

# CoosCurrents

Coos Watershed Association

Summer 2010

Coos Bay, OR

Coos Watershed Association  
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<http://www.cooswatershed.org>

The Coos Watershed Association is a local 501(c)(3) non-profit organization formed in 1993 as a way for people with a wide range of interests to get together and discuss the “big picture” of the conditions in the Coos watershed. The Association also helps individual landowners decide how to manage and restore the watershed’s natural systems.

## STAFF:

Dan Draper  
*Monitoring Technician*

Bessie Joyce  
*Assessment & Outreach Coordinator*

Dave Nelson  
*Riparian Crew Leader*

Tyler Pedersen  
*Lowlands Restoration Projects Manager*

Aimee Peters  
*Office Manager & Bookkeeper*

Meredith Pochardt  
*Watershed Outreach Organizer  
(AmeriCorps)*

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*Monitoring Technician*

Nick Scheidt  
*Monitoring Coordinator & Uplands  
Restoration Projects Manager*

Jon Souder, Ph.D.  
*Executive Director*

Adam Weybright  
*Monitoring Coordinator*

## Tide Gates & Salmon: Effects on Movement & Migration

Arthur Bass, an OSU graduate student has been conducting research at the Larson and Palouse tide gates since fall of 2007. The focus of Art’s work is to determine the impact that tide gates may have on juvenile salmon movement. Tide gates are one-way doors integrated into dike systems that prevent saltwater intrusion to agricultural land and allow freshwater drainage to the estuary during low tide. Incidentally tide gates may act as fish passage barriers for juvenile salmonids, limiting movements during migration and access to rearing habitats.

The opportunity for passage is determined by how frequently and the duration the tide gate is open, whether or not the tide gate culvert is perched, and water velocity at the tide gate outlet. In order to evaluate this Art installed passive integrated transponder (PIT) antennae around a top-hinged gate, a side-hinged gate and in a reference system with no gate. These antennae were used to track the movement of juvenile coho and chinook salmon that were tagged with PIT transmitters. Along with this water velocity and door angle were also recorded.

From Art’s research we have gained a better understanding of what impacts tide gates may pose on the movement and migration of juvenile salmon. The results of this research show that the ideal tide gate for fish would be side-hinged, “leaky” (meaning allowing some salt water intrusion upstream of the tide gate), and not perched. Each case, however, should be looked at on an individual basis to balance the needs of both the fish and landowners upstream of the tide gate.

CoosWA is happy to announce that the tide gate at the mouth of Willanch Creek will be replaced this summer with a fish-friendlier tide gate. The new tide gate will have one side-hinged and one top-hinged door. Our hope is to have similar research conducted using this combination design.



Top: Top-hinged door on Palouse  
Bottom: Side-hinged door on Larson

For more information on tide gates visit our website: [://cooswatershed.org/publications.html](http://cooswatershed.org/publications.html)

# Restoration Highlight: Engineered Log Jams

Through a grant from the Oregon Watershed Enhancement Board, the Coos Watershed Association will be placing engineered log jams (ELJs) in the West Fork Millicoma River this summer. The West Fork Millicoma River, with its headwaters in the Elliott State Forest, supports coho salmon, cutthroat trout, Chinook salmon, and winter steelhead.

Historical, stream-cleaning, riparian logging practices and removal of conifers from slide draws have led to low levels of large wood in streams. The presence of large wood improves stream habitat complexity, pool frequency, and gravel volume necessary for salmon to spawn. Through an Aquatic Habitat Inventory survey conducted by CoosWA, it was determined that the West Fork Millicoma River had 0.00 complex pools per km; clearly showing the need for large wood placements. Due to the large size of the stream traditional wood placement techniques would not remain stable. However, this provides the opportunity to improve habitat complexity through construction of ELJs.

The engineered log jams use boulders and existing key trees to stabilize the placed wood pieces. For this project 12 key trees ranging from 45

to 85 feet long, 19 smaller rack trees and 12 logs will be placed and stabilized with 330 boulders varying in size. In total there will be 7 ELJ sites on the West Fork Millicoma River. This project will result in a stream channel with greater habitat complexity.



