

# STEWARDS OF THE LAND

NEWSLETTER OF GOLD RIDGE RESOURCE CONSERVATION DISTRICT

FALL 2009

Protecting our natural resources benefits our economy and environment,  
contributing to our quality of life, now and in the future.

VOLUME 9, ISSUE 3

*American Recovery and Reinvestment Act 2009*

## How Federal Stimulus Funding is Being Used to Support Agriculture and Fisheries in western Sonoma County.



The Gold Ridge Resource Conservation District (GRRCD) was recently awarded three funding agreements as a result of the American Recovery and Reinvestment Act of 2009 (ARRA). These projects include: 1) The Estero Americano Sediment Reduction Project; 2) The Estero Americano Rangeland Water Quality Enhancement Project; and 3) Save Our Salmon (SOS) – Salmon Creek Habitat Rehabilitation Project.

The overall goals of the *ARRA* are to stimulate the economy in the short term and invest in education and other essential public services to ensure the long-term economic health of our nation. There are four principles guiding the distribution and use of *ARRA* funding:

- \* Spend funds quickly to create jobs
- \* Improve student achievement through school improvement and reform
- \* Ensure transparency, reporting and accountability
- \* Invest one-time *ARRA* funds thoughtfully to minimize the "funding cliff"

The cumulative total of the three funding agreements is \$2,505,000. The Gold Ridge RCD will be spending this money in the following ways:

### Estero Americano

1. Construction of six gully restoration projects on six different agricultural properties
2. Installation of 25,000 linear feet of riparian pasture fencing
3. Restoration of over 3,000 linear feet of streambank utilizing bioengineering techniques
4. Development of 12 Conservation Plans for agricultural landowners
5. Project effectiveness monitoring
6. Water quality monitoring

### Salmon Creek

1. Installation of 25 large wood structures to improve salmonid rearing habitat by adding in-stream complexity, deeper pools, and shelter
2. Installation of 16,000 linear feet of riparian fence
3. Installation of 22 rainwater catchment systems
4. Installation of 5,000 linear feet of riparian planting
5. Pre- and post-project habitat indicator monitoring

Please contact Gold Ridge RCD at (707) 874-2907, or visit our website at [www.goldridgercd.org](http://www.goldridgercd.org) for more info.

## Water for Fish & People in Salmon Creek

### *What can we do to improve coho salmon and steelhead trout habitat in Salmon Creek?*

By Prunuske Chatham, Inc

Driven by the disappearance of coho from the watershed in 1996 and the desire to see them return, local residents, the Salmon Creek Watershed Council, Gold Ridge RCD, the Occidental Arts and Ecology Center (OAEC) and local consultants Prunuske Chatham, Inc. began working together in 2001 to answer this question. Water quality, streamflow, sediment sources, and physical habitat conditions in the creeks and estuary have been assessed. The studies recommended both short-term and long-term actions to improve habitat conditions.

Two of the biggest threats to fish survival are lack of summer streamflow and insufficient instream habitat features. Flow monitoring in Salmon Creek shows that riffles often dry up by early July; stranding juvenile salmonids in disconnected, shallow pools and causing water quality in the pools to become lethal. Near-channel wells in the alluvial valleys have been found to be drawing from subsurface flows and affecting stream depths. Springs that feed tributaries are no longer flowing as they once did, likely due to groundwater withdrawals. Instream pumps for summer irrigation use take water directly from the creek during critical periods. A long-term program to reduce water demands in the Salmon Creek watershed, increase streamflow during the critical summer months, and install log structures in the both the estuary and creeks has begun. Several grant-funded projects are paving the way.

One grant, the *Salmon Creek Water Conservation Program*, to OAEC from the State Coastal Conservancy is conducting a supply and demand inventory to quantify water usage in the watershed, developing a water conservation plan as a framework for long-term project implementation, and providing community education and assistance through planning processes and workshops.

