

# STEWARDS OF THE LAND

NEWSLETTER OF GOLD RIDGE RESOURCE CONSERVATION DISTRICT



## HAPPY 75<sup>TH</sup> ANNIVERSARY, GOLD RIDGE RCD!

This year, the Gold Ridge RCD celebrates 75 years of service. Established in 1941, Gold Ridge was the first RCD in Sonoma County and the seventh in all of California. At its inception, the RCD was called the Gold Ridge Soil Conservation District. The first concept of the RCD was as an agency to protect working land soils from repeating the tragedy of the 1930s Dust Bowl. Educating farmers in conservation practices that benefited their land, their community, and the environment was a founding principle of early conservation efforts. Today, our title and mission has expanded to include all natural resources, but the district still works directly with the members of this community to achieve responsible stewardship of this land as it did in the beginning.

### Gold Ridge Receives Gold Resolution from the Sonoma County Board of Supervisors

Gold Ridge and Sonoma RCD along with the Natural Resource Conservation Service gratefully received this special recognition for our collaborative and high quality work.

### Executive Director Awarded Employee of the Year, Celebrates 10 Years with RCD

Brittany Heck was awarded Employee of the Year at the California Association of RCDs 2015 conference. She is proud to have worked in this amazing community for 10 years.

### Lead Scientist Awarded Restorationist of the Year

John Green, lead scientist of Gold Ridge RCD, was awarded Restorationist of the Year by the Salmonid Restoration Federation. He is the 17th recipient of this honorable award.

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## LETTER FROM THE EXECUTIVE DIRECTOR



Dear Residents and Partners,

We have been blessed this year to work alongside you to complete some wonderful projects which improve our environment and strengthen the resiliency of our community by fighting the drought, saving endangered species, and ensuring that farms thrive in Sonoma County. The 2015 projects I am most proud of were:

The RCD addressed drought by installing rainwater catchment projects totaling over 2 million gallons of stored water per year, and increasing stream flow in Dutch Bill and Green Valley Creek for salmon survival with the Coho Partnership. We improved water quality by joining the LandSmart program and working with farmers in the Laguna de Santa Rosa. We addressed climate change by providing water resiliency and preparing to offer carbon farm plans to our farmers and ranchers. We enhanced salmon habitat by increasing water instream, improving rural roads, installing large wood and winter refugia habitat, fencing livestock out of streams, and repairing and replanting erosive gullies. We promoted soil health by providing a no-till rangeland seeder to landowners to seed their property in a manner that conserves fuel, increases soil moisture and improves soil fertility. We engaged our youth through 10 guided school field trips for 3rd-6th grade children to explore our local agriculture and ecology, as well as 2 lectures and 3 field trips for Sonoma State University classes. We want to recognize that none of it would happen without the support of our community, funders and partners. The state and federal grants we receive are contingent upon local funding, and we look toward our county, local agencies and our district residents to assist us in bringing these funds to our community. More than 95% of our budget comes from grants. Your tax-deductible donation is critical to close the gap for us to provide free, non-regulatory assistance to landowners wishing to voluntarily manage their natural resources.

We can't do this work alone. Your gift will help wildlife and local agriculture thrive, ensure clean and reliable water, and combat climate change.

Sincerely,

Brittany Heck Jensen  
Executive Director

## GOLD RIDGE RCD, SONOMA RCD, NRCS RECEIVE GOLD RESOLUTION

On November 10th, the Sonoma RCD, Gold Ridge RCD, and NRCS received a Gold Resolution from the Sonoma County Board of Supervisors in recognition of our educational and technical assistance programs focused on soil conservation and soil health to landowners and farmers throughout Sonoma County for the last 80 years.



## 2015—International Year of Soils

The 68<sup>th</sup> UN General Assembly declared 2015 the International Year of Soils. The specific objectives of the IYS 2015 are to:

- Raise full awareness among civil society and decision makers about the importance of soil;
- Educate about the crucial role soil plays in food security, climate change adaptation and mitigation, essential ecosystem services, poverty alleviation and sustainable development;
- Support effective policies and actions for the sustainable management and protection of soil resources;
- Promote investment in sustainable soil management activities to develop and maintain healthy soils for different land users and population groups;
- Strengthen initiatives in connection with the Sustainable Development Goals process and Post-2015 agenda;
- Advocate for rapid capacity enhancement for soil information collection and monitoring at all levels (global, regional and national).

Here at home, the Gold Ridge and Sonoma RCDs declared, through the Sonoma County Board of Supervisors, that November is the Month of Healthy Soils. Our humble soils do so much to provide for our well-being each day: soils filter water, grow our food, stabilize our coasts and landscapes, sequester carbon, and support biodiversity. However, soils are non-renewable. So we ask ourselves this year especially to consider how we will protect our soils.

