

2018 ANNUAL REPORT

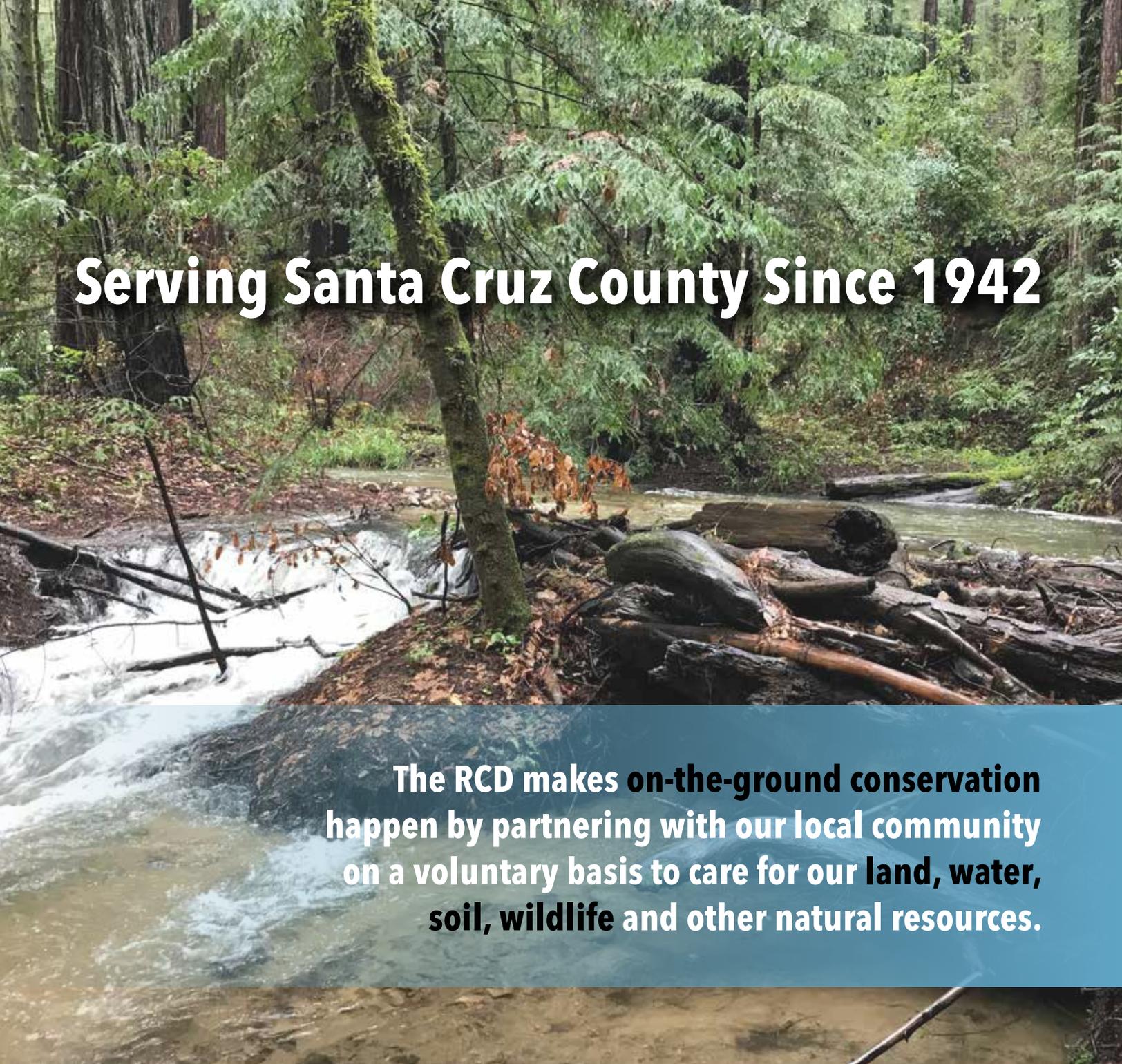
Resource Conservation District of Santa Cruz County



July 1, 2017 - June 30, 2018



RESOURCE
CONSERVATION DISTRICT
OF SANTA CRUZ COUNTY



Serving Santa Cruz County Since 1942

The RCD makes on-the-ground conservation happen by partnering with our local community on a voluntary basis to care for our land, water, soil, wildlife and other natural resources.