Another is *Save our Salmon (SOS)*, a federal stimulus grant from NOAA to Gold Ridge RCD. SOS projects are considered a Phase I of a long-term program to reduce pressures on streamflows, increase riparian buffer width and integrity, and improve instream habitat in the Salmon Creek watershed. The projects are designed and located to be educational—showcasing different rainwater harvesting and distribution methods, planting plans and species for riparian forests, and the value of large wood in the stream system. We are focused on developing community and regional support for utilizing water conservation and rainwater catchment as alternatives to streamflows and showing that it is an economically viable and sustainable option. The project will capture and store approximately 500,000-600,000 gallons of rainwater in the town of Bodega, primarily in 5,000 to 20,000 gallon tanks, an agricultural pond, and in one large underground storage system. The long-term goal is to keep riffles flowing for longer periods, provide fresh water to pools, and maintain pool volumes during the low-flow season. It will also provide Bodega area residents with a clean, safe source of water for gardens and livestock.

Thank you to everyone who has worked with us; whether it be for funding or project support, conservation is a team effort.

### **Gold Ridge RCD Funding Partners in Salmon Creek**

- \* NOAA Fisheries
- \* USDA Natural Resources Conservation Services
- \* State Water Resources Control Board
- \* State Coastal Conservancy
- \* CA Department of Fish and Game
- \* Sonoma County Fish and Wildlife Commission

### **Gold Ridge RCD Project Partners in Salmon Creek**

- \* Landowners
- \* Salmon Creek Watershed Council
- \* Prunuske Chatham, Inc.
- \* Dragon Fly Stream Enhancement
- \* Occidental Arts & Ecology Center

### **Gold Ridge RCD Project Support in Salmon Creek**

- \* Office of Congresswoman Lynn Woolsey's Office
- \* Sonoma County Board of Supervisors
- \* Sonoma County Farm Bureau
- \* Trout Unlimited
- \* Salmon Creek Watershed Council
- \* University of California Cooperative Extension
- \* Sonoma County Agricultural Preservation and Open Space District
- \* USDA NRCS



**Salmon Creek Partners at the Big Event:** Lauren Hammack (PCI), Lisa Hulette, (RCD), Virginia Porter, Brock Dolman (OAEC) and David Shatkin

## Save our Salmon (SOS) - The Salmon Creek Habitat Rehabilitation Program—Phase I

Coho salmon were once common in central and northern California, spawning in large numbers in most coastal streams, including Salmon Creek and its tributaries. Populations declined steeply during the 20<sup>th</sup> century, however, and the coho disappeared completely from their namesake watershed in the late 1990s. With the decline of the coho came the crash of the local fishing industry, which was an important part of the west Sonoma County economy.

The coho and other salmonids have been the focus of watershed restoration efforts designed to improve habitat conditions for the fish and assist in their long-term survival in coastal California. In Salmon Creek, the Gold Ridge Resource Conservation District has been an important part of these efforts, conducting assessments of watershed and habitat conditions, working with local landowners on stream protection and restoration projects, and helping to inform the public about the ecological and economic importance of coho. Efforts to restore the fish in Salmon Creek were given a huge boost last December, when the California Department of Fish and Game planted over 300 adult coho in the stream.

Habitat improvement work must continue if the coho are to thrive in Salmon Creek. Working with our partner, Prunuske Chatham, Inc., of Sebastopol, the RCD has secured a \$1.5 million federal stimulus grant from the National Oceanic and Atmospheric Administration (NOAA) to fund the Save Our Salmon Program (SOS). This program has two purposes: to implement restoration and resource protection projects to improve habitat conditions in Salmon Creek, and to create jobs and stimulate the west county economy.

SOS is a cooperative effort, with local landowners and resource and construction professionals working with the RCD to design and build projects that will benefit both fish and people in the Salmon Creek watershed. The SOS program will help to stimulate the west county economy in the short term by providing employment in designing and building these projects. The training and experience these workers gain in restoration and resource protection will be invaluable in the emerging green economy. The program will assist local agricultural operators and other landowners in securing a more reliable and diverse water supply without drawing down the creek during the dry season. By building on ongoing



Crews from Prunuske Chatham, Inc above working on the agricultural pilot site for the SOS Program.

stewardship efforts, it will enhance west county agriculture's reputation for a strong commitment to the environment. And in the long term, we hope the restoration of healthy populations of coho to Salmon Creek will help to revive the fishing industry in Sonoma County.