A Sonoma County Soil Health Collaborative, as the group has been informally dubbed, was formed in the summer of 2015 by local resource conservation partners to improve soil health on all landscapes in Sonoma County and reduce organic matter loss. This unique group is a combination of local, state, and federal government in conjunction with non-profits and local districts that work with both agricultural and urban areas to increase knowledge of natural resource conservation and protection. These groups are driven to collaborate efforts to make visible change throughout the county. Watch for special soil-related events to come, including a challenge to our community to protect and amend more soil in more places. We won't let our passion for soils end with November or with the International Year of Soils. In fact, we see 2015 as the beginning of a new era of soil stewardship.

### Gold Ridge RCD Board of Directors



Welcome Melvin Sanchietti to the Gold Ridge RCD Board of Directors. Sanchietti brings over 40 years of experience in farming a variety of crops across Sonoma County. Among many, he has served on the Harvest Fair Board, the Farm Bureau Board, the CA Apple Advisory Board, and the SRJC Viticulture Advisory, and the American Ag Credit Bank Board. We look forward to having his leadership.

And thank you to this year's retired directors, Jill Butler and Don Petersen. Butler continues to offer her expertise in forest management at the CalFire Sonoma County office. Petersen has retired from 32 years of service to the RCD. We thank them both for their contributions to the Gold Ridge RCD.

*We are proud to present a new Gold Ridge RCD logo.*

# SOIL HEALTH UPDATE

## Bringing Carbon Farming to the District

### What is Carbon Farming?

You may have heard of a new land management practice exciting ranchers and scientists alike in the North Bay: Carbon Farming. Pioneered by the Marin County-based Carbon Cycle Institute, and researched by the Marin Carbon Project, Carbon Farming uses a set of known methods for reducing on-farm operational carbon emissions and for sequestering atmospheric carbon dioxide within soils and converting them to plant material and/or soil organic matter by way of the carbon cycle. This farming practice is being developed and tested for a wide variety of agricultural land-use types and locations around the world.

Carbon emissions are strategically *reduced* by identifying and reducing the occurrence of common sources such as driving a tractor, tilling the soil, over-grazing, using fossil fuel based fertilizers, pesticides and herbicides. Greenhouse gas emissions are also reduced by capturing the release of methane and carbon dioxide from decomposing organic matter and processing them into storable energy in machines called “biodigesters.” Biodigesters can provide clean energy on-site to farming operations.



***A load of compost is dumped on rangeland in Marin County, CA, before being spread across the landscape to benefit the soil.***

Carbon emissions are *returned* to the soil on Carbon Farms by applying a thin layer of compost across the site. So far, the land-use type effectively developed with this method is grazed rangeland. And the conservation benefits to soil, water and agricultural production are significant. “Research by the Marin Carbon Project scientists indicates that a single application of a half-inch layer of compost on grazed rangelands significantly increases forage production (by 40-70%), increases soil water holding capacity (to 26,000 liters per hectare), and increases soil carbon sequestration by at least 1 ton per hectare per year for 30 years without re-application. Compost decomposition provides a slow release fertilizer to the soils, which, with improved soil moisture conditions, leads to increased plant growth. More plant growth leads to more carbon dioxide being removed from the atmosphere through the process of photosynthesis, leading to increased transfer of carbon dioxide through the plant to the soil as roots, root exudates and detritus, yielding additional soil carbon and water holding capacity increases. More water and more soil yields more plants, and the cycle ascends and spirals regeneratively, all from one initial compost application” (CCI).

The Marin Carbon Project has both demonstrated and modeled GHG mitigation rates over a 30-year time frame of more than 13 tons of CO<sub>2</sub>e for each acre of land treated with compost (Ryals and Silver 2012) and over 18 tons of CO<sub>2</sub>e per acre over 20 years from avoided emissions associated with the diversion of organic matter from landfills and manure lagoons to composting (DeLonge 2013). When avoided methane emissions are included, compost appli-

cation on Marin's rangelands alone could sequester enough carbon to offset 10% of the annual emissions of the commercial sector in California (DeLonge et al, 2013).

### **How is Gold Ridge RCD Involved in Carbon Farming?**

In June 2015, Gold Ridge RCD, Marin RCD, Napa County RCD, Peninsula Open Space Trust, San Mateo RCD, Sonoma County Agricultural Preservation and Open Space District, Solano Land Trust, Sonoma Land Trust, Sonoma RCD, and the Marin Carbon Project applied to the NRCS Regional Conservation Partnership Program to acquire funding to create seven Carbon Farming Plan templates appropriate for landowners in the North Bay.

These templates will instruct land-use types beyond grazed rangeland in Carbon Farming: managers of orchards, vineyards, forests, row crops, and equine facilities will have templates and technical support available to them.

