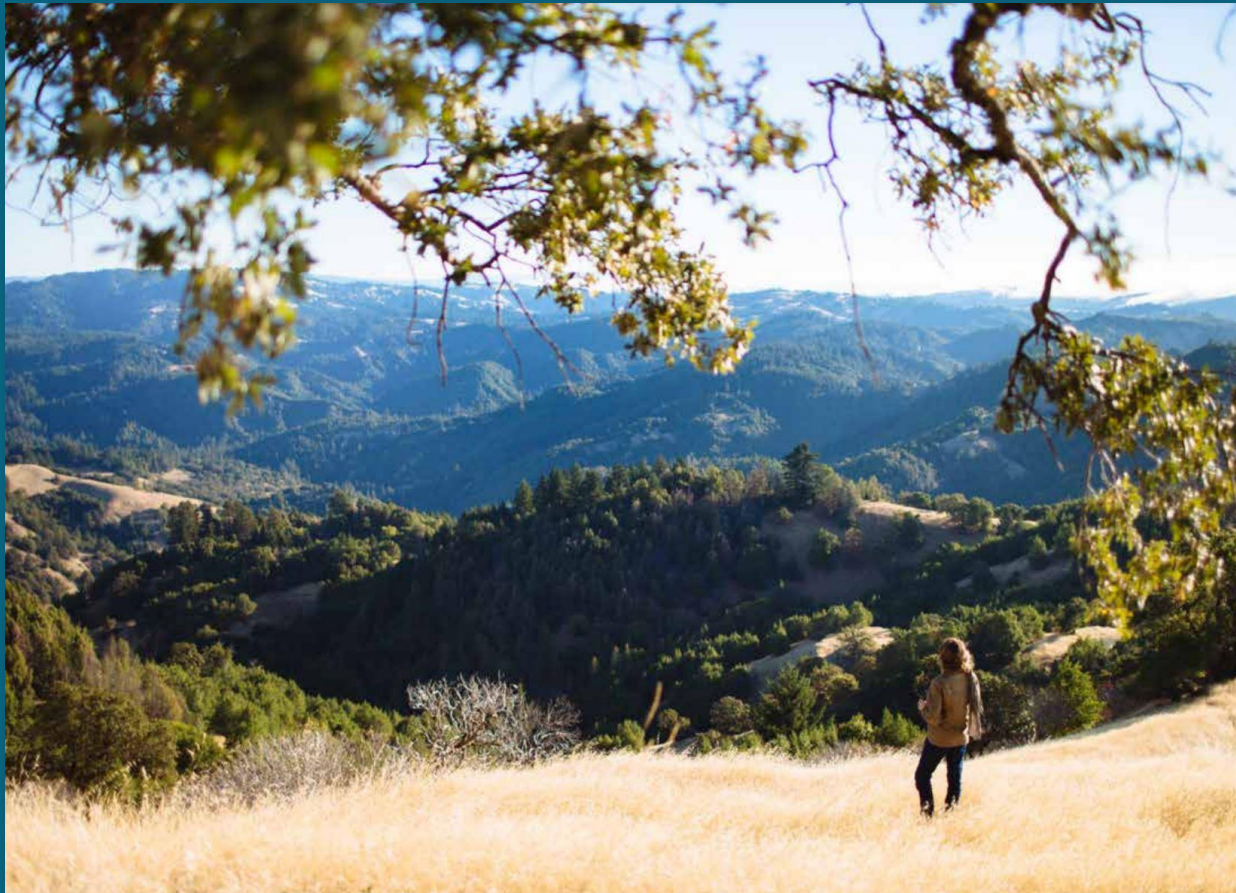


# Resource Conservation District of Santa Cruz County

## Service and Sphere of Influence Review



Adopted Version (October 7, 2020)

### Local Agency Formation Commission of Santa Cruz County

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## EXECUTIVE SUMMARY

### Introduction

This Service and Sphere of Influence Review provides information about the services and boundaries of the Resource Conservation District of Santa Cruz County. The report will be used by the Local Agency Formation Commission to conduct a statutorily required review and update process. The Cortese-Knox-Hertzberg Act requires that the Commission conduct periodic reviews and updates of Spheres of Influence for all cities and districts in Santa Cruz County (Government Code section 56425). It also requires LAFCO to conduct a review of municipal services before adopting Sphere updates (Government Code section 56430). The District's last service review was adopted on August 5, 2015.

