enhancement. The plantings help to stabilize the banks and enhance riparian habitat values. Park personnel have also cabled spruce logs in the river to protect the bank and provide fish habitat, and installed some riprap to armor the bank.

So far there have been no habitat enhancement projects in the estuary proper. The banks have scattered spruce trees, which serve as perches for the various raptors. The raptors that regularly use the area include bald eagles, red tail hawks, peregrine falcons, and others. A wide variety of other bird species use the marshes, meadows and river banks, making this area popular with bird watchers.

The estuary is bar-bound in the summer due to low river flows and ocean circulation patterns. This results in some summer lowland flooding in addition to the regular winter flooding. Overbank flooding allows small fish and other aquatic animals to enter the adjacent marshes and feed on insects that are not normally available to them.

Third Annual Watershed Symposium

By Thelma Hoffmann

On Thursday April 27, Curry and Coos Counties will present the third annual Research and Educational Watershed Symposium (CC-CREWS). The symposium will take place at the Gold Beach Fairgrounds from 8:00AM - 3:00PM. Following the successes of the last two symposiums this year's event will bring together students and teachers from schools throughout Curry and Coos Counties.

All students from participating middle and high schools will have the opportunity to share their discoveries with resource personnel representing various state and federal government agencies as well as local businesses and related organizations. Several students will present research projects that relate to watershed sciences. Many of the watershed-based groups participating in the event will also host informational booths in an effort to educate the students as well as the public about their involvement in local watershed issues. This one-day event will provide a unique opportunity for students to learn about careers in natural resources.

This year's keynote speaker will be Mr. Bill Hastie from the Oregon Watershed Enhancement Board. Mr. Derek Godwin from OSU Extension Service will serve as this year's closing speaker.

CC-CREWS is supported through a collaborative effort between Bandon High School, Coquille High School, Marshfield High School, Millicoma Middle School Blanco Middle School, Riley Creek Gold Beach High School, Azalea Middle School, Brookings Harbor High School South Coast Coordinating Watershed Council, Lower Rogue Watershed Council, Curry County Soil & Water Conservation District, Resource Assistance for Rural Environments (RARE) Interested citizens are encouraged to attend. Registration is from 8:00 AM – 8:45 AM the day of the event. Total participating students so far are 114.

For more information please contact Thelma Hoffmann, Youth Services Coordinator and Symposium Coordinator, at (541) 247-4082.

The Winchuck Estuary Projects by Bruce Follansbee

The first South Coast Coordinating Watershed Council Coordinator, John Wilson, worked with Oregon State Parks in Summer of 1996 on a project to enhance the habitat in the Winchuck Estuary. The project consisted of cabling stumps in the estuary and planting conifers on the banks. The stumps were placed to provide cover for fish hiding from predators and increase habitat complexity. Since then some of the stumps have shifted, but most are still in position and doing their job. The conifers (Sitka spruce and shore pine) provide additional cover along the shore and eventually woody debris when they die and fall into the estuary.

Currently, State Parks is reviewing their master plan for the estuary and formulating long-term plans. One option under consideration is to remove fill placed in the estuary west of Highway 101 to recover lost acreage and then do additional habitat enhancement work. The watershed council is also working with individual landowners to plant additional estuarine riparian vegetation along the lower estuary.

Pistol Estuary Projects by Bruce Follansbee

Several projects have been undertaken in and around the Pistol River estuary. On the estuary proper, several rock vanes were constructed on the west shore. The vanes force the main channel away from the bank to reduce erosion and promote the formation of a deeper main channel. The landowner temporarily fenced livestock out of the stream to allow revegetation of the riparian zone. Willows were then planted to provide additional bank stabilization and cover for fish along the bank.

Crook Creek is a tributary to the estuary that historically had chinook , steelhead and cutthroat trout runs. Portions of the lower creek have been fenced, a livestock bridge was installed, and habitat plantings were established. The plantings now include shore pine, Sitka spruce, Douglas fir, western redcedar, hemlock, bigleaf maple, black cottonwood, elderberry and twinberry.

Video Lending Library

The watershed councils and Curry SWCD have assembled a collection of videos on watershed topics that are available for check-out to anyone in the county. The titles and subjects are:

"Life On The Edge" (OSU) ecological functions of riparian areas, land use practices that impact riparian, habitat restoration techniques.

"Alternatives To Push-up Dams" (Bureau of Reclamation) discusses alternative ways to divert agricultural irrigation water without using push-up dams.

"Learning To Live With Flooding Rivers"

"After The Rain Urban Runoff" (OSU) effects of urban runoff on streams/rivers, methods to reduce impacts of urban runoff on streams.

"A Place To Come Home To" (NRCS) shows examples of local residents working with state and federal agencies to restore salmon habitat.

"Sustaining America's Agriculture" (NRCS) how America's farmers/ranchers minimize environmental impacts while maximizing production.

"Copper Salmon: A Call For Wilderness" (Friends of Elk River) discusses biological values of Copper Salmon and wilderness proposal.

"Oregon's Natural Resources: Here Today – Here Tomorrow" (NRCS/OWEB) examples of success stories from locally-led efforts to restore watersheds.

"Protecting Mother Earth" (NRCS) tribal efforts to conserve natural resources in partnership with governmental agencies.

"Fresh Waters Flowing" (Salmonweb) connection between humans and streams, human influences and ability of stream to support healthy biological communities.

"Biological Monitoring Protocol" (Salmonweb) step-by-step instructions for collecting standardized samples of invertebrates, and develop an index of biological integrity.