## **Gold Ridge RCD & Marin RCD Partner to Improve Watersheds**



Gold Ridge RCD is assisting the Marin RCD on two important projects within Marin's District; the Black Mountain Creek Sediment Reduction and Fish Passage Project, and the Conserving Our Watersheds Phase IV (COW IV) Project. With over a decade of experience managing road-related erosion and sediment reduction projects, Gold Ridge RCD's newest employee, project manager Jason Hoorn, is providing overall management of the Black Mountain Creek project for Marin RCD. For the COW IV project, Jason is assisting Marin RCD to complete initial site visits and preliminary descriptions of potential projects being considered to receive funding.

The Black Mountain Creek Sediment Reduction and Fish Passage Project implemented road related sediment reduction treatments within the Black Mountain Creek subwatershed of Lagunitas Creek. Instream habitats that support runs of endangered coho salmon and steelhead trout within the Lagunitas Creek system are threatened by excessive sediment, which smothers spawning gravels and reduces water quality. Road related erosion is a major source of instream sedimentation. Approximately 3.5 miles of roads were either upgraded or decommissioned as part of the project. In addition, fish passage was addressed at 3 stream crossings that were previously limiting ingress and egress of adult and juvenile salmonids. This work improved fish access to nearly 1,200 feet of Class 1 stream for spawning and rearing.



***Before and after: damaged culverts present a barrier to fish passage; new culverts have wide mouths and flat bottoms for easy passage along Black Mountain Creek, just outside Pt. Reyes Station.***

## Salmon Creek Dairy Water Conservation Project



***Left: The Hughes Dairy's 1.4 mil gal water storage tank will be constructed by December 2015. Right: The Hughes' Jersey dairy cows who will be drinking the captured rainwater in the summer of 2016.***

One of the year's largest construction projects is the Salmon Creek Dairy Water Conservation Project on the Westview Jersey's Organic Dairy operated by Richard and Marilyn Hughes in the Salmon Creek Watershed. Dairies are currently both significant water users forced to draw from sources influencing riparian flows and integral contributors to the agriculture-based economy of their surrounding communities. This project further advances the RCD's expanding water conservation program: we are working to provide immediate benefits to riparian systems while advancing technologies to prepare our communities for less predictable rainfall patterns in the long run.

This water conservation project will transition the dairy summertime water source from a shallow creek-side well to a rain water roof-catchment pond. When all is done, the project will harvest winter rainwater caught from the roofs of five structures with sufficient capacity to store the entire summer demand for the organic dairy operation. Implementation of this project addresses the impacts of one of the largest individual water diversions on the mainstem of Salmon Creek. It prevents the extraction of approximately 1,408,000 gallons of water from the stream during the critical summer/fall dry season.

To the fish of Salmon Creek, this project is a critical step toward survival. In the summer, surface water is scarce, especially in the Salmon Creek Watershed. Typically dry summer seasons have been extending; this fall of 2015, Salmon Creek did not reconnect surface flow until November rains hit. Next summer, we hope this project will alleviate the extending drought season and leave approximately 7,000 gallons of water for fish in Salmon Creek each summer day.

By itself, 7,000 gallons per day will not have a large impact on streamflow, as it equates to only about .01 cubic feet per second of flow. However, the Hughes project has been designed and implemented in conjunction with multiple other streamflow enhancement projects throughout the Bodega Valley, including the Gilardi Ranch 235,000-gallon rainwater catchment project (implemented in 2010), seven residential and small agricultural-scale rainwater catchment projects (implemented in 2010), and seven additional rainwater projects (implemented in 2015). The goal of the RCD's streamflow enhancement program is to provide enough additional water in the stream to keep it flowing throughout the dry season, particularly during drought years. Juvenile coho salmon and steelhead have a much better chance of survival if the stream's riffles have even a small amount of water flowing over them. Riffles introduce oxygen into the water (a highly important element of good salmon habitat) and the gravel in riffles sort away finer sediments that would smother salmon eggs.

Our contractors on this project include Prunuske Chatham, Inc. (rain water catchment system design and specifications), RGH Consultants (rain water catchment system geotechnical investigation), and Schaefer Engineers (pond construction and rainwater catchment system installation). This project uses state funds from California Department of Fish and Wildlife Fisheries Restoration Grant Program, the California State Coastal Conservancy, and the California Department of Water Resources. Special thanks to our partners at the North Coast Resource Conservation and Development Council for their support on this project!