Director's Message



As the first rains this fall cleared out the dense smoke that had blanketed our region from the devastating Camp Fire 200 miles away, I was struck by the contrast of the drought driven fire with the havoc that intense heavy rains can

sometimes play in the Santa Cruz Mountains. This left me thinking about resiliency - resilient landscapes, water supplies, and communities. Resiliency is the steadfast ability to weather adversity and emerge stronger and more connected. It is the result of diversity, redundancy, planning, and adaptation. At the RCD we are working together every day toward this vision for Santa Cruz County. From community wildfire preparedness to stormwater management, groundwater recharge to water conservation, species recovery and climate change adaptation to carbon farming and agricultural stewardship. As we face ever more extreme climatic conditions, the RCD is here working hand-in-hand with our partners and our community to strengthen the health of our natural resources, and by extension ensuring the resiliency of our community and economies which depend upon them. Together with Sonoma County Ag and Open Space and the Santa Clara Valley Open Space Authority, the RCD recently released a regional report exploring the benefits and economic values of natural and working lands.

This study finds that Santa Cruz County's natural capital provides at least \$800 million to \$2.2 billion in benefits to people and the local economy each year. Let that sink in a moment. Our natural and working lands provide services that make our community more adaptable and durable and a place we are privileged to call home. Services like clean and abundant water, clean air, storm and flood protection, healthy soils and carbon sequestration, as well as natural beauty and recreation. Stewardship of those natural resources is as critical as maintenance of our local infrastructure or schools. It is an investment in our resiliency and an investment in our future. So take a moment to give thanks to nature and to the farmers, landowners, volunteers, scientists, non-profits, and public agencies who work every day to be good stewards of our natural and working lands. And join me in appreciating another year of collaborative conservation with the RCD, our partners, and many supporters like you.

Lisa Lurie, Executive Director

Healthy Lands, Healthy Economies Reports:

www.rcdsantacruz.org/healthy-lands-healthy-economies

RCD 2017-18 Fiscal Year Budget

Income Sources	2017-2018	Expenses	2017-2018
Interest	\$4,980	Professional Services & Construction	\$1,551,207
Local Property Taxes	\$34,179	Salaries, Taxes, & Benefits	\$770,375
Augmentation Funds	\$41,289	Operating Expenses	\$71,898
State or Federal Grants	\$2,086,795		
Donations	\$5,040		
Unclaimed Money	\$27		
Total	*\$2,172,309	Total	*\$2,393,479

**The difference between income and expenses represents grant money spent but not yet received by the RCD.*

Restoring Pinto Lake Together

Pinto Lake is a beautiful, shallow 120-acre lake located in the City of Watsonville in southern Santa Cruz County. It was created approximately 8,000 years ago, when seismic activity on the Zayante-Vergales fault caused land subsidence along Pinto Creek. Today the lake is surrounded by homes, farms, and two parks that offer a variety of recreational activities and provide habitat for wildlife, including over 130 species of birds. But, every year, the lake experiences massive cyanobacteria blooms, a dangerous algae that can harm people and pets. In the early 1980's the blooms began appearing with more frequency indicating a decline in the health of the lake. After extensive research, the cause of the blooms was traced back to years of runoff from various sources including fertilizers and septic systems that have contributed to the buildup of nutrient-rich sediments on the lake bottom. In the summer of 2018 the RCD concluded work on a four-year grant with the City of Watsonville, contracted through the State Water Resources Control Board, to address these issues. The main goals of the grant were to address in-lake sediments, reduce input of new sediments, and educate the public about the problems and ways they can help.

