

# NORTH COAST CURRENTS

A Newsletter Publication of the North Coast Resource Conservation & Development Council

*WINTER 2009-2010*



The North Coast Resource Conservation & Development Council celebrated a surprisingly good year in 2009—despite the financial turmoil and difficulty in obtaining needed funds, our organization was able to continue important work throughout our 4-county area (Marin, Sonoma, Lake, and Mendocino Counties). Four major Action areas were supported by members of the NCRC&DC:

- **Agricultural Diversity** - Encourage agricultural diversity so family farms and ranches can maintain economic stability, including opportunities for enhancing pollinator habitat
- **Natural Landscape Conservation** - Investigate opportunities for sustainable use of forest products, including biomass energy.
- **Community and Economic Development** - Assist rural and agricultural landowners to identify and develop community and economic opportunities compatible with environmental stewardship practices.
- **Native Plant Habitat** - Assist and support removal or management of non-native, invasive plant species.



## *What is the NCRC&DC?*

We are a community-based organization that helps people protect and develop their agricultural, natural, economic, and social resources in ways that improve their area's environment, economy, and quality of life.



The NCRC&DC obtains and uses our resources to help others in our community work toward these goals. Our focus for the past several months has been on pollinator habitat, rainwater collection systems, and biomass utilization opportunities.

The coming year will include a focus on these same program areas. In addition, we continue to support local individuals and groups in addressing projects and issues related to pollinator habitat, effective water conservation, and invasive plant species control.

We have also launched a new website at <http://www.ncrcanddc.org> which will keep members and the public apprised of our activities.

Please contact us for information on membership, our programs and opportunities.

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## **Busy with Bees**

The North Coast Resource Conservation & Development Council has partnered with another non-profit organization, Partners for Sustainable Pollination (<http://www.partnersforsustainablepollination.org>), to foster habitat enhancement for honey bees and other native pollinators in the North Coast. Both the honey bees and native bees, such as the western bumblebee, are in trouble in California.

The bumblebee, for example, was once common from Monterey County to southern British Columbia. Bumblebees pollinate about



15% of our food crops, as well as native vegetation on which our wildlife depend for survival. Many bumblebees frequent California poppies, lupines, vetch, wild roses,

blackberries, clover, sweet peas, horsemint, and mountain penny royal during their flight season, generally from mid-May through September.

Honey bees are also suffering from a variety of problems--loss of forage habitat as well as the enigmatic Colony Collapse Disorder (UD Davis suggests the disorder is attributable to a combination of factors. For more information on CCD, the reader should visit <http://entomology.ucdavis.edu/news/dsseriesicmuksen.html>).

Pollinated crops account for an annual 15 billion dollars in revenues for the United States, an important portion of our gross national product. Potential agricultural losses with the decline of pollinators is a serious matter. Significant losses are possible since over one hundred crop species in North America require a visit from an insect pollinator to be most productive.

In the past, native bees and feral honey bees were abundant. These insects could meet the pollination needs of small orchards,



tomato and pumpkin fields, and berry patches at times in our agricultural past when small farms were typically adjacent to areas of habitat that harbored important pollinators. Now, large acreages of crops make it difficult for native bees and

feral honeybees to thrive with little habitat amid monocultures or side-by-side farmed areas.

As a consequence, honeybees are moved commercially around throughout the nation to enhance pollination of many crops. Almonds, for example, are an important crop in the central valley of California, and these nut trees are completely dependent upon bee pollination for development of the crop. Without a significant supply of pollinators, large losses would be found in the almond growing community. Similar pollinator-dependent crops are found throughout California.

Bee growers estimate that there may be insufficient commercial honeybees to provide pollination services across the United States. However, steps can be taken to reverse the decline of pollinators, such as maintaining riparian zones or managing wind-breaking hedgerows.