## Westminster Woods Water Conservation & Storage Project

Westminster Woods Camp and Conference Center has partnered with Gold Ridge RCD and the Russian River Coho Water Resources Partnership (the Coho Partnership) to make a positive change in the way its grounds are irrigated. The camp, located in the coastal redwood forest of Occidental, CA, will soon irrigate its playing fields with stored winter spring water, alleviating the need to take water from the salmon-bearing Dutch Bill Creek during the summer/fall dry season. Dutch Bill Creek is prime habitat for coho salmon and steelhead trout, and through the years has received much-needed attention to improving its habitat, with projects such as the 2009 Dutch Bill Dam removal and very recently, the Camp Meeker water release (see pg 11). Now, the Westminster Woods water storage project promises to source 175,000 gallons of water per year not from Dutch Bill Creek, but from nearby springs. Water will be collected at a very low rate throughout the winter wet season, stored in large steel tanks, and then used to irrigate the playing fields in the dry season.

Construction steadily progressed this past fall – two rather large concrete pads were poured, and just a few weeks after, water tanks with a total capacity of 175,000 gallons were assembled on the pads. The camp's existing treatment/filtration system will enable Westminster Woods to treat the stored water for potable use should it be needed as drinking water. This project provides Westminster Woods with a reliable source of water at no cost to the salmon living in the creek. In exchange for the water storage project, Westminster Woods has agreed to refrain from using water from Dutch Bill Creek for irrigation. With no end to the drought in sight, this will be a vital leg-up for Dutch Bill Creek's sensitive species as they try to make it through the coming dry season.



***100,000 gal tank finishing construction at the Westminster Woods Camp. A second pad (foreground) awaits construction of a second 75,000 gal tank. Plentiful spring water will be collected in winter to irrigate the camp's playing fields (below) in the summer.***





# Donate to Support Local Resource Conservation

**Please join us in fighting the drought, saving endangered species, and ensuring that farms thrive in Sonoma County.**

More than 90% of our budget comes from grants. **Your tax-deductible donation is critical** to close the gap for us to provide free, non-regulatory assistance to landowners wishing to voluntarily manage their natural resources.

With the help of donors like you, this past year we have:

**Addressing Drought** by installing rainwater catchment projects totaling over 2 million gallons of stored water per year, and increasing stream flow in Dutch Bill and Green Valley Creek for salmon survival with the Coho Partnership.

**Improving Water Quality** by joining the LandSmart program and working with farmers in the Laguna de Santa Rosa.

**Addressing Climate Change** by providing water resiliency and preparing to offer carbon farm plans to our farmers and ranchers.

**Enhancing Salmon Habitat** by increasing water instream, improving rural roads, installing large wood and winter refugia habitat, fencing livestock out of streams, and repairing and replanting erosive gullies.

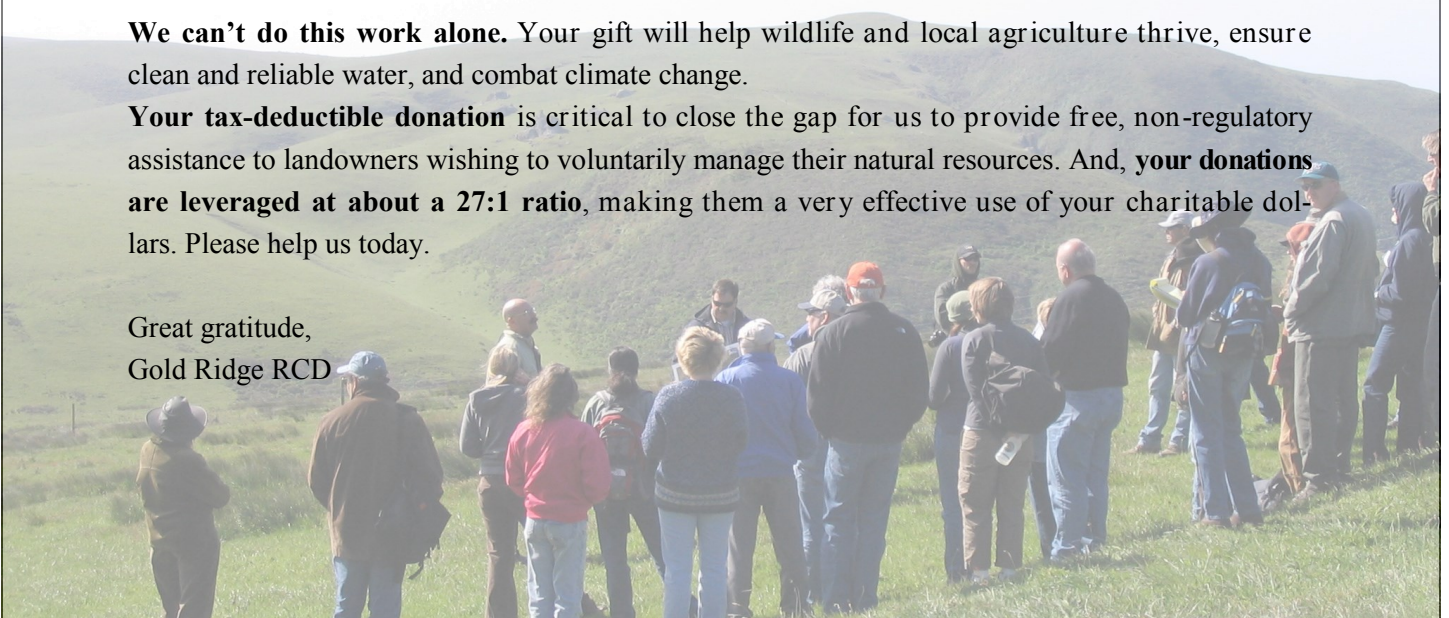
**Promoting Soil Health** by providing a no-till rangeland seeder to landowners to seed their property in a manner that conserves fuel, increases soil moisture and improves soil fertility.