In April 2017, the City of Watsonville completed an alum treatment of the lake to trap nutrients embedded in sediments at the bottom of the lake that are feeding the algae. To complement that effort, the RCD implemented three projects at Pinto Lake County Park to reduce the transport of nutrient rich sediments into the lake. Road upgrades help divert runoff away from the lake, a sediment basin settles out and removes sediments from adjacent properties, and a vegetated filter strip collects sediment runoff



from the newly installed pump track. The RCD also hosted two informational workshops for Pinto Lake residents that discussed the lake's history, the research used to identify the issues, the options for reducing the toxic blooms and how the community could get involved.

To further engage the public, the RCD designed three interpretive signs highlighting the projects, planned a community day with Watsonville Wetlands Watch to plant 350 native plants around the sediment basin, and held a family-oriented "I Spy Science" event that drew over 250 people to participate in various activities that inspired a sense of responsibility and stewardship for Pinto Lake.

As part of our ongoing work with agricultural operators, we reached out to Pinto Lake area farmers who we assisted with planting cover crops to further reduced sediment movement to Pinto Lake, ultimately decreasing the frequency and size of the algal blooms.

Find more information on these restoration efforts at www.cityofwatsonville.org/728/Pinto-Lake-Restoration-Efforts

Can Cover Crops Help Us Meet Our Water Sustainability Goals?

If you drive around the Pajaro Valley in late October, you can see a lot of activity and transition taking place in the farm fields. Most strawberry growers have rotated to a new field and are listing beds, covering them with plastic, and getting ready for planting in early November. Many of the terminated strawberry fields are being planted with winter cover crops, which will be incorporated into the soil in March or April for late spring vegetable plantings. In the vegetable fields, about half are being harvested for their last crop of the year. They will be left fallow (uncovered soil) during the winter months to be prepped for early spring planting as the rains end. The other half will grow winter vegetable crops. Incorporating cover crops into this rotating system helps achieve multiple conservation objectives at the farm and landscape levels, including: water savings, soil health, erosion control and carbon capture. This time of year, about four times more acreage is fallow or planted with a cover crop than during the summer months. Other portions of the landscape, which have more permanent or long-term crops, such as apple orchards or cane berries, remain unchanged, with a few exceptions.

Such a dynamic agricultural landscape seems to have found a well calibrated rotation system that supports multiple specialty crops and a high value ag industry. However, at the same time local aquifers continue to be overdrafted and there is a continued need for reducing groundwater pumping, which prompted the question: is there room within this system to augment the acreage or

the time dedicated to covered fallow (fallowing productive land for short periods, but planting it with a cover crop instead of leaving bare soil exposed) beyond just winter time? In 2015, the RCD, the County of Santa Cruz and partners of the Community Water Dialogue began to dig into this question. This led to a three-year participatory planning process, economic analysis of public and private costs and benefits, and ideas for potential incentives. The results, published by the RCD in February 2018, concluded that increasing annual covered fallow acreage during high water demand months by approximately 400 acres (split between strawberry and vegetable fields) could result in a sizeable reduction in groundwater pumping (1,000 AFY) and therefore contribute to balance aquifer overdraft. Furthermore, by developing the right incentives, this could be achieved voluntarily without heavily impacting the economic viability of the local agriculture industry.

The full Pajaro Valley Covered Fallow Plan is available online at: www.communitywaterdialogue.org



Community Engagement and On-The-Ground Conservation Highlights



Organized the family friendly 'iSpy Science' event that drew over **250 people** to engage in **hands-on educational activities** about the natural environment.



Worked with a total of **90 volunteers** at two projects to **plant 4,350 native plants** and build one mile of trail.



Conducted **5 agricultural workshops** that **educated 102 growers** on topics covering irrigation and nutrient management, cover crops, and use of various online tools.

Recommendations for Strawberries

48-inch beds

2 drip lines per bed

0.5 gpm/100 ft flowrate

	Average	Maximum
m	--- 10 min	--- 10 min
n	10 min	20 min

Developed a **water assessment tool and 15 practical water use guides** for farm irrigation managers.