CoosWA would like to thank the Elliott State Forest, Oregon Department of Fish & Wildlife and Blue Ridge Timber Cutting for partnering on this exciting project.

*Photos: Left: (Top) Boulders used to stabilize the ELJ's. (Bottom) Site 4 of the ELJs. Right: Mike Lester monitoring a riparian planting site.*

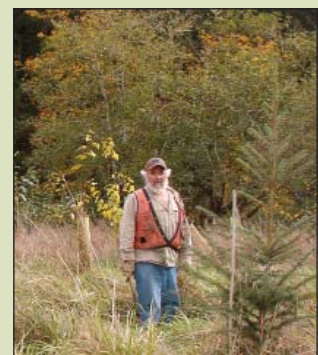
## Farewell to Mike Lester

CoosWA would like to thank Mike Lester for all his hard work over the many years of his employment. Mike began his work for the watershed back in 1995 when the Association began. Since then he has been an instrumental element to all that we do.

Prior to Mike's time at CoosWA he was a commercial fisherman for 20 plus years. Mike began his career at CoosWA as part of the "Hire the Fishermen" program which employed displaced fishermen. Throughout his time here Mike held several positions; he began as part of a riparian planting crew and then moved into road and landing survey work. After seven years of survey work he accepted a full-time staff position as the Sediment Risk Reduction Coordinator in 2004. In 2007 he also became the Riparian Stewardship Crew leader.

After 15 years of work for CoosWA, Mike is enjoying a much deserved retirement.

*"Thank you Mike"*



# CoosWA Combating the “Beautiful Killer”

Purple loosestrife’s Latin name, *Lythrum salicaria*, means beautiful killer. It is a non-native wetland plant of Eurasian origin. The flowers bloom from late June to early September and is the only purple-magenta flowering plant that covers large tracts of wetland in a monoculture fashion. These plants produce an astonishing amount of seeds. A four to five year old plant can produce 2,700,000 seeds in one season.



Purple loosestrife rivals Himalayan blackberry in its ability to out compete native vegetation. A purple loosestrife invasion can rapidly convert a healthy wetland to an extensive monoculture that has little or no habitat value to many fish and invertebrates.

The CoosWA, Bureau of Land Management (BLM), and Oregon

Department of Agriculture (ODA) have partnered in efforts to control purple loosestrife through a combination of flower-head removal to prevent seed formation, and distribution of host-insects (provided by ODA) that feed on the plant’s leaves, buds and roots. These insects are released in late spring early summer and have had a roughly 50% success rate at decreasing the area infested with purple loosestrife; according to a study conducted by CoosWA from 1999-2003. CoosWA has served as a liaison with private landowners, providing information about the problem and obtaining permission to enter and implement controls, both mechanical and biological.

*Photos: (Left) Up-close Purple Loosestrife, (Right) Mike Lester conducting Purple Loosestrife surveys.*

## Students Paint A Message In Coos Bay

Have you ever wondered what happens when stormwater or pollutants go down the storm drain? They drain, untreated, to a nearby waterway. What are the effects of oil, sediment, and other pollutants on water quality and marine animal health? Well a group of high school students are working on a project to make these questions apparent when you see a storm drain, and they’re doing it in an artistic way.

The Community Action Adventure (CAA) group, a program of Oregon Coast Community Action, is designing murals that will be painted on storm drains in Coos Bay. These murals are similar to ones that have been done in Port Orford and Newport. The purpose of this artwork is to make the connection that what goes down the drain does have an impact on our oceans and marine life. The murals are designed by local high school students, and will be located at the pedway near the Coos Bay Farmers Market and at the new Coos bay visitor’s center.

We would like to thank the students, OMI CH2M Hill for graciously donating the supplies and the City of Coos Bay for assisting in the planning and approval of this project.