The municipal service review process does not require LAFCO to initiate changes of organization based on service review conclusions or findings; it only requires that LAFCO make determinations regarding the delivery of public services in accordance with the provisions of Government Code Section 56430. However, LAFCO, local agencies, and the public may subsequently use the determinations and related analysis to consider whether to pursue changes in service delivery, government organization, or spheres of influence.

Service and sphere reviews are informational documents and are generally exempt from environmental review. LAFCO staff has conducted an environmental review of the District's existing sphere of influence pursuant to the California Environmental Quality Act (CEQA) and determined that this report is exempt from CEQA. Such exemption is due to the fact that it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment (Section 15061[b][3]).

### District Overview

The Resource Conservation District of Santa Cruz County ("RCD" or "District") was formed as an independent special district in December 1977 to help people protect, conserve, and restore natural resources through information, education, and technical assistance programs. The RCD has ongoing projects that promote natural resource conservation in relation to farming and ranching operations and watershed-based habitat restoration. The District's services and programs focus on reducing soil erosion, off-farm sediment transport, non-point source pollution, salmonid and wildlife recovery, and improving ecosystem health. The District encompasses the unincorporated county lands as well as the City of Capitola. The Cities of Santa Cruz, Scotts Valley, and Watsonville are excluded from RCD's jurisdictional boundary. An overview map is shown as **Figure 1** on page 5.

### Sphere of Influence

Santa Cruz LAFCO adopted the first sphere of influence for RCD on December 19, 1983. The District's sphere is the entire County of Santa Cruz, including all four cities. The last sphere update occurred in August 2015. **Figure 8** on page 24 shows the current sphere of influence boundary. LAFCO staff is recommending that the sphere boundary be reaffirmed as part of this service and sphere review.

## **Key Findings**

The following are key findings of the 2020 Service and Sphere of Influence Review for the Resource Conservation District of Santa Cruz County:

### **1. The District provides services countywide.**

RCD was formed in 1977 following the consolidation of two existing conservation districts: Pajaro Soil and Redwood Soil Conservation Districts. In 1983, the City of Capitola was annexed into the District. While the remaining three cities are not within the District's jurisdiction, RCD has developed strategic partnerships with those cities and other local governments to help protect, conserve, and restore natural resources through various services and programs. At present, RCD has over 60 strategic partnerships at the local, state and federal level. Such collaboration is a great example of collaborative efforts among local agencies in pursuit of economies of scale, service efficiency, and overall "good government."

### **2. The District offers timely resources involving fire prevention, resiliency, and recovery.**

The recent fires have devastated parts of Santa Cruz County and will continue to be a threat, particularly in the wildland-urban communities. RCD has a long history of collaborating with local community and agency stakeholders to provide residents with educational and cost share assistance to reduce wildfire threat and to collaborate with Cal Fire and the Fire Safety Council of Santa Cruz County to identify high priority areas for fire breaks and other fuel management projects as outlined in their Community Wildfire Protection Plan. The Forest Health and Fire Resiliency Program also provides a number of services to Santa Cruz residents, including chipping, fuel load reduction around homes and structures, fire breaks in wildlands, wildfire awareness and prevention, and post-fire recovery.

### **3. The District is facing financial constraints.**

RCD's primary source of revenue is from Grants. In FY 2018-19, Grant funds represented 60% of the District's entire revenue source. Based on LAFCO's analysis, and excluding FY 2015-16, RCD has experienced a deficit on an annual basis from 2014 to 2019. Audited financial statements indicate that the fiscal shortage has ranged from approximately \$25,000 to \$150,000. As a result, the District has been depleting its reserves each year. It is LAFCO staff's understanding that the District is currently addressing this issue.

### **4. The District is complying with website requirements under State law.**

State law now requires all independent special districts to maintain and operate a website by January 1, 2020. RCD continues to provide a large array of information on their website. LAFCO staff encourages the District to continue this effort and include other useful documents outlined in Senate Bill 929, including but not limited to, recent final budgets and adopted services reviews.