Held **3 workshops** that **educated 145 rural property owners** about fire safety, stream care, wells and septic systems, private roads and erosion management.



Designed **3 interpretive signs** that inform visitors at Pinto Lake City and County Parks about cooperative projects that are improving the health of Pinto Lake.



Assisted **168 landowners and farmers with on-site technical assistance** related to a variety of soil, water, and other natural resource related topics.



Provided classroom and hands-on **irrigation training** to over **60 Spanish speaking growers**





Together with Bonny Doon, South Skyline and Santa Clara Fire Safe Councils we **chipped ~9,200 cubic yards** of cleared vegetation to **reduce fire risk at 158 households**



Worked with CAL FIRE and California State Parks to create an **8 acre shaded fuel break** to decrease fire risk along Graham Hill Road



Implemented road drainage practices that **reduced an estimated 5.62 tons of sediment per year from reaching Pinto Lake**



Prevented the loss of 1344 tons of soil on 219 acres of farmland through a winter **cover crop rebate program**.

Improved 0.8 miles of in-stream habitat for Coho and steelhead salmon in North Santa Cruz County.



Treated 14 acres of invasive Jubata grass to improve oak woodland upland habitat for native amphibians.



Infiltrated 60 acre feet of water through two managed aquifer recharge systems to **improve groundwater supplies**.



Completed **plans for five habitat restoration projects** for future implementation.



Fire Risk Reduction and Preparedness

This past year, risk of wildfire is clearly on the minds of all Santa Cruz County residents and all Californians. The RCD has a long history of working on wildfire preparedness and trying to balance fuel load reduction with concerns such as severe erosion and habitat protection. Over the past few years, at the request of the County Board of Supervisors and with funding through the Office of Emergency Services (OES), the RCD has helped guide the formation of a centralized Fire Safe program with the aim of supporting the County's local Fire Safe Councils (FSC) while also addressing significant unmet needs in locations that were not represented by a preexisting FSC. The anticipated benefits of a centralized Fire Safe program include the ability to better identify County-wide priorities, coordinate activities, realize economies of scale, and bring more resources to the County to help residents, land managers, and agencies be prepared for and respond to wildfire.

With assistance from the RCD, Fire Safe Santa Cruz County (FSSCC) incorporated as a 501(c)(3) nonprofit in 2016. It has now adopted a set of bylaws and its Board of Directors are holding regular public meetings every other month, that are guided by the mission to educate and mobilize the people of Santa Cruz County to protect their community, homes,