Whether managing a riparian buffer or growing a hedgerow, agricultural practices can increase the overall diversity of plants and physical structure in a landscape. Through simple changes, improved or new habitat for native pollinators can be developed. For example, a wide variety of

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flowering trees and shrubs can be incorporated into a hedgerow, or a diverse understory of insect-pollinated plants can be used to augment a riparian buffer. Another simple way to provide pollinator habitat is to leave snags (standing dead trees or branches) along riparian corridors or in adjacent forested areas since many important native bee species nest in a snag's old beetle tunnels. Research has shown that windbreaks and other linear plantings also can serve as buffers to drifting pesticides, which helps protect pollinators from chemicals used in adjacent fields.

Bees, whether European honey bees or native bees, are the most important pollinators of crops in the United States. Bees tend to readily transport pollen while at the same time visiting flowers from a single plant species during each foraging trip. This tendency ensures that the correct pollen is transferred from plant to plant. Bee foraging patterns are also beneficial, since bees fan out from a central nest, and generally stay in the area around a crop where the nest is close by. In contrast to this bee behavior, other insect pollinators like butterflies tend to drift across the landscape visiting a variety of flower species to gather nectar.



In the wine growing region, the growth and development of vineyard landscapes can have significant impacts on the availability of habitat for pollinators. While grape vines do not require pollinators to produce a crop, bees can utilize grape blossoms and vineyards can have habitat for pollinators, leading to a healthier bee population for those crops that do require insect pollination (pears, apricots, citrus, tomatoes, strawberry, beans, and many others.) The NCRC&DC has been sponsoring workshops throughout our 4-county area, including at the winery shown on Page 4 in Sonoma County, to discuss practices that help pollinators become re-established. These

workshops involve speakers and information from the University of California, Partners for Sustainable Pollination, and other knowledgeable organizations.

These workshops demonstrate how well considered agricultural operations can enhance pollinator habitat and lesson impacts to pollinators by using biodiverse practices.



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### ***Pollinator Planting at Salmon Creek School***

The NCRC&DC also funded a pollinator planting at Salmon Creek School in Occidental. This effort brought together Gold Ridge Resource Conservation District, Salmon Creek School, Rose Roberts of Farm Stewards, and Partners for Sustainable Pollination for a late September planting of native species for pollinator use and a pollinator hedgerow in the Salmon Creek School Garden.

The planting day was warm and the weather was lovely as students and other volunteers placed water-wise native plants in a lovely habitat area on the school grounds. These plantings are a learning tool for the observation of plant and insect interaction and will be used by many classes.

The pictures at above right show Fifth graders planting native species. The students are placing species such as

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goldenrod, sedum, yarrow, and salvia to feed bumblebees, honeybees and other pollinator insects.



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### ***Parlin Fork Biomass Study Lays out Needed Work Ahead***

The NCRC&DC has been studying the feasibility of existing technologies for energy production from biomass materials for a potential plant located at the Parlin Fork Conservation Camp. The Camp is situated along the South Fork of the Noyo River and is bisected by the Parlin Fork of the river (Parlin Creek). About eleven miles east of Fort Bragg on Highway 20 in Mendocino County, the Camp is within a forested area immediately surrounded by private and public forestlands, including Jackson Demonstration State Forest. The Camp is a correctional facility which has its primary mission as providing inmate crews for fire suppression activities, mostly in Mendocino County, but during fire season the crews are deployed throughout the state under the supervision of CalFire. An onsite Camp sawmill provides low cost lumber for State projects with an output of approximately 100,000 board feet per month.

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Recently, the NCRC&DC release its latest report, developed by a firm, TSS consultants, that evaluates several specific technologies for potential utilization at the Camp. This work was funded by a grant from the California Association of Resource Conservation and Development Councils and the U.S. Forest Service. The study assesses the possibility of combined heat



and electrical power generating technology, utilizing locally available fuels that would otherwise be wastes or potential wildfire hazard. The report considered biomass

technologies of both direct combustion and gasification systems, with a goal of also being environmentally compatible and permissible at the Camp's location.