### **5. The District's sphere of influence is countywide.**

Santa Cruz LAFCO designated the first sphere of influence for RCD in December 1983. The District's sphere is the entire County of Santa Cruz, including unincorporated and incorporated areas. The last sphere review occurred in August 2015. The sphere boundary has remained unchanged since its original adoption. Staff is recommending that the sphere for RCD be reaffirmed as part of this service review.



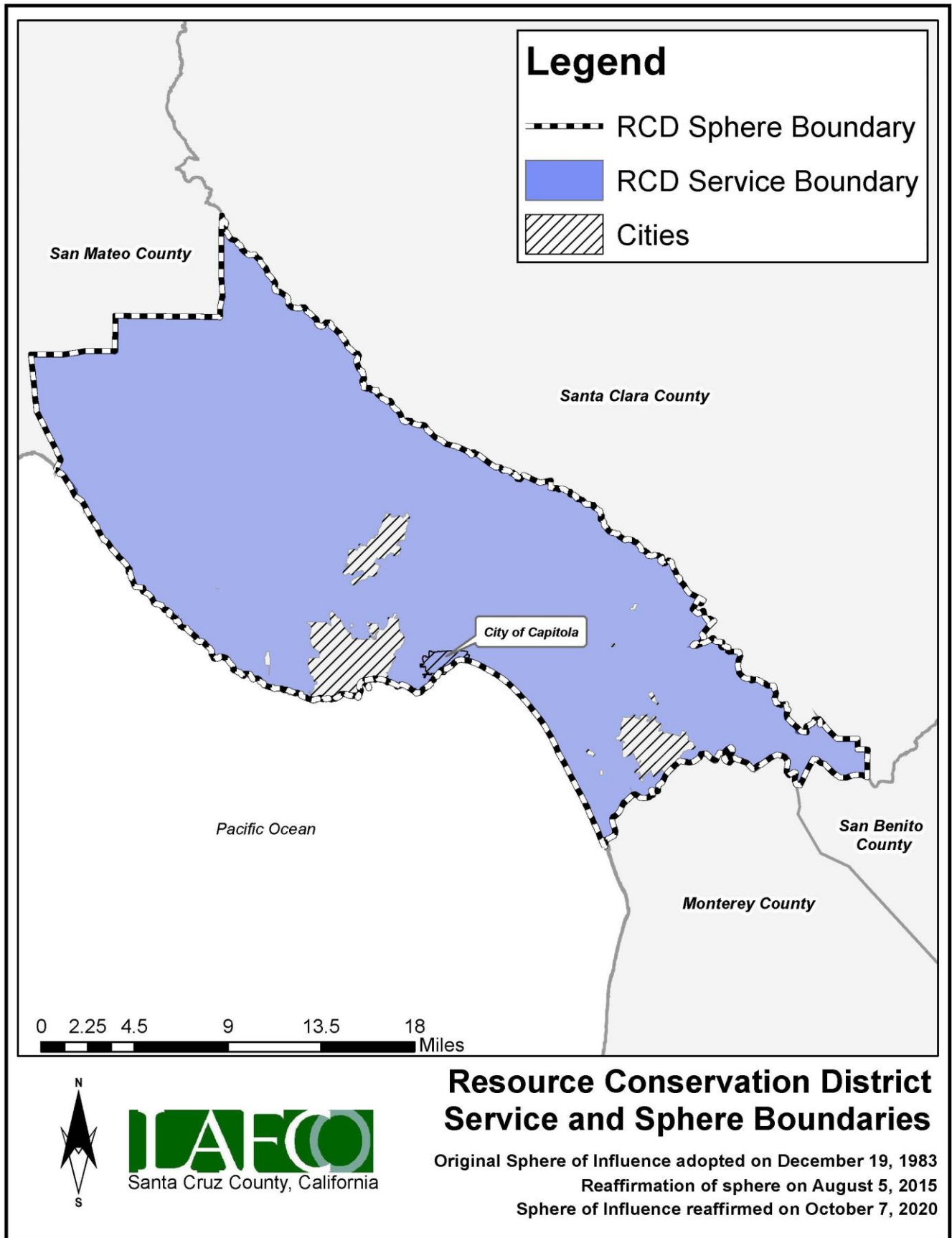
## **Recommended Actions**

Based on the analysis and findings in the 2020 Service and Sphere of Influence Review for the Resource Conservation District of Santa Cruz County, the Executive Officer recommends that the Commission:

1. Find that pursuant to Section 15061(b)(3) of the State CEQA Guidelines, LAFCO determined that the sphere of influence review is not subject to the environmental impact evaluation process because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment and the activity is not subject to CEQA;
2. Determine, pursuant to Government Code Section 56425, the Local Agency Formation Commission of Santa Cruz County is required to develop and determine a sphere of influence for the Resource Conservation District of Santa Cruz County, and review and update, as necessary;
3. Determine, pursuant to Government Code Section 56430, the Local Agency Formation Commission of Santa Cruz County is required to conduct a service review before, or in conjunction with an action to establish or update a sphere of influence; and
4. Adopt a Resolution (LAFCO No. 2020-27) approving the 2020 Service and Sphere of Influence Review for Resource Conservation District of Santa Cruz County with the following conditions:
  - a. Reaffirm the District's current sphere of influence; and
  - b. Direct the Executive Officer to distribute a copy of the adopted service and sphere review to the Resource Conservation District for their records.



Figure 1: Vicinity Map



## DISTRICT OVERVIEW

### History

The Resource Conservation District of Santa Cruz County is an independent special district that operates pursuant to the Resource Conservation District Act (California Resources Code Section 9151 et seq.). The formation of this public agency was a result of a consolidation between two conservation districts: Pajaro Soil and Redwood Soil Resource Conservations Districts. The Pajaro Soil RCD was originally formed in 1941 and served the southern portion of the County. The Redwood Soil RCD was originally formed in 1949 and served the central portion of the County. In 1977, the Directors of the two Districts petitioned the Board of Supervisors and LAFCO to consolidate the two agencies and extend the boundaries countywide. The Commission approved the consolidation on December 29, 1977. The City of Capitola was later annexed into the District in 1983. The District's service area (encompassing about 419 square miles) has remained the same since 1983, as shown in **Figure 1** on page 5.

### Services and Operations

While RCD has no regulatory or enforcement functions, its mission focuses on helping residents protect, conserve, and restore natural resources through information, education, and technical assistance programs. The RCD has ongoing projects that promote natural resource conservation in relation to farming and ranching operations and watershed-based habitat restoration. These projects focus on reducing soil erosion, off-farm sediment transport, non-point source pollution, salmonid and wildlife recovery, and improving ecosystem health. The RCD leverages available technical, financial and educational resources to meet the needs of local landowners and its constituents. The District has two core business areas, which are summarized in the following pages.

#### Core Business #1 (Emphasis in Watershed)

The first core area of service is watershed restoration and protection. This service area is broadly defined because the RCD completes projects of many types that result in the protection and restoration of Santa Cruz County watersheds. In conjunction with the US Department of Agriculture's Natural Resources Conservation Service (NRCS), the RCD offers permit coordination services through the Santa Cruz Countywide Permit Coordination Program. The program is intended to be a model of coordinated, multi-agency regulatory review that ensures the integrity of agency mandates, but makes permitting more accessible to rural landowners, farmers and ranchers than the traditional permitting process.

The RCD is also the hub for the Integrated Watershed Restoration Program (IWRP), which provides for a coordinated program to addresses the highest priority restoration and recovery projects in a more efficient and effective manner. The programmatic focus areas and typical projects under watershed restoration and protection include:

1. Forest Health and Fire Resiliency: example project types include forest management and fire plans, shaded fuel breaks, fuels management, chipping programs, fire readiness assessments, post-fire impact and recovery assessments, education, and removal of invasive species;

2. Water management: example project types include water quality improvement, water supply augmentation and conservation, erosion control, sediment management and drainage;
3. Habitat restoration: example project types include stream, riparian, and wetland restoration, invasive species management and eradication;
4. Species recovery: example projects include restoration and habitat protection for species listed on the endangered species list;
5. Multi-objective planning: example project types include landscape-scale planning for multiple outcomes including water supply and quality, habitat and species, public uses, and flood management;
6. Regional advanced mitigation: example project types include transportation improvement mitigation actions tied to documented needs and opportunities, including habitat protection and restoration; and
7. Regulatory assistance: example project types include private and public landowner services for permitting and regulatory requirements.

