Healthy Agriculture, Healthy Wildlife

By Christopher Rose

Solano RCD has a long history working on agricultural lands to address resource issues both in the District and throughout Solano County. For more than 40 years, the RCD has focused on addressing natural resource issues through watershed education and implementation of a variety of on-farm Best Management Practices (BMPs). Since almost all agricultural lands are privately owned, we spend a fair bit of time working with landowners, land managers and growers. Our message has always been that thriving and productive agricultural lands are not mutually exclusive with wildlife habitat corridors and water quality promoting practices such as cover crops. We work from the theory that a healthy agricultural landscape is composed of a diversity of agricultural crops and the benefits hedgerows, tail-water ponds, grassed waterways, and beneficial insect plantings strips bring to the landscape. It is more important than ever that Solano RCD continues to work collaboratively with partners to practice and promote regard and respect for agriculture, enthusiasm and passion for creating wildlife habitat, dedication to controlling weeds and restoring the natural landscape, and commitment to implementing Best Management Practices for clean water. Our biggest motive – our only motive – is to create a better place for both people and wildlife to live, to ensure our work supports healthy production agriculture into the future.

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Solano County roadside hedgerow fronting a field of sunflowers.
Goodbye, Miles
By Sarah McKibbin, Restoration Project Manager

Spring is in the air, bringing about change and renewal. For us here at Solano RCD, one of those changes is particularly bittersweet. Our long-time Restoration Project Manager and friend, Miles DaPrato, is leaving Solano RCD for a new position at the University of California in Davis as an Environmental Steward for their Department of Campus Planning and Environmental Stewardship.

Miles joined the Solano RCD restoration team in 2012, and since then, has championed hedgerows, conquered invasive weeds, formed new partnerships with Solano landowners, and converted countless acres of degraded fields into flourishing wildlife habitat, all while acting as one of the most helpful and proactive members of the SRCD team. His dedication and excitement about habitat restoration is infectious, and Miles has been an inspiration to those that have had the honor to work with him.

Although we will miss working with him, Miles has not gone far, and we hope to have the opportunity to work with him again in new capacities. UC Davis has gained a true asset to their program, and we wish Miles the best as he continues his legacy of enhancing the natural world and inspiring everybody around him.

Sediment and Erosion Control Assistance
By Andrea Mummert, Conservation Project Manager

Solano County’s irrigated agricultural producers are required by the Central Valley Regional Water Quality Control Board to implement sediment and erosion control practices that minimize or eliminate sediment movement off of their properties above background levels.

Some producers with parcels identified as higher risk for contributing sediment to off-farm waterbodies are required to complete Certified Sediment and Erosion Control Plans to document which sediment management practices are in place or will be implemented in the future.

The Dixon/Solano RCD Water Quality Coalition offered workshops in November 2017 and February 2018 to allow growers to certify their own plans. The trainings helped growers assess the risk of erosion and sediment loss from their farms, and evaluate whether the existing practices are sufficient, or whether additional practices need to be installed.

Now the RCDs – with funding and technical support from NRCS – have started conducting on-farm site visits to growers who want additional help inventorying and evaluating the effectiveness of their sediment control practices, or would like help reviewing the required Sediment and Erosion Control Plan forms. We can also provide growers with a Conservation Plan for their property that can address not only erosion, but other management concerns like problematic weed species or recommended species for vegetative practices like hedgerows or cover crops.

If you are interested in a site visit, please contact our office 707-678-1655, and speak with Kelly Huff (x 102) or Andrea Mummert (x 112).

Get the Lay of the Land by e-mail!
If you would like to start receiving the Lay of the Land as a pdf in your email in-box instead of as a mailed paper copy, please contact Caitlyn Morrissey at Caitlyn.Morrissey@solanorcd.org
Solano RCD Attends Youth Ag Day at the Solano County Fairgrounds

By Laura Morgan, Education Program Coordinator

On March 20th, 2018, our education team attended the 16th Annual Youth Ag Day at the Solano County Fair Grounds to meet with Solano County third graders and talk to them about the water that flows through their lives.

The event is a collaborative effort of the Solano County Fair and agricultural-related businesses, organizations, farmers, ranchers and others. Its goal is to provide Solano County third graders with first-hand experience with local agriculture and its workings. Solano RCD is a long-time Youth Ag Day participant, talking to students about the water that agriculture and everyone else relies on. Educators Laura Morgan, Carla Murphy, and Wendy Low talked to students about where our water comes from, where their watershed is, how storm water impacts their waterways, and water conservation. RCD staff distributed water related booklets and prizes to help students remember the ideas they explored at Youth Ag Day. The well-attended event saw RCD staff engaging with 2,815 third grade students about Solano County water and good stewardship practices.

Solano RCD’s participation was funded by the School Water Education Program (SWEP) and the RCD’s Welcome to the Watershed program, supported by the Solano County Water Agency. You can count on the Solano RCD’s attendance at Youth Ag Day in the years to come.

If you, or anyone you know, is interested in receiving a free water resource lesson or materials in your classroom, please contact the SWEP coordinator Laura Morgan via email at Laura.Morgan@solanorcd.org.