*Draft painting of one of the murals to be on the storm drains.*

# Volunteers Help Clean-Up Matson Creek Wetland Preserve

On June 5th volunteers gathered at the Matson Creek Wetland Preserve to help with various watershed related projects. In total there were 21 volunteers representing Boy & Girl Scout groups, the Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians, Cape Arago Audubon Society, as well as CoosWA Board members and staff. The event was organized by the CoosWA AmeriCorps intern with assistance from SOLV.

During the sunny morning volunteers helped remove invasive blackberry, repair native tree enclosures, remove old scrap metal, and plant native trees. As a celebration for all their hard work, volunteers enjoyed a barbecue with food provided by the Coos Bay Safeway.



## About Matson Creek Wetland Preserve

The Matson Creek Wetland Preserve - a historically tidal wetland was converted to pasture land with the installation of tide gates under Catching Slough Road. This separated the property and Matson Creek from the tidal influence of Catching Slough. The construction of dikes and ditches also manipulated water movement and quality.

Through a partnership with The Wetlands Conservancy (the current property owner), the Coos Watershed Association and the Coos Bay-North Bend Water Board, 49 acres of tidal marsh and 23 acres of river-sourced marsh have been restored.



*Photos: (Top) Young volunteers helping remove invasive blackberry. (Bottom) Volunteers enjoying the barbecue after a hard days work*

The 165-acre site was purchased in 2000 using funds from the US Fish and Wildlife Service Coastal Wetlands grant program. Additional funds from the Oregon Watershed Enhancement Board, Oregon Department of Fish and Wildlife and Coos Bay-North Bend Water Board have paid for restoration and enhancement at the Preserve.

The restoration design for the wetland included removing and filling man-made dikes and ditches and allowing the new influx of tides to naturally form its new channel. In 2008, the wetlands and channel were reconnected to Catching Slough, allowing water (and fish) to flow in and out of the wetland.

Many native wetland plants have naturally re-established in the bottomland, demonstrating that native wetland plant seeds were dormant in the substrate, awaiting the return of proper hydrologic conditions. Since 2008 the channel complexity has increased, creating new braided side channels that provide improved habitat for juvenile salmon and a variety of water birds.

Currently the Coos Watershed Association is looking into the feasibility of renovating the existing barn into a community environmental education center with office spaces for non-profit organizations. For more information on Matson Creek Wetland Preserve visit <http://.cooswatersehd.org/matson.html>

## CoosWA Helps With New ORCCA Campus

Oregon Coast Community Action (ORCCA) of Coos Bay is developing a new 5-acre campus that, in addition to its service programs, will serve as a demonstration site for Low Impact Development (LID). The new campus is located off Newmark Ave at the corner of Thomas Ave and Laclair St (behind Staples).

The new campus will contain three major buildings: Food Bank, Head Start, and Child and Family Resource Center. It is a priority for ORCCA to incorporate LID practices at the new campus, and they hope to include infiltration practices such as porous pavement and rain gardens; runoff storage practices such as green roofs, rain barrels and cisterns; runoff conveyance practices such as biowales; and filtration practices such as bioretention ponds and wetland conservation and enhancement.

Through a grant from DEQ, the Coos Watershed Association has sub-contracted technical assistance to provide LID recommendations and assist in planning demonstration sites on the new campus. Some of the LID Best Management Practices that will be in place at the new campus include: stormwater infiltration and treatment through a bioswale, demonstration site of pervious pavement, installation of an eco-roof, rainwater harvesting in a cistern, reduce soil disturbance, preserving existing vegetation and wetlands, and installation of solar panels. Additionally interpretive signs will educate the public about the LID practices in place on this new campus.

Construction is slated to begin this fall with the Food Bank building. The Child and Family Recourse Center and Head Start buildings will be getting started in winter 2011.