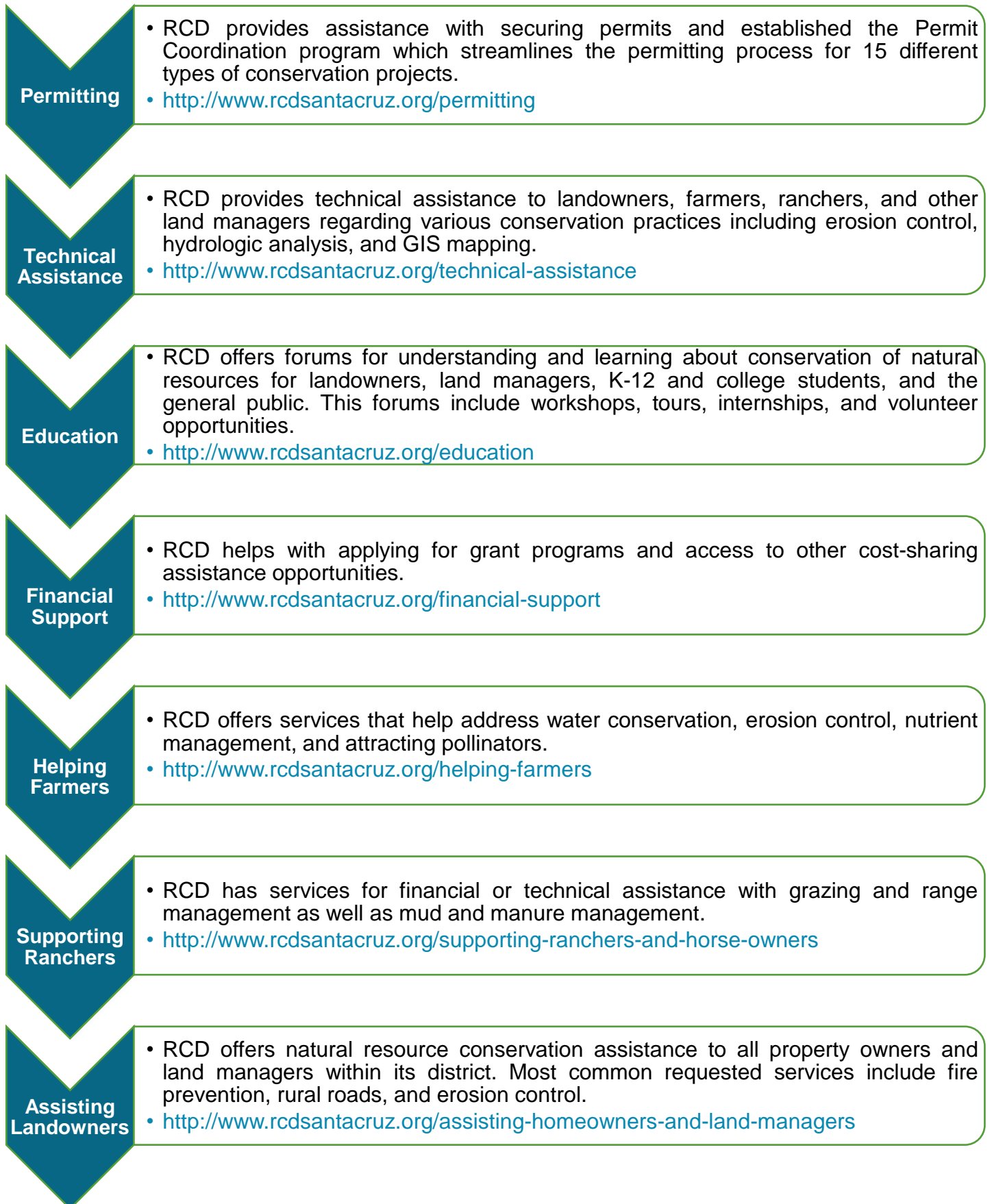
### **Core Business #2 (Emphasis in Agriculture)**

The second of the RCD's core businesses is conservation and stewardship in agriculture, and continues to serve the agricultural community as it has since the District's formation. The RCD (and in partnership with NRCS Conservationists) offers services to assist agricultural landowners with land management issues, including irrigation and nutrient management, soil health, erosion control, crop cover, etc. The RCD places a high priority on issues and work related to the protection of prime and important farmland within Santa Cruz County, and support for limited resources and Spanish-speaking owners. Assistance to livestock owners is also provided for both commercial facilities and backyard operations. The RCD has three program areas under the core business function of conservation and stewardship in agriculture:

1. Water management: example project types include water quality improvement, water conservation, managed aquifer recharge, erosion control, sediment management and drainage improvements on agricultural lands;
2. Land and soil stewardship: example project types include conservation and farm planning, technical assistance, ecological resource enhancement, carbon sequestration, soil health, and sustainable agriculture land uses; and
3. Multi-objective planning: example project types include farm and landscape scale planning for multiple outcomes including water supply and quality, soil quality, habitat and species, food safety, and stormwater management.