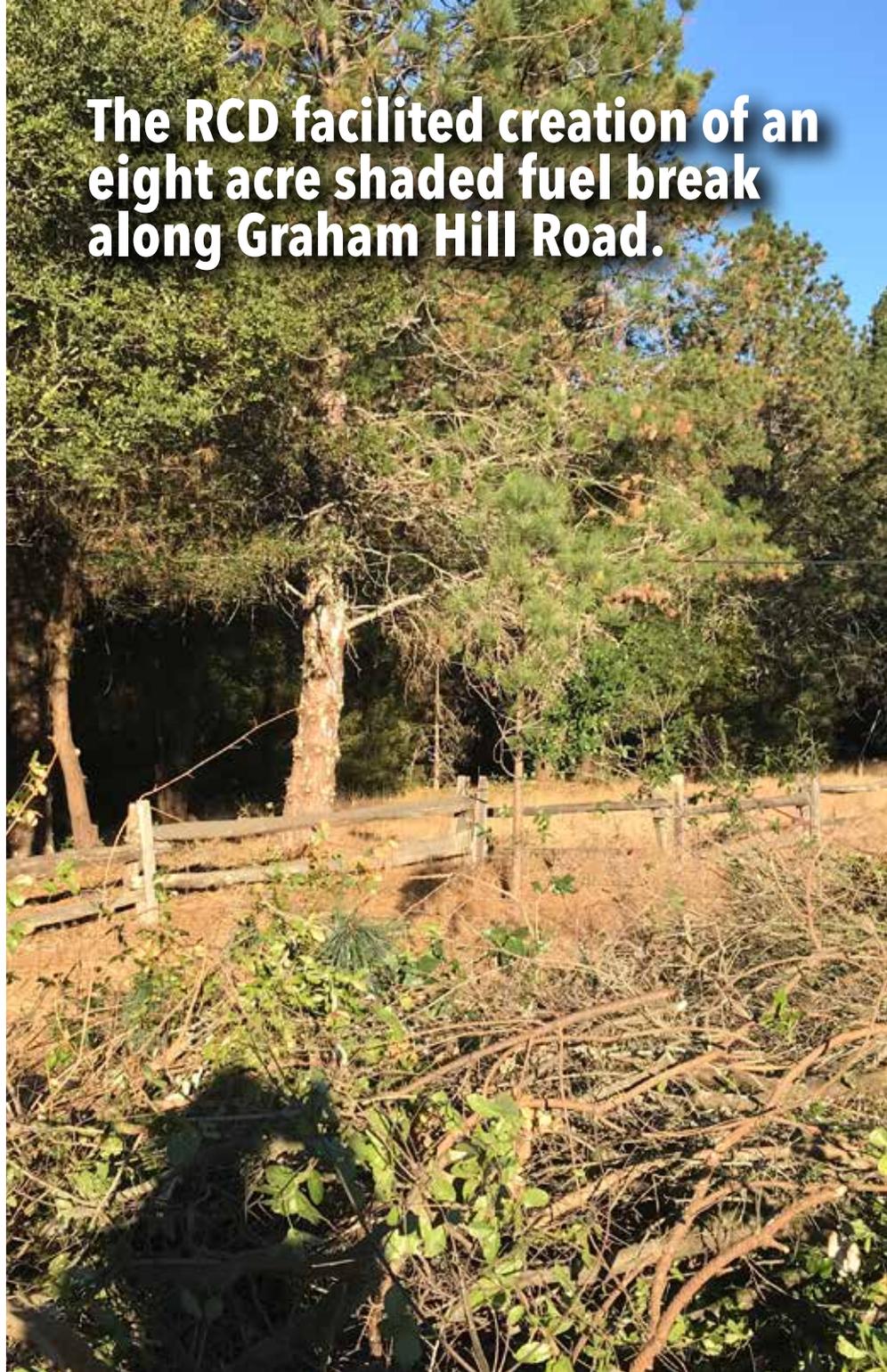
and environment from wildfire. With continued funding from the OES, the RCD maintains an active role in supporting and furthering the capacity of the FSSCC. This past year we launched the FSSCC website (www.firesafesantacruz.org) and Facebook pages, applied for a number of fire-preparedness grants to address FSSCC priorities, participated in the Community Wildfire Protection Plan 2018 update, and continued to provide administrative support.

The RCD also participated in variety of other fire risk reduction and preparation activities. In June 2018 we facilitated two public workshops, with over 150 attendees, that included presentations from Cal Fire on fire safety and protection for rural residents. Through funding from Cal Fire, we continued work on the Graham Hill Road fuel load reduction project, started in 2016 by Bonny Doon Fire Safe Council. Approximately eight acres of a shaded fuel break were added along several



miles of this important transportation corridor near the communities of Felton and Scotts Valley, minimizing the fire risk for approximately 150 habitable structures and limiting potential negative impacts to the San Lorenzo watershed which supplies drinking water to roughly 100,000 residents. In the Fall of 2017, the Monterey Bay Air Resource District provided funding to the RCD to reduce fire risk around residential properties and discourage pile burning. Homeowners who cleared downed wood from the previous year's winter storms and created defensible space around their properties received no-cost chipping services. Together with the Bonny Doon and South Skyline and Santa Clara Fire Safe Councils, services were provided to over 150 homes and approximately 9,200 cubic yards of materials were chipped.