### For more information, please contact

John Green, Lead Scientist/Project Manager at the RCD:  
(707) 874-2907 or [john@goldridgercd.org](mailto:john@goldridgercd.org)

Or

Lauren Hammack, Lead Scientist/Geomorphologist at PCI:  
(707) 824-4601 x 110 or [lauren@pcz.com](mailto:lauren@pcz.com)

## Wood Debris Structures in Salmon Creek

Small coastal streams like Salmon Creek are considered the last refuge of the endangered central coast coho salmon. The California Department of Fish and Game (CDFG) reintroduced adult coho to Salmon Creek during the winter of 2008-09, and spawning coho and their redds were subsequently observed in both Tannery and Fay Creeks. However, very low summer flows and poor habitat quality and complexity limit the viability of coho, as well as steelhead trout, in the Salmon Creek watershed.

Large wood, usually provided by falling trees, is an essential habitat component for salmonids. Its presence retains gravels, scours pools, and creates shelter, providing cool temperatures in summer and protecting young salmonids from high flows and predators. Logs capture seasonal detritus and store it so that it can sustain the invertebrates that salmonids feed on throughout the year. But because of historic stream clearing and the loss of riparian forest, the amount of wood naturally recruited into Salmon Creek is low.

The Gold Ridge RCD, Prunuske Chatham Inc., Dragonfly Stream Enhancement, and other partners, using funding from National Oceanic Atmospheric Administration (NOAA) and CDFG, plan to install approximately 25 large woody debris (LWD) structures in key areas of the watershed in order to enhance habitat for our salmon and steelhead. LWD structures will be placed in the Bodega Valley reach of Salmon Creek as well as in Tannery and Fay Creeks. These stretches are considered some of the best salmon spawning and rearing reaches in the watershed. The sites were selected and the structures designed by a team that included a geomorphologist, landscape architect, and restoration specialist. Depending on existing site conditions, the structures are designed to deepen pools, enhance riffles, create gravel bars, and/or provide cover for both juvenile and adult fish.

**Quantifiable targets:** 25 LWD structures will be installed by 2010. **Monitoring of the large wood structures** will include visual observations of function during high and low flows. Where possible, measurements of pool scour and sediment deposition will be made. A short monitoring memo will be provided at the end of the grant period, and any observations of fish utilization of the structures or associated habitat features will be included.

Contact: John Green, Gold Ridge RCD.

Email: [john@goldridgercd.org](mailto:john@goldridgercd.org)



## Stewards of the Land

### New RCD Field Technician



Nick Crump is a student at Sonoma State University. He performs all of the water quality monitoring and restoration plant maintenance for Gold Ridge RCD. He can be reached at [nick@goldridgercd.org](mailto:nick@goldridgercd.org)



Photo of a Large Wood Debris structure installed by Doug Gore of Dragonfly Stream Enhancement with funding from the CA Department of Fish and Game, Summer 2008

### CONTACT INFORMATION

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#### NRCS Sonoma-Marin Office

1301 Redwood Way, Ste 170

Petaluma, CA 94954

Phone: 707-794-1242 ext.3

#### NRCS Russian River Office

405 South Orchard Ave

Ukiah, CA 95482

Phone: 707-468-9223 ext.3



## Gold Ridge RCD Hires Lead Scientist and Project Manager

The RCD welcomes the addition of John Green to our staff. John Green is Lead Scientist and Project Manager with the Gold Ridge Resource Conservation District, and is managing the implementation of the Save Our Salmon program.