Assessing Cover Crops’ Benefits

By Andrea Munnert, Conservation Project Manager

In cooperation with a local working group composed of agricultural producers, regional planners, and researchers, Dixon RCD is working on a pilot project to assess the benefits of winter cover crops in Solano County. Their primary goal is to determine the extent to which winter cover crops can increase infiltration and promote groundwater recharge. They are also reviewing additional benefits cover crops can provide such as reduced storm runoff and flood risk, improved water quality, and carbon sequestration.

The group is currently in an information gathering phase, reviewing and compiling existing research and accounting methods. This effort draws upon the work of UC Davis and CAFF, as well as those of the Freshwater Trust, the largest restoration-focused organization in the Pacific Northwest. This work will draw on these previous efforts to collect, analyze, and model current knowledge on groundwater recharge practices. Information is also being gathered from local growers using winter cover crops and trying alternate seed mixes, including both orchard and row crop ground.

The work and assessment of this project will inform the Groundwater Sustainability Agency for the Solano sub-basin and local planners as they develop policies and rules to account for net groundwater recharge and storm flow reductions. If benefits for groundwater recharge can be demonstrated from cover cropping, it is hoped that producers who use cover crops in appropriate areas could get credit for groundwater recharge.
When local farmers Roy and Chope Gill decided to plant hedgerows on Reveille Farms just north of Dixon, Solano and Dixon RCDs were delighted to assist with the effort. A hedgerow is simply a linear strip of perennial vegetation that is planted along the edge of a farm field. Although a straightforward hedgerow might consist of a single row of a single kind of tree, hedgerows can be much more complex, with a diverse selection of trees and shrubs in the overstory and many types of grasses and wildflowers in the understory.

Farmers have been planting hedgerows for hundreds of years for many reasons:

- A densely-planted hedgerow can serve as a wind break.
- Hedgerows can help prevent soil and nutrients from moving off the farm, particularly when perennial grasses are included in the hedgerows. Dense stands of grass filter overland flows of storm and irrigation water, trapping sediment, fertilizers and other agricultural chemicals.
- With careful plant selection, hedgerows can provide year-round flower and nectar resources for both native and honey bees, which is an absolute necessity for these important pollinators. Hedgerows also increase the presence of many other types of beneficial, carnivorous insects that feed upon pest insects, such as lacewings and ladybugs.
- Finally, hedgerows can produce a plethora of berries and seeds, all of which provide food for birds and other wildlife species.

Roy and Chope decided they wanted all of the many benefits that hedgerows can provide, and so they opted for hedgerows containing 20 species of native trees and shrubs and 18 species of native grasses and wildflowers. Between 2013 and 2015, staff from both RCDs worked with planting crews from the Gill’s farming operation to install 13,200 feet of hedgerows on road borders and field margins throughout Reveille Farms.

The Gill’s showcased these native plant features to a property owner on nearby Rowher Ranch who they lease ground from. After excitement was generated for these wildlife-friendly farm features, 2,640 feet of hedgerow was installed on that property as well. As an added benefit, the Rowher hedgerow is sited along one of the drainage canals maintained by Dixon RCD, allowing this section of the canal to be completely vegetated, reducing erosion and improving water quality.

At this point, a total of 825 trees and shrubs and 9.5 acres of native grasses and wildflowers have been planted on Reveille Farms and Rowher Ranch. Not only do these hedgerows look beautiful, they are also attracting essential pollinating species and other beneficial insects, protecting water quality, and creating wildlife habitat!

Please contact us if you are interested in installing a hedgerow on your rural property, ranch or farm.

For more information on the benefits of hedgerows, you can access research by Rachael Long of UC Cooperative Extension at: http://calag.ucanr.edu
Agricultural systems can help mitigate for climate change by pulling carbon out of the atmosphere and sequestering it in plants and soils. The farming practices that conserve carbon are those that build up organic matter in the soil or in perennial plantings, as these are relatively stable forms of carbon not likely to be re-circulated back into the atmosphere. These include:

• **Reduced/minimum tillage** (tilling oxygenates the soil, stimulating soil microbes to respire and release CO2)
• **Compost application** (compost is a stable form of carbon and can be applied to row crops or pasture land)
• **Rotational grazing** (letting a pasture rest between grazing events allows the plants to recover and grow more by taking up CO2, and lets the soil microbes convert animal waste to stable soil organic matter)

The great thing about all of these practices is that they have many other benefits to a farming operation as well, such as increased soil fertility and water infiltration, reduced long term costs, etc. **Please contact Amy King at amy.king@solanorcd.org or 707-678-1655 x111 if you are interested in developing a Carbon Farm Plan to calculate the carbon benefits of these practices on your farm or rural homestead.**

Join Us for a Hedgerow Installation Workshop

Solano RCD is partnering with Dixon RCD and a local organic farm to host a workshop on hedgerow installation on **Saturday April 28 from 9-12 pm**. This hands-on morning will discuss plant selection, nursery sources, soil preparation and long term hedgerow maintenance. Participants will help install native plants and the drip irrigation system on the farm’s hedgerow. Refreshments and informational handouts will be provided. We look forward to seeing you there! For details on location, please **RSVP with Amy King at amy.king@solanorcd.org or 707-678-1655 x111.**

Carbon Farming

by Amy King, Watershed Project Manager
Don’t miss the RCD’s April 28 Hedgerow Installation Workshop!
Hedgerows provide excellent habitat for pollinators, like these honey bees...

...and wildlife, like this White-tailed kite (Elanus leucurus).

See the announcement on page 5 for more information.