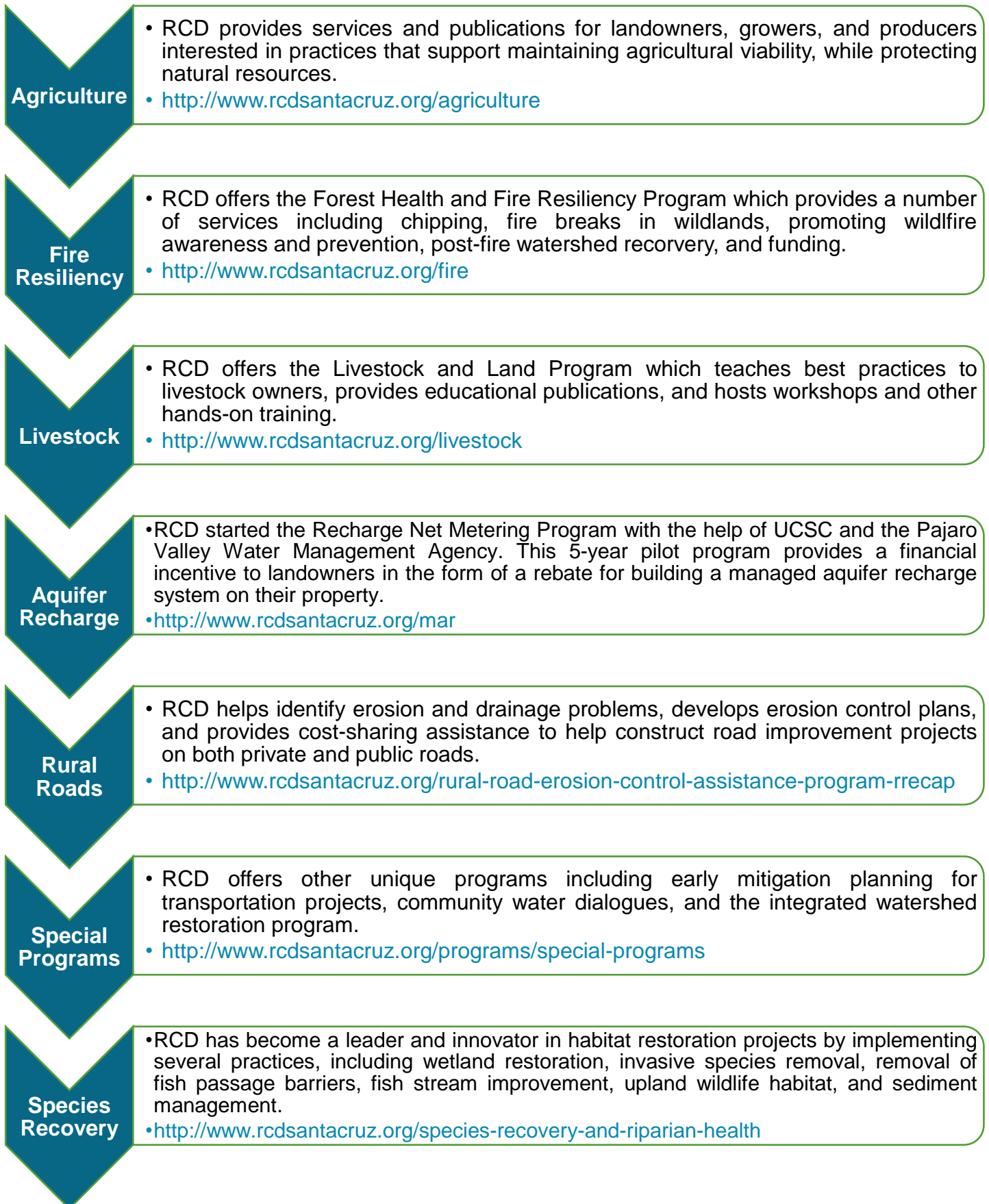
The RCD offers a significant amount of technical information and resource links through the District's website including permit information, NRCS program information, educational materials, and watershed plans. These services and programs are summarized in **Figures 2 and 3** on pages 8 and 9.