He holds a Master of Science degree in Fluvial Geomorphology from the University of Oregon, and has extensive experience in salmonid habitat protection and restoration. He previously worked as a Senior Geomorphologist with Pacific Watershed Associates, and headed PWA's San Francisco Bay Area office. He lives in the Dutch Bill Creek watershed in western Sonoma County.

**You can contact John at [john@goldridgercd.org](mailto:john@goldridgercd.org)**

“We are all very excited about the potential to implement creative and innovative solutions that will address the needs of both fish and people,” said Lisa Hulette, Executive Director, Gold Ridge RCD “and we are committed to working with landowners on a voluntary basis with the primary goal of creating a collaborative foundation from which landowners and agencies will work together to create reliable water supplies for future generations.”

## Russian River Coho Water Resources Partnership

In response to the precipitous decline of coho salmon in the Russian River watershed, the Russian River Coho Water Resources Partnership (Partnership) is developing a systematic approach to improve streamflow and water supply reliability in five Russian River tributaries critical to the recovery of endangered coho salmon. The Partnership is funded by the National Fish and Wildlife Foundation and includes the Center for Ecosystem Management and Restoration, Gold Ridge Resource Conservation District, Occidental Arts and Ecology Center WATER Institute, Sotoyome Resource Conservation District, Trout Unlimited, University of California (UC) Research and Extension Center's Hopland GIS Lab and UC Cooperative Extension.

Initial efforts will focus in five first-priority streams -- Dutch Bill, Grape, Green Valley, Mark West and Mill Creeks -- where streamflow is believed to limit salmonid survival and where cooperative projects could provide significant opportunities for both salmonids and water users.

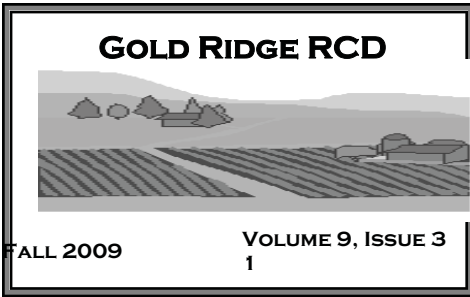
**For more information, please contact your local Resource Conservation District; For Dutch Bill and Green Valley Creeks contact John Green, 874-2907, [john@goldridgercd.org](mailto:john@goldridgercd.org) and for Mark West, Mill and Grape Creeks, contact Sierra Cantor, 569-1448 x107, [scantor@sotoyomercd.org](mailto:scantor@sotoyomercd.org)**



**Above:** Stream Restoration Project Along Green Valley Creek. Photo taken December 22, 2008

**Below:** the RCD gets help from our friends when conducting water quality monitoring in Green Valley.





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**RCD Mission and Vision:**

The mission of the Gold Ridge RCD is to assist landowners in addressing concerns by maintaining a presence in natural resource conservation work in all watersheds within the District. The GRRCD can provide a conduit for landowners through whom local, state, and federal monies can be obtained to support and implement restoration programs and practices. The Vision of our District is to ensure the continuation of strong, productive, and viable agricultural endeavors in Western Sonoma County by improving soil and water quality in order to provide an economically and ecologically viable and healthy agricultural community.

**BOARD OF DIRECTORS MEETINGS:**

Third Thursday of each month at 6:00 pm

14775 'B' Third St  
Occidental, CA 95465

**MEETINGS ARE OPEN TO THE PUBLIC**

**THE GRRCD STAFF**

- Lisa Hulette**  
*Executive Director*
- Joe Pozzi**  
*District Manager*
- Brittany Heck**  
*Project Manager*
- Diana Hines**  
*Fisheries Biologist*
- Noelle Johnson**  
*Conservation Planner*
- Nick Crump**  
*Field Tech*
- John Green**  
*Lead Scientist*

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- Chester Gin**  
*Soil Conservation Tech*
- Jessica Sternfels**  
*Soil Conservationist*
- Kristan Flynn**  
*Range Management Specialist*
- Jennifer Gabor**  
*Soil Conservationist*
- Brooke Cole**  
*Agricultural Engineer*
- Phong Ly**  
*Soil Conservationist Intern*

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