**Engaging our Youth** through 10 guided school field trips for 3rd-6th grade children to explore our local agriculture and ecology, as well as 2 lectures and 3 field trips for Sonoma State University classes.

**We can't do this work alone.** Your gift will help wildlife and local agriculture thrive, ensure clean and reliable water, and combat climate change.

**Your tax-deductible donation** is critical to close the gap for us to provide free, non-regulatory assistance to landowners wishing to voluntarily manage their natural resources. And, **your donations are leveraged at about a 27:1 ratio**, making them a very effective use of your charitable dollars. Please help us today.

Great gratitude,  
Gold Ridge RCD





## Off-Channel Winter Salmon Habitat Restoration Project Update

Constructed in October 2014, the Green Valley Creek Off-Channel Winter Habitat Restoration Project is entering the second season of biological and physical monitoring, with good results. The purpose of the Project is to provide the structurally complex habitat needed by juvenile salmon to survive and thrive during winter high flows—called “refugia”—habitat that once was provided by seasonally inundated, floodplain wetlands. To address this need, the RCD constructed a side channel and wetland complex that connects the floodplain at lower (safer) flows; this off-channel habitat provides winter rearing and high flow refugia habitat for juvenile salmonids that would otherwise be swept away in high flows.

Here’s what we’ve learned from the monitoring so far. Physically, the channel performed well under the extremely high flows delivered during December 2014. The project provided the flow refugia as designed, even as Green Valley Creek spilled onto the historic floodplain and coursed through the field adjacent to the constructed channel. Despite some dramatic flows in December 2014, it was something of a rare event; 2014 was a drought year, which did not see many of the storm events and resulting high flow conditions the project was designed to function under. While the high flow conditions did not coincide with juvenile coho migration in 2014-15, we were delighted to find that several adult coho migrating into Green Valley Creek to spawn during low flow conditions did utilize the created channel on their journey upstream. According to the UCCE Seagrass monitoring program, under the drought conditions in this first post-implementation year, overwintering juvenile coho salmon appear to rely on rearing habitat upstream of the project site since most fish are not detected moving through until after winter base flows resume, in April and May.



**Left: Students in the STRAW program (pg 12) replanting the bare banks of the newly created off-channel habitat. Right: Refugia pools filled with flood water, creating safer, slower waters for juvenile salmonids in winter storm events.**

Green Valley Creek is one of only five remaining streams in the Russian River drainage where wild juvenile coho are known to exist. Green Valley Creek has been impacted by many activities during the last century that have led to degradation of the stream habitat. Currently, the main type of habitat in the lower reach of the watershed is flat-water habitat. Two consecutive watershed planning efforts have been conducted in recent years to identify and propose a prioritized plan of action to address limiting factors to coho salmon survival in the Green Valley Watershed. This project to address the lack of winter rearing habitat was identified as a top priority, particularly in the lower six miles of the stream. We were excited to work in collaboration with the Thomas Creek Ranch Homeowners Association, Prunuske Chatham, Inc., Petersen Construction Services and University of California Cooperative Extension/Sea Grant Program, as well as with our funders, the NOAA Community Restoration Center and California Department of Fish and Wildlife. With the higher rainfall amounts expected this winter, we will be watching to see how the coho and other aquatic wildlife use the created habitat. Stay tuned for more information about this project and tour opportunities in the coming year!

## Residential Water Conservation

As part of our ongoing water conservation program in the Salmon Creek watershed, the Gold Ridge RCD is finishing construction of seven small-scale rainwater catchment systems for properties located in and around the town of Bodega. These systems will collect and store a total of 157,000 gallons of rainwater each winter, and the water will be used for non-potable outdoor purposes such as irrigation and livestock watering during the summer dry season. The systems are designed to collect their target water volume even in a severe drought year, so water is available when it is needed most. In addition to enhancing water supply security for residents of Bodega, the rainwater systems will reduce the amount of water drawn from Salmon Creek or from shallow wells located near the creek, leaving more water to support juvenile salmon and steelhead during the dry season.