The RCD facilitated creation of an eight acre shaded fuel break along Graham Hill Road.



Lending A Hand To Some Long-Toed Locals

Very few of us will ever lay eyes on the small and elusive Santa Cruz Long-toed Salamander (SCLTS). At only 4-6 inches long, these orange-spotted creatures with one “long-toe” spend most of their life underground, except during breeding season when they travel during dark, rainy nights to and from a very few freshwater ponds.

A true local, the SCLTS is only found in small pockets of southern Santa Cruz and northern Monterey Counties and is at risk of disappearing entirely from the southern extent of its range. There, two of the three remaining breeding sites have become salty and uninhabitable for the species due to tide-gate failure and marine tidal water infiltrating the pond/slough.

Currently underway is a collaborative strategic planning effort for north Monterey County between the Resource Conservation Districts of Santa Cruz and Monterey Counties, Central Coast Wetlands Group, Coastal Conservation and Research Inc, Elkhorn Slough Foundation, Elkhorn Slough National Estuarine Research Reserve, California Department of Fish and Wildlife, the University of California, Santa Cruz, and United States Fish and Wildlife Service (Service). The outcome of the effort will be a holistic, climate adaptation strategy developed as a road map to direct amphibian species migration away from coastal habitats vulnerable to sea level rise and infrastructure failure, and into interior, higher elevation, more climate resilient habitats. The final plan will first identify existing coastal breeding locations, and then outline ideal migration routes to existing or new inland



aquatic breeding habitats. The plan will outline climate smart strategies for restoration and create a network of breeding habitats, with adequate surrounding dispersal and upland habitat, to support populations of the species that can interbreed to create genetic diversity and resilience to stochastic events.

One such project is already underway with the goal of moving species from Upper Moro Cojo Slough, which has experienced an increase in salinity levels for the past three years, to higher ground at the North Monterey

County High School (NMCHS). With funding from the Wildlife Conservation Board, the Santa Cruz and Monterey RCDs, United States Fish and Wildlife Service, North Monterey County Unified School District, Central Coast Wetlands Group and the Coastal Conservation and Research, Inc. are working with the California Conservation Corps and volunteers to improve upland and wetland habitat at NMCHS and create riparian corridors to encourage SCLTS to move from the slough to the site.

The overall project will enhance existing wetland habitat on the 25-acre NMCHS property for amphibian breeding, flood attenuation, groundwater recharge and water quality improvement. It will also restore coastal grassland and oak woodland for amphibian upland habitat, nesting and

foraging areas for birds and other wildlife, and increase carbon sequestration and infiltration through native grassland conversion.

Working on the NMCHS property has provided a living classroom for students. An environmental curriculum is being developed that will emphasize the restoration efforts, local threatened and endangered species, and the importance of habitat conservation in the local community. Installation of trails and interpretive signage will provide additional learning opportunities for the students and the public. In March of 2018, over 60 volunteers and students planted over 3,000 plants during a community work day. Contact the RCD for more information on volunteer opportunities at the site.

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Roberta Smith

Staff Farewells

Chris Coburn
Rebecca Moore

In April 2018, our Executive Director, Chris Coburn accepted a position at the City of Santa Cruz Water Department. We appreciate all his work during his time at the RCD and know he will be an asset to the City and a continued partner in our work. The Board of Directors hired former RCD program manager Lisa Lurie as our new executive director. She has a wealth of internal knowledge at the RCD and has stepped up to the challenge. We are happy to welcome her to her new position.



RESOURCE

CONSERVATION DISTRICT
OF SANTA CRUZ COUNTY

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Invest in Local Conservation. Make a Difference Today.

The Resource Conservation District of Santa Cruz County is primarily funded by grants and contracts with public entities and non-profit organizations. Your tax deductible **donation** helps to further the mission of the RCD and can be targeted toward your area of interest. Donate today by calling **831.464.2950** or visiting our web site at **www.rcdsantacruz.org**.

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