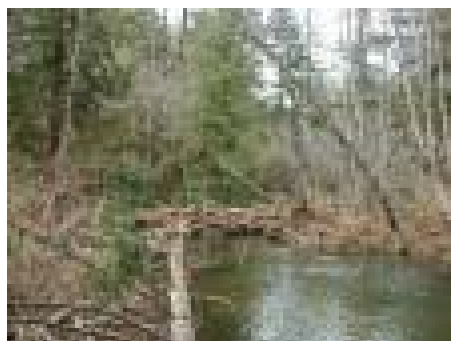


Salmon Do Grow on Trees!!

In the fall and winter of 2002/2003, the Clackamas River Basin Council (CRBC) worked with local neighbors, state and federal agencies and a timber company to place over ninety whole trees, some complete with roots

into almost three miles of the North Fork of Eagle Creek. For a portion of the project, in the steep canyons upstream



from Eagle Fern County Park, a heavy lift helicopter placed the trees in the creek. The wood will help improve salmon and steelhead habitat by providing cover, slowing the stream, trapping gravel for spawning and creating pools. The Oregon Dept. of Fish and Wildlife will monitor the project, looking at changes to the stream channel and vegetation and sampling adult and juvenile fish for the next few years. Coho salmon, wild winter steelhead and cutthroat trout are expected to benefit from the trees.

Landowners and a Group Effort Make a Difference

A local citizen group, Friends of Eagle Creek, conceived of the project and approached the CRBC. To make it happen, the council worked closely with local landowners, the Oregon Watershed Enhancement Board, Oregon Department of Fish and Wildlife, Longview Fibre, the US Forest Service and the BLM.

(Continued on page 2)

Looking at the Watershed, From Assessment to Action

"If you don't know where you are, how you gonna get where you're going?"

A watershed assessment looks at past and present conditions of a watershed. It identifies factors that limit our water quality and fish and wildlife habitat, and prioritizes areas to monitor and improve. Though it is obvious that human development has altered our watershed, we share a vision of restoring and maintaining the functions necessary for healthy people, fish and wildlife. Last year, the council worked with local residents to assess conditions in the south side Clackamas tributaries; Clear and Foster Creeks. This year we're looking at the northern tributaries; Deep and Goose Creeks. Having an analysis of our watershed is like having a good road atlas. Knowing where we are will help guide actions and partnerships with landowners to better maintain watershed health. The next step for the CRBC and its partners is to use the assessment to develop and implement a watershed-wide action plan- a list of actions and projects that will help address high priority issues. Call us to get involved.

The Clackamas Needs You! What Can You Do to Help Keep the Watershed Healthy?

- Help us develop our action plans;
- Volunteer with us on stream and riverside enhancement projects on your land;
- Join a volunteer council committee to help implement projects;
- Keep pesticides, fertilizers and animal waste out of the water;
- Call us for more ideas on how you can help.

What is a Watershed Council?

The Clackamas River Basin Council (CRBC) is a local and voluntary non-profit watershed council with representatives elected from 21 diverse stakeholder groups. Our mission is to foster partnerships for clean water and to improve fish and wildlife habitat and the quality of life for those who live, work and recreate in the watershed. We consider the entire river drainage, and focus our work along the mainstem and the tributary streams that enter the Clackamas River below Estacada.

The council meets the third Thursday of each month and citizen participation is encouraged. Join us! For more information please visit our website at www.clackamasriver.org or call us at 503.722.5161



Who We Are, Our Stakeholder Groups...

Small Woodlot Owners
Commercial Woodproducts
Agriculture (Non-Timber)
Commerce
Industry
Fish & Wildlife Interests
Environmental Interests
Recreation Interests
Federal Land Owning Agency
Special Districts
Water Providers
State Natural Resource Agency
Native Tribes & Interests
Local Hydropower Utility
City or County
Riverfront Property Owners
Property Owner on Tributary
Rural CPOs
Urban CPOs
Education / Youth
Citizens at Large

Salmon Do Grow on Trees!! (continued from page 1)

Study Shows Clear and Foster Creeks Need More Wood Too

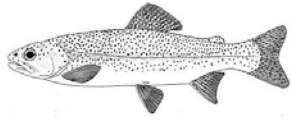
Historically, large old trees would have fallen into the creek to provide this important habitat element. Over the past 150 years, human activities have cleared the area of many such trees. This project replaces wood that would have reached the creek naturally. In the "old days" it was thought that log jams were bad for the creeks and were often removed. We now know that salmon and steelhead need trees along and in the creek. Trees shade and cool the water, and when they fall into the creek, create pools and riffles and help distribute spawning gravels; things that salmon need to thrive.