The RCD currently has active water conservation programs in the Salmon Creek, Dutch Bill Creek, and upper Green Valley Creek watersheds through the Coho Partnership Program. We can provide technical assistance to landowners who are interested in developing rainwater catchment or off-channel water storage projects, and we have a limited amount of grant funding available for construction of these projects. If your water comes from one of these creeks, or a shallow well adjacent to a creek, and you are interested in participating in an RCD water conservation program, please call to speak with Adriana, or email: [Adriana@goldridge-rcd.org](mailto:Adriana@goldridge-rcd.org).

## Wildlife in Atascadero Creek

Long thought of as a less productive stream, the upper Atascadero Creek has been gaining attention from local resource agencies, including the Gold Ridge RCD and the University of California Cooperative Extension, as potential habitat for coho salmon and steelhead trout, as well as other state and federally endangered species. In the summer of 2015, when the water was lowest, informal surveys showed astoundingly rich habitat for a variety of wildlife. These cool, dark, sinuous stretches of creek interspersed with wetland habitat have excellent wildlife habitat features: plenty of shade-providing over-hanging foliage from mature stands of trees, shrubs and ferns; they have curving reaches with multi-stage pools; undercut banks with exposed roots; and even some downed wood. This place is certainly special. We hope to conduct an official survey in the near future to fully assess the habitat offerings and the wildlife that are living in this miraculous creek.

Juvenile steelhead trout, from a few months to a few years old, were discovered using the cool ponds and wide riffles of these upper reaches; Endangered California freshwater shrimp (*Syncaris pacifica*) were found by the dozens in the sheltering roots of undercut banks. Invasive signal crayfish (*Pacifastacus leniusculus*) and native sculpin were frequently spotted as well.



Sculpin

Cal. Freshwater Shrimp

Steelhead juvenile

Signal Crayfish



## Water Released for Wildlife in Dutch Bill Creek

Gold Ridge RCD and the Russian River Coho Water Resources Partnership have partnered with the Camp Meeker Rec and Park District (CMRPD), Russian River Utility, NOAA and California Fish and Wildlife to improve stream-flow in Dutch Bill Creek. Water from CMRPD's well in Monte Rio is now being released into the creek at Alliance Redwoods Camp at the low but impactful rate of 0.1 cubic feet per second to provide much-needed water for juvenile salmon during the ongoing drought. Our staff agrees, the sound of water softly gurgling over the rocks and into Dutch Bill is most therapeutic after months of ceaseless drought.

## Green Valley Creek Gains Large Wood Debris

In August 2015, the Gold Ridge RCD collaborated with Dragonfly Stream Enhancement and four Green Valley Creek landowners to implement another phase of instream habitat enhancements, placing 21 large wood structures downstream of the Green Valley Rd crossing to improve rearing and spawning habitat for coho salmon and steelhead trout. The structures, composed of redwood logs, root wads, and boulders for anchoring, work to scour deep pools, provide cover and high flow refugia, sort spawning gravels, and contribute to overall habitat complexity. Juvenile salmonids need these features to survive both the low flows of dry summers, when rearing pools become isolated,



and the flashy storm events of winter, when storm water rips through the creek's incised channels and threatens to flush out the tiny young fish.

The structures are meant to re-create natural features that would form on their own as mature trees die and fall into the channel, redirecting water and scouring pools, allowing gravels to aggrade in riffles, and creating other complex habitat features that comprise healthy streams. This fallen wood has historically been removed by landowners concerned about bank stability, and at times by water agency staff concerned about flood control or even fisheries biologists themselves trying to ensure salmonid passage during spawning. This practice contributed to ho-

mogenized, incised channels with little summer habitat, winter protection, or spawning gravels for salmonids, which in turn has contributed to the near extinction of these once predominant keystone species.

Green Valley Creek has emerged as a critical refuge for remaining wild populations of the endangered coho, and currently serves as a stocking reach for the Russian River Coho Captive Broodstock Program's hatchery fish. The new wood structures will work to support these small but tenacious populations, providing much-needed cover when the new generation emerges from the spawning gravels this spring. Contact [Noelle@goldridgercd.org](mailto:Noelle@goldridgercd.org) with questions.

## Our Public Partnerships



### STRAW (Students and Teachers Restoring A Watershed) Program

Gold Ridge partnered with Point Blue Conservation Science's STRAW program on two watershed projects this year: The Green Valley Creek Off-Channel Habitat and Winter Refugia Habitat Enhancement Project and a gully repair and off-channel habitat restoration project on Ebabias Creek. The STRAW program's students become familiar with native plant species, their functions in the riparian corridor, how to plant and maintain plantings, and the hard work that goes into a restoration project. We can't wait to work with STRAW and Point Blue Conservation Science again.