The studied technologies have low air emissions and low water use/discharge considerations along with other attributes that are favorable for use at the Camp site. Three technologies were studied in depth from those reviewed: (1) Phoenix Energy (gasification), (2) Nexterra (gasification), and (3) Envio Energie (direct combustion). While all three technologies might potentially be able to be permitted at the Camp, the direct combustion process would generate wastewater which requires discharge or disposal. The necessary wastewater control system would be difficult to permit at this site. The other two technologies are based on gasification and would be feasible at the site.

Cost analyses for fuel and transportation were also included in the report, which is fully available for downloading on the NCRC&DC's website.

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### **Support the NCRC&DC**

Did you know that your contribution toward our work efforts is fully tax deductible?

We receive much of our funding through grants from federal and state agencies, along with support from the California Association of Resource & Development Councils. However, last year, our basic grant from the Natural Resource Conservation Service was reduced to less than half of the amount of prior grant from earlier years. We have turned to direct public support to augment our programs to allow us to continue to fund worthwhile local projects such as rainwater collection systems at schools, pollinator education programs throughout our area, and other resource conservation activities. The gifts from generous donors grew 200% in 2009 over the level in 2008, and we hope to continue this growth in this year. With help from you, we can continue to make a difference in our local community.



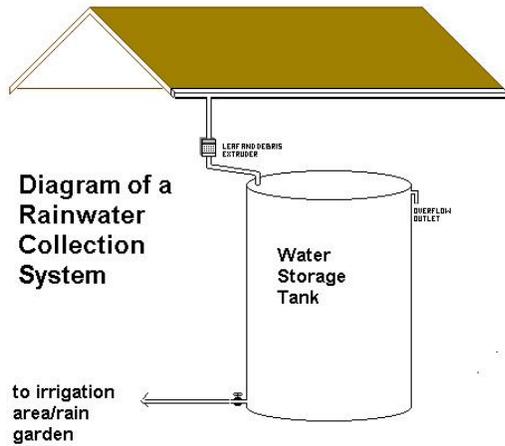
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### **Rainwater Collection For Conservation and Reuse**

A rainwater collection system can be quite simple. Runoff collected from roofs, driveways, walkways, and compacted lawn areas can be directed toward tanks for storage and irrigation, or perhaps even to low-lying areas where it may be allowed an opportunity to soak into the ground.

With capture and storage in tanks, the rain water may be re-used throughout the year at times when rain is not falling and water may be in short supply. One of the more common areas for collection of rainwater is from roofs—where the large surface area sheets into

gutters which are directed to a tank, similar to the diagram below.



Sometimes, the water is merely collected and re-directed to a low-lying area. This re-direction is beneficial in several ways: infiltration gradually seeps lower and may recharge shallow groundwater, reduced runoff helps prevent flooding which is often increased by paved areas, and natural soil filtration removes contaminants that may otherwise have entered the storm drain system and our streams and rivers. One of the helpful benefits is that people have more water to grow plants, and may actually plant a “rain garden.”



A rain garden is merely a place that grows plants irrigated mainly with collected rainwater. Native plants are recommended for low-lying rain gardens because they

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generally don't require fertilizer and are more tolerant of one's local climate, soil, and water conditions. The plants — such as a selection of wetland edge vegetation like wildflowers, sedges, rushes, ferns, shrubs and small trees — take up excess water flowing into the rain garden.

A broader definition of a rain garden encompasses those elements discussed earlier that are used to capture, channel, divert, and make the most of the natural rain and snow that falls on a property. Once collected, this rainwater may be stored in large tanks, and can supplement or even replace water for irrigation of food and other plants. Vegetable gardens and yard landscape plants may be irrigated with stored water during the dry summer months when water shortages are often common.