"Roadside Vegetation Control" (Aqua Heat Technology)

"Backyard Conservation" (NACD) adapts farming conservation practices for urban backyards.

"Fishing For Answers" (Turner Environment)

"Watershed Restoration with the Fishermen" (Pacific High School)

"Marketing For Conservation Success" (NACD) practical steps for marketing conservation measures to landowners.

!!!!!!We have a book/pamphlet and GIS CD lending library also – come by to see titles.!!!!!!

Curry Currents

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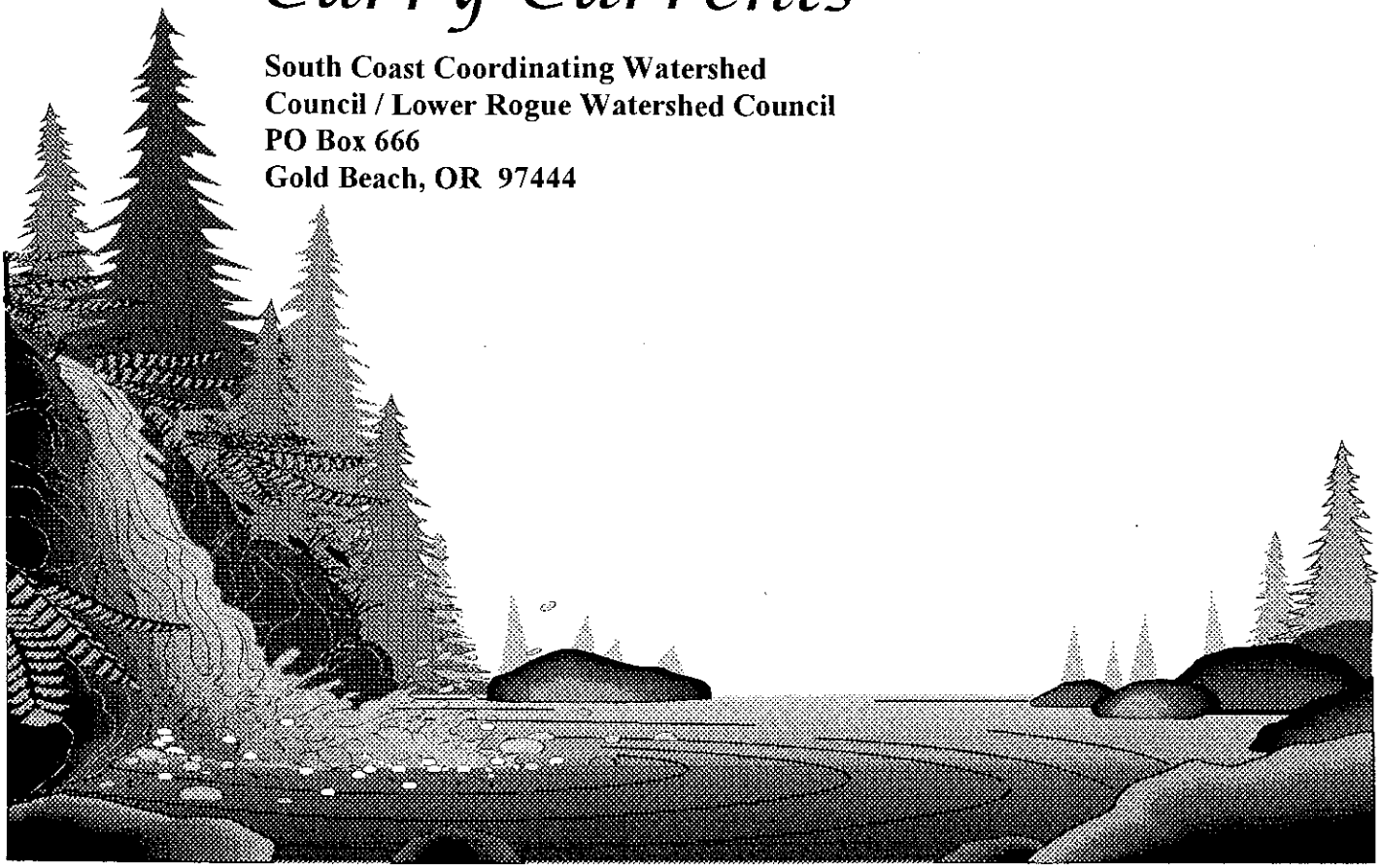

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Curry County Soil and Water Conservation District: (541) 247-2755
Michael Knapp - Chairman, Earl Lang -Vice Chairman, - Don Smith Secretary/Treasurer,
Keith Smith - Director, Bob Pommarane - Director, Cecil Ashdown - Administrator

South Coast Coordinating Watershed Council: (541) 247-2755
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Mike Maguire - Project Manager for the Watershed Assessments, Matt Swanson - Monitoring

Lower Rogue Watershed Council: (541) 247-2755
John Lighty - Chair, Bruce Follansbee - Coordinator
Cindy Ricks -Monitoring Coordinator

Chetco Watershed Council: (541) 247-2755
Roger Thompson - Chair, Ted Freeman - Vice Chair, Angie Dillingham - Secretary

Port Orford Watershed Council: (541) 247-2755
John Leuthe - Chair

Elk/Sixes Watershed Council: (541) 247-2755
Joe Marsh - Chair

Floras Creek: (541) 247-2755
Joe Brown - Chair

Hunter Creek/Pistol River Council, Winchuck Council, Euchre Creek Watershed Council

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