### The Sonoma County Food System Alliance

The Alliance is one of the most dynamic collaborations for food system change in California. Since 2009 the group has developed a roadmap for how communities can come together to change the dialogue and the policy choices driving food and farming in our region. Some of the group's accomplishments include the creation of a citizen-science based community-food assessment that is a model for how stakeholders and community members can learn about and evaluate their local food system; sponsoring the county's single largest gathering (more than 250 participants) of food system stakeholders to create a shared vision and agenda for the future; and holding multiple community forums to create solutions to problems as diverse and challenging as increasing land availability for farmers, to assuring everyone in the county has access to healthy food.



### The Sonoma County Soil Health Initiative

2015 is the International Year of Soils, and Sonoma County won't let this important celebratory year pass without great recognition. In August 2015, Gold Ridge RCD entered a partnership with Sonoma RCD, NRCS, the Sonoma County Agricultural Preservation and Open Space District, Daily Acts, Supervisor James Gore, and the Healdsburg SHED to create the Sonoma County Soil Health Initiative and keep the energy of the International Year of Soils going into

2016. The Initiative's goals are to celebrate the soil conservation work being done in this county as well as challenge and inspire the county into a new year of soil-focused stewardship. Watch for Soil Health events on the Gold Ridge RCD website.

### The Farmers Guild

The Farmers Guilds are gatherings of farmers, ranchers and agricultural advocates who gather each month to share resources and information, build lasting relationships and celebrate our local food. Gold Ridge is developing a relationship with these guilds to connect on-the-ground land managers with educational resources, services and technical assistance. We are excited to see this kind of grass-roots support emerge and grow around the District's new farmers especially, and look forward to playing a role in growing public awareness of the many sources of financial and technical support available to land managers here.



**Thank you to these and other groups that support conservation values and practices throughout our district.**

## Our Available Services

### Groundwater Level Monitoring Services

Well owners within the Gold Ridge District can now have their well water level monitored. As the drought continues and groundwater supplies become less reliable, well owners throughout our district have become increasingly concerned about monitoring their well water levels. The Gold Ridge RCD has developed a program to offer confidential monitoring services for residential or commercial wells. Measurements will be performed using a sonic meter, so there is no risk of water contamination. While all information about well levels and locations is completely confidential, participants in the program may have the option of having their well data included in the California Statewide Groundwater Elevation Monitoring Program (CASGEM). Monitoring will occur biannually, with measurements taken in the spring and fall.

Fees for having a well monitored, currently \$20/visit, are meant to cover the cost of the program. Contact Noelle Johnson in our office for more information about participating in the 2016 round of monitoring: [Noelle@goldridgercd.org](mailto:Noelle@goldridgercd.org).

W W W. ↗

We are updating our website. The new website is due to launch in December 2015, and will feature updated and expanded pages on all of our projects and programs, a resource library with links to educational materials, active pages for events and updates, a page dedicated to communicating with our contractors, as well as additional videos of this year's projects. Visit the website soon!

### Rent the Great Plains 606 No-Till Drill

We are proud to announce that the no-till drill has seeded 100 acres this year! The Great Plains 606NT is ideal for seeding into everything from pasture renovations to food plots, and it is an effective way to reduce non-point source pollution, soil erosion, soil compaction. It protects water quality, helps to build soil structure, provides a permanent soil cover, retains soil moisture, and provides cover to microorganisms. Visit our blog at <https://goldridgercd.wordpress.com> to view a video that compares long-term conventional tillage and non-tillage systems. Folks within the Gold Ridge District can rent the no-till drill for \$100 per day; those outside our district can rent it for \$150 per day. To get your name on the list for the next seeding season call to speak with William, or email: [William@goldridgercd.org](mailto:William@goldridgercd.org).



## 2014-15 Public Outings & Workshops

**Bodega Water Storage Workshop, December 6, 2014, in Bodega, CA:** We ended last year with a December tour of the five small-agriculture and residential water tanks and the two Bodega Fire Department water storage tanks built to relieve Salmon Creek of summer-time diversions. These tanks store winter roof-collected rainwater for use in the summer. Attendees examined the various designs of the roof-water collection systems custom-built for low-roof and multistory structures, for use in the garden, for livestock and emergency preparedness, and on a variety of grades. Representatives of the engineering firm who built the projects, Prunuske Chatham, Inc., presented on the designs. These tanks are part of a larger local program for water conservation, the Russian River Coho Water Resources Partnership, or simply, the Coho Partnership.