This past year, the NCRC&DC helped several organizations begin a rainwater collection and re-use program to both conserve water as well as utilize water in the dry months. One example was at the High School in Fort Bragg, Mendocino County, where a new rooftop



collection system now diverts rainwater into a storage tank (shown below) for use through the irrigation season to irrigate a large vegetable garden—the “Learning Garden,” operated by Noyo Food Forest as an on-site Farm-to-School Program and center for education in community-based agriculture and nutrition. Organic food is grown by students, volunteers, and staff, sold to the Fort Bragg Unified School District Food Service Program, and served in the high school cafeteria. The NCRC&DC provided the funds for and purchased the large water storage tank that is

at the heart of the collection system. We provided advice (and some labor, too!) on the design of the system, in cooperation with other community groups and individuals. Similar projects elsewhere were also supported, and 2010 should see a collection system installed in the Talmadge area.

Contact Phil Giles at 707-569-9710 for further information.

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### **President's Corner**

The RC&DC program is one of the federal government's success stories with its ability to return \$7.50 for every dollar the federal government invests to support economic



development and resource protection in rural areas," NCRC&DC President Ron Rolleri recently observed.

"Unfortunately, the federal budget woes will make continued funding very difficult, even though jobs are stimulated by the funding." Acknowledging that the RC&DCs will need to depend more on local fundraising efforts, Rolleri points out that our organization's partnerships remain key to building successful programs in our 4-county area. "We partnered successfully with Sotoyome and Gold Ridge RCDs as well as *Partners for Sustainable Pollination* in our outreach efforts for improving pollinator habitat, a critical area for successful production if certain crops in California. We plan to do more of these joint efforts in the future."

Ron Rolleri was elected President of the NCRC&DC in January 2010. Ron has lived in Sonoma County since 1971, and currently resides near Sebastopol. He was involved in the initial formation and development of the Council in 2003. After working in the high-tech industry for 12 years, Ron began a landscaping contracting business

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specializing in natural landscapes and efficient irrigation. Ron has managed vineyards, apple orchards, and planted his own vineyard in 1989. He has served on the Sonoma County Vineyard Technical Group as Director and President. Ron was part of the development of Fish Friendly Farming practices to protect endangered Coho salmon and steelhead trout. He has been a past president of the Sotoyome Resource Conservation District, where he has been a Director since 1998. He currently also serves on the Board of the California Association of Resource Conservation Districts.

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### **Leave a Legacy**

Imagine how much good could be done if each of us remembered a favorite charity in our will or estate plan? The impact would be immeasurable. If you cherish agriculture and sustainability for maintaining our quality of life, then as a 501c(3) non-profit agency, the NCRC&DC will work with you and your estate planner on a legacy donation—be it a small residual from your estate, a generous gift of a house, a fund for a continuing grant in your name, or some other thoughtful bequest. Your legacy donation, whether small or large, will help maintain and expand the NCRC&DC's work to preserve our agrarian quality of life in Mendocino, Sonoma, Lake, and Marin Counties. Please call us at 707-569-9710 to arrange a discussion with our financial advisors.

#### Many Thanks to our Sponsors and Partners:

- Conservation Fund
- County of Mendocino
- Gold Ridge Resource Conservation District
- Marin Resource Conservation District
- Mendocino Resource Conservation District
- Partners for Sustainable Pollination
- Sotoyome Resource Conservation District
- Southern Sonoma Resource Conservation District
- Westlake Resource Conservation District
- Our Membership

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**Not a Suporter Yet? NOW is the Best Time to Become a Member!**

Your tax deductible membership contribution is crucial to ensuring the NCRC&DC's success in furthering farm land preservation, sustainable rural economies, and protection of our resources. Please become a member today by filling in the following form and returning it to our office:

Name: \_\_\_\_\_

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I wish to join as a:

- \_\_\_\_\_ General Member (\$10.00)
- \_\_\_\_\_ Friend of the Council (\$11.00 - \$49.99)
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I am interested in:

- \_\_\_\_\_ Biomass projects
- \_\_\_\_\_ Agriculture/Nature Tourism
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- \_\_\_\_\_ Invasive Plants
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- \_\_\_\_\_ Rainwater Catchment

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