The CRBC's 2002 Watershed Assessment of Clear and Foster Creeks indicates that salmon and steelhead in these creeks would be helped by the addition of large wood. The CRBC's Stream Team provides free trees for landowners who would like to improve habitat by planting trees along their creek. The council has secured grant funding and found three landowners along Clear Creek who want to work with us next summer to put large wood along three miles of the creek. We are also looking at the feasibility of putting some logs in Deep Creek. Would you like to help salmon and steelhead by planting trees or by putting some large wood in your part of the creek? If so please contact us at 503.650.1256

Would you like to serve on the Council by representing one of the above groups? If so, please call 503-722-5161 or email jo@clackamasriver.org

A helicopter provided by the BLM lifts a large fir donated by Longview Fibre.





How Is the Water?

- ◆ We tested the water for indicators of water quality such as turbidity, nitrate, ammonia, chlorine, phosphorous and temperature.
- ◆ The tributaries feeding Clear Creek had higher levels of all the parameters measured. Nitrate levels increased in lower Foster Creek. Overall nitrogen levels in both creeks increase in the spring. Ammonia levels showed a slight increasing trend in Clear Creek. There is a source of chlorine and ammonia in upper Foster Creek.
- ◆ Sources of ammonia could be septic systems and livestock. Keeping livestock away from the water and off-stream watering can help. Careful use of, or reduction of fertilizers close to the water could also help.
- ◆ Data shows that during parts of the summer, water in Clear Creek and all its tributaries, except for Spring Creek, did not meet water quality standards for temperature that are safe for salmon and steelhead.

Clear and Foster Creek Residents and CRBC Take a Look at Water Quality

This June, the Clackamas River Basin Council partnered with the Student Watershed Research Project to host a “Snapshot Water Quality Day.” The event took a “snapshot” view of water quality in the creeks. Similar to Audubon Christmas Bird Counts, people all over the nation took a look at water quality, wielding bottles rather than binoculars.

The CRBC invited Clear and Foster Creek residents to check out their creek. Twenty-five residents collected their own water samples at their part of the creek, then brought them to Carver Park to be logged and analyzed by student volunteers. Participants received individual test results and a study summary. You can view the summary on the CRBC website.



Photo: Streamside residents log their water samples

How is the Water?

The samples taken in June show similar trends as the data summarized in the 2002 Clear and Foster Creeks Watershed Assessment. Water quality in both creeks was within healthy levels, but cumulative impacts of septics, fertilizers and livestock on the creeks could become an issue if we are not careful. See left sidebar.

Clear and Cold Water Good For All

The CRBC wants to work with landowners and residents to protect water quality for all of the uses people enjoy; drinking water, fish and wildlife, recreation, irrigation and aesthetics. We know that land use practices can effect water quality, but it not always clear how much. Having baseline data helps us to understand present conditions and to look at changes and trends. One indicator of water quality that is fairly easy to monitor is water temperature. High water temperatures can be a problem. Warm (and nitrogen enriched) water is more susceptible to algal blooms. Algal blooms deplete oxygen from

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Snapshot Event

(Continued from page 3)

“Salmon and steelhead need cold water for spawning, egg incubation and fry rearing.”

the water, harming aquatic life and making the water unpleasant for recreation. The water intakes on the Clackamas River for domestic water supplies can't filter out the tinge of algae, resulting in poorer quality drinking water. And finally, salmon and steelhead require cold water for spawning, egg incubation and fry rearing. Water that is consistently over 55 degrees is bad for these fish.

This spring through fall the council monitored water temperature loggers at seven Clear Creek locations between the Hwy. 211 bridge and Carver. We found that the creek gets warmer as it flows from Hwy. 211 towards Carver, and the average number of days the water temperature was higher than recommended for water quality was seven. The trends from this data indicate that we should take some actions to keep the water cooler.

Stream Stewards Can Help

One thing all streamside residents can do to help is to keep some streamside vegetation along the creek. This will help keep the water cool, as well as filter pollut-

ants and prevent erosion. In particular, overhanging vegetation provides the best results. The CRBC stream team program provides free trees to waterside property owners for projects that protect water quality. Over the past four years the council has helped willing landowners plant over forty thousand trees in the watershed. If you'd like to care for the creek by planting free trees this winter or spring, contact the council. Citizens with water quality concerns such as sediments, nutrients and shading can contact the council or the Clackamas County Soil and Water Conservation District (503) 656-3499, both work in a non-regulatory manner with people who ask for assistance .



Volunteers help plant trees along Foster Creek.

Hurrah! Boneless Parasite Returns to Foster Creek!

Have your attention? Lets talk about the Pacific Lamprey. Most people think of the lamprey as a horrible animal, but it's got a "place in the choir" if you consider the sound of a healthy creek music! Like salmon, the lamprey are born in freshwater streams, migrate to the ocean and return to freshwater to spawn as adults. And like salmon, they don't feed during their spawning migration. Because lamprey have many of the same habitat needs as salmon, they have suffered many of the same challenges and population decline.