**The 33rd Annual Salmonid Restoration Conference, March 11-14, 2015, in Santa Rosa, CA:** With the four-day statewide conference taking place this year in our neck of the woods, we were requested by the Salmonid Restoration Federation to host a few tours of our recent habitat restoration projects. Lead Scientist John Green and Ecologist Sierra Cantor,

with representatives of consulting firms Blencowe Watershed Management and Prunuske Chatham, Inc., brought salmon scientists and advocates from across the state to sections of Green Valley, Dutch Bill, and Willow creeks undergoing restoration. These creeks have historically lost coho salmon habitat features such as large wood debris through either natural events or intentional “stream cleaning.” The projects viewed during this year’s conference emphasized the district’s work to replenish the stream channel with structural woody debris and boulders that create healthy complexity important to all riparian life.

### **Biochar Soil Management and Pasture Benefits Workshop and Demonstration, June 8, 2015, in Valley Ford, CA:**

Biochar is a specialized form of charcoal made at relatively high temperatures in the absence of oxygen (in a process termed “pyrolysis”). Combined with compost or similar inoculant, biochar has been demonstrated to improve soil health, retain soil moisture, increase crop yields, and sequester carbon. Participants had the opportunity to see members of the Sonoma Biochar Initiative discuss and operate a biochar production unit, called the Adam retort (photo below); to see a test plot on pasture land to which biochar/compost mixture had been applied and compared to an adjacent control plot; and to see energy recovery demonstrations using process heat from the retort. Guest speaker Richard King gave a memorable explanation of the importance of soil health.

### **The 18th Annual Coho Confabulation, August 21-23, 2015, in Occidental, CA:**

Ecologist Sierra Cantor and lead scientist John Green toured attendees once again through restoration projects on Green Valley and Dutch Bill creeks: Sierra toured the off-channel winter refuge project for juvenile coho salmon on Thomas Creek Ranch, where large wood (30’ redwood logs and root wads) was strategically placed to create pools with slower moving waters and depth that can protect young salmon from flashy floodwaters and predators. John took attendees to see the new Dutch Bill Creek water release site where water stored at the Camp Meeker Rec and Park District is being slowly released into Dutch Bill, increasing water quantity through the intensely dry summer season to survivable depths for salmon. The tour continued to sections of Dutch Bill Creek to see previous years’ project installations of large woody debris.

### **Agricultural Heritage Outing: Creative Drought Solutions, Nov 14, 2015, in Bodega, CA:**

With funding from the Sonoma County Agricultural Preservation and Open Space District, Gold Ridge RCD conducted this year’s first Agricultural Heritage outing, “Creative Drought Solutions: Water Storage on a Bodega Ranch and How It Helps Our Salmon,” held Nov. 14 at Gilardi Ranch, a property protected by the Ag and Open Space District since 2009. Attendees learned how groundwater is connected to surface water, how drought and water use imperils our salmon and how we can help, what role agriculture does and can play in conserving water, how rural water storage works, and how land managers can apply for funding to install more wildlife-saving water collection systems.



*A biochar production unit.*

## Youth Education



Gold Ridge RCD and Sonoma RCD have received three years of funding from the Sonoma County Agricultural Protection and Open Space District to connect youth with the wonders of our local, preserved agricultural and open lands. This year, third, fourth, fifth and sixth graders visited the historic Bianchi Dairy in Valley Ford, the Dutton Apple Ranch in Sebastopol, the Gilardi Ranch in Bodega, and, newly, the Crane Family Farm in Santa Rosa. These students are part of our **TEAM (Teaching Agricultural and Environmental Memories) program**, and they really are on our Sonoma County team, as we work within our community to teach about the value of farming and working lands, the ethics of good stewardship, and the promise of protected lands saved forever from development.

Third graders who visited the Bianchi Dairy touched calves, learned what, where and how much dairy cows eat, and studied the chemical process for aging milk into cheese.

This past spring, fourth graders spent time in the Dutton Ranch orchards examining spring apple blossoms, “living” the life of a pollinating native bee, racing to produce apple sauce from start to finish, and quietly study-

ing decades-old apple trees.

This past fall, fourth graders experienced the Crane Family Farm from a historical perspective: students learned the heritage of a six-generation agricultural establishment, tasted the famous, golden Crane Melon, drew pictures of the family’s new vineyard, and studied the area’s unique adobe soil by comparing its properties to other soil types.

Fifth and sixth graders who visited the Gilardi Ranch had water on their minds as they explored the dynamic place that is Salmon Creek and its watershed, the lifecycle of local salmon, how water bugs tell us the quality of the water, and why native plants are important for healthy creeks.

***From top left, clockwise: Fourth graders at Crane Family Farm learn about soil structure; fifth and sixth graders call out salmon habitat features at Gilardi Ranch; fourth graders conduct an apple tasting and produce apple sauce at Dutton Ranch.***



## GOLD RIDGE RCD



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### BOARD OF DIRECTORS MEETINGS:

Third Thursday of each month at  
6:00 pm unless otherwise posted

2776 Sullivan Rd.,  
Sebastopol, CA 95472

### MEETINGS ARE OPEN TO THE PUBLIC

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