State of Oregon  
Department of  
Environmental  
Quality



## Recap on Stormwater Solutions Workshop

Maria Cahill was the keynote speaker for the Stormwater Solutions workshop held May 26th at the Mill Casino. Maria is the owner of Green Girl Land Development Solutions based out of Portland. She explained the ins and outs of best management practices with an in-depth look at how non-structural (i.e. good planning, conservation) and structural (i.e. good engineering, mitigation) practices can reduce environmental impacts & support community development goals.



In addition to Maria's presentation, Dave Holman from the Port Orford City Planning Commission, Harry Hoogesteger the Executive Director of the South Coast Watershed Council, and Briana Godwin the Outreach Specialist from the Port Orford Ocean Resources Team discussed the challenges and successes of implementing LID on the Oregon South Coast. Through their partnership they were able to develop a stormwater ordinance for the city of Port Orford. This ordinance encourages minimizing stormwater runoff volume and non-point source pollution caused by stormwater runoff by implementing LID Best Management Practices.

The purpose of this workshop is to improve water quality through education. A wide variety of occupations were represented including public agency staff, landscapers, engineers and consultants. The workshop concluded with a tour of local stormwater LID demonstration sites at the Mill RV Park and new Fire Station in Coos Bay.

In October CoosWA will be hosting a Rain Garden workshop. For more information check out our website at: <http://www.cooswatershed.com>.



Photo: Workshop participants learning about the bioswale at the Mill RV park.

# Welcome Katherine!

Katherine Nordholm is joining the CoosWA team as part of a continued partnership with OSU. Katherine will be taking over as Monitoring Coordinator while pursuing a masters degree in fisheries science. Her tasks will include conducting the juvenile and adult salmon traps on Larson and Palouse Creeks and tagging juvenile salmon with passive integrated transponders (PIT) as part of our continued life cycle monitoring program.

We would like to thank our former Monitoring Coordinator, Adam Weybright, for all his excellent work during his time with CoosWA. Adam is finalizing his masters degree, also in fisheries science.



*Photos: (Left) Katherine constructing a PIT antennae in the Palouse tide gate. (Bottom) Adam Weybright and Arthur Bass collecting data at the rotary scow trap on Palouse Creek.*



## UPCOMING EVENTS:

*For more information on these and other events go to [www.cooswatershed.org/events](http://www.cooswatershed.org/events)*

### August:

**13-14:** Tuna Classic, Charleston Marina. *Benefiting the Oregon Food Bank & Ducks Unlimited.*

**21-22:** Charleston Seafood Festival, Charleston Marina. Pancake breakfast, tasty seafood, beer & wine garden, outdoor exhibits, arts & crafts, family fun & events.

**27-29:** Oregon Shorebird Festival, Oregon Institute of Marine Biology (OIMB). Expertly guided land-based field trips and presentations.

**28-29:** Blackberry Arts Festival, Downtown Coos Bay.

### September:

**25:** National Estuaries Day Celebration at South Slough NERR.

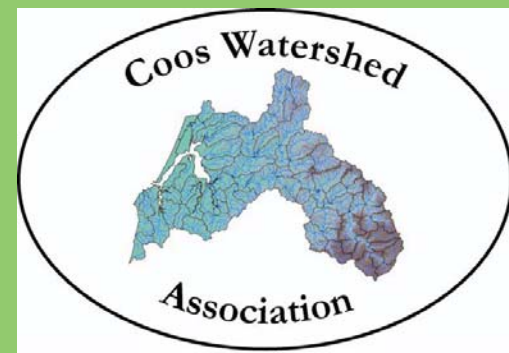
**25:** SOLV Beach and Riverside Clean-up, Bastendorf Beach and North Spit

### October:

**26:** Rain Garden Workshop. Call for more information.

### November:

**6-7:** WISE Teacher Training. Coos Bay. Call for registration information.



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Become a *Friend* today and stay up-to-date on these and other volunteer opportunities. We have several donation levels to become a *Friend* ranging from \$10 for student or senior membership to \$100 for corporate membership. Visit our website <http://www.cooswatershed.org/donate.html> to learn more about becoming a *Friend of the Coos Watershed*.