Although adult lamprey living in the ocean are parasitic, juvenile lamprey have a special niche in the stream habitat. They live in stream bottom sediments and filter feed on microscopic plants and animals. Animals that filter feed for a living are very susceptible to pollutants and disturbance - so they can act like a canary in a coal mine. When they disappear, there may be something for us to be concerned about. Lamprey



live in Clear Creek, and last summer after the Bakers Ferry culvert replacement project, landowners upstream reported seeing lamprey in Foster Creek. From a stream health standpoint, this is something to celebrate!

Good Culvert, Bad Culvert -by Jo Anne Dolan

I'm standing knee deep in water, neck deep in blackberries, waving a fifteen foot stadia rod (engineering jargon for big measuring stick) back and forth. My work partner, biologist Jenny Walsh, is squinting through a device that measures elevation, trying to spot the rod through the dense summer vegetation.

We're hard at work, looking at culverts in the tributaries of the Clackamas Watershed to see if they are a barrier to migrating salmon and steelhead. Though it may seem obvious that some culverts don't pass fish, like the photo at right, it is not always so straightforward.

Factors such as culvert size, shape, slope, placement and stream gradient all make a difference. Pools at the base of a culvert allow fish to rest before swimming upstream.

The Clackamas River Basin Council is identifying culverts on private land that should be replaced to help fish reach their spawning habitat and to allow juvenile fish to migrate instream before they journey to the ocean. Young salmon live several years in the creeks



Notice the "natural" streambed in this culvert. Good for fish.

and must be able to move up and downstream to find food, cover and cool water.

Landowners have been incredibly helpful with this survey, allowing the field crew to measure their culverts. They are also a great source of information. Typically residents know what is happening in their creek better than anyone else, things like where steelhead



used to spawn and what changed after the floods of '96. Landowner participation in the

study has been invaluable. The council thanks them.

Last summer the council looked at culverts in Clear and Foster Creeks; this year Deep, Goose and Eagle Creeks are the focus. Once the council has a good picture of where the high priority barriers are, it will seek grant funding with willing

landowners to fix culverts that block access to the most critical fish habitat. To see the results of the 2002 Clear and Foster Creeks Fish Passage Study visit the projects page at www.clackamasriver.org

The Wonders of Wild

From birth 'til death,
in a single breath,
the journey long,
an unsung song.
From life giver, returns to
river,
in the sun's gleam, through
brook and stream.

The wonder wish,
this marvel fish,
from birth to life,
a life-long strife.
No human guide can abide,
such directions,
such discretion.

From brook to ocean,
what emotion!
Back then from the sea,
such strange personality.
Their own lives they give,
their children come to live.
A culture around them, these
elegant salmon.

- James Boger
Clackamas High School

(James was a member of a team of over two hundred students at Clackamas High School who spent several weeks researching the history and literature of the Clackamas and the Deep and Goose Creek watershed).

Clackamas River Basin Council 2002-2003 Project Highlights:

- ◆ Clear and Foster Creeks Watershed and Fish Passage Assessments
- ◆ Deep, Goose and Eagle Creeks Fish Passage Assessment
- ◆ Clackamas Stream Team - Streamside Tree Planting and Invasive Plant Removal
- ◆ Clear Creek Salmon Carcass Nutrient Enrichment Project
- ◆ North Fork Eagle Creek Large Wood Project
- ◆ Clear and Foster Creeks Water Quality Monitoring
- ◆ Japanese Knotweed Mapping and Eradication
- ◆ Third Annual Watershed Celebration and Salmon Bake



High School students fertilize Clear Creek with salmon from Eagle Creek Hatchery.

In This Newsletter:

- ◆ **Salmon Do Grow On Trees** - Habitat Project Benefits Coho and Wild Winter Steelhead
- ◆ **Looking at the Watershed, From Assessment to Action** - What You Can Do to Help
- ◆ **Clear and Foster Creek Residents Take a Look Their Water**
- ◆ **Pacific Lamprey**
- ◆ **Good Culvert, Bad Culvert** - Results of Clear and Foster Creeks Fish Passage Assessment

Coming Soon to Your Watershed:

- ◆ Deep and Goose Creeks Watershed Assessment
- ◆ Deep, Goose and Eagle Creeks Fish Passage Barrier Prioritization
- ◆ Clear Creek Habitat Enhancement: Culvert Repair and Large Wood Project
- ◆ Basin-wide Action Planning

The CRBC would like to express a special thank you to the following organizations for their generous financial and/or technical support:

Clackamas River Water
Oregon Watershed Enhancement Board
Oregon Department of Fish and Wildlife



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