**Figure 2: RCD Services**





**Figure 3: RCD Programs**



### **Program Highlight: Fire Prevention and Post-Fire Recovery**

Santa Cruz County is continually threatened by catastrophic wildfire, particularly in the wildland-urban interface. Local topography and fuels make the County subject to periodic wildfires. Combined with 100 years of effective fire suppression, these conditions have led to uncharacteristically high fuel loads. This threat has been felt countywide due to the recent fires. The RCD has a long history of collaborating with local community and agency stakeholders to provide County residents with educational and cost share assistance to reduce wildfire threat and to collaborate with Cal Fire to identify high priority areas for fire breaks as outlined in the Community Wildfire Protection Plan. The Forest Health and Fire Resiliency Program provides a number of services to Santa Cruz residents, including:

- **Chipping:** Once vegetation is cleared around homes and neighbors for compliance with defensible space guidelines, the material can be chipped and spread on-site to reduce the impacts of green waste.
- **Fuel Load Reduction around homes and structures:** State Law requires that any person that owns, leases, controls, operates, or maintains a building or structure in, upon or adjoining any land covered with flammable material shall at all times maintain 100 feet of defensible space. The RCD can provide assistance to landowners that require clearing of flammable materials or creating defensible space on their property, while ensuring that sensitive habitats are considered.
- **Fuel Load Reduction/Fire Breaks in Wildlands:** The RCD employs fuels management to reduce the threat of wildfire on private forestland and shrub land areas. Hazardous fuels are reduced through a variety of treatments which remove or modify wildland fuels, thereby reducing the potential for severe wildland fire behavior, lessening post-fire damage, minimizing soil erosion and the impacts to water quality, enhancing wildlife habitat, and limiting the spread of invasive species and diseases.
- **Promoting wildfire awareness and prevention:** The RCD promotes wildfire awareness and prevention by creating and distributing educational outreach materials to County residents and partner agencies. These resources, including the Living with Fire in Santa Cruz County Guide, RCD Chipper Program Flyer, Defensible Space Trifold and Firescaping with Appropriate Plant Lists, are available on the [www.rcdsantacruz.org](http://www.rcdsantacruz.org) website. The RCD also works with partner organizations to sponsor workshops to provide information and cost share assistance for wildfire prevention and recovery strategies regarding fuel hazards, erosion control, soil health and native plant recovery.
- **Post-Fire Recovery:** Working closely with their federal partner, the UDSA Natural Resources Conservation Service, the RCD offers post-fire recovery to the community in times of need. These services include on-site technical and planning services to assess post-fire land conditions and recommend appropriate actions, concerning potential harmful debris runoff, erosion and drainage issues, stream impacts, tree health, winter preparedness, private road and culvert damage, and hillslope stability. The RCD can also provide permit assistance for post-recovery actions and help agricultural and forest landowners find and navigate potential funding resources to reduce the cost burden making repairs and protecting the land.

## Population and Growth

Based on staff's analysis, the population of the RCD service area in 2020 is estimated to be 147,085. The Association of Bay Area Governments (ABAG) and the Association of Monterey Bay Area Governments (AMBAG) provide population projections for cities and counties in the Coastal Region. Official growth projections are not available for special districts. In general, the Coastal Region is anticipated to have a slow growth over the next twenty years. **Table 1** shows the anticipated population for each local agency within RCD. The average rate of change is 1.18%.

### Population Projection

Based on the projections for Santa Cruz County and the City of Capitola within the District's service area, LAFCO staff was able to develop a population forecast for RCD. Staff increased the District's 2020 population amount by 1.18% each year. Under this assumption, LAFCO staff projects that the entire population of the RCD service area will be approximately 152,000 by 2040.

**Table 1: Projected Population**

	2020	2025	2030	2035	2040	Average Rate of Change
Santa Cruz County (unincorporated area)	136,891	137,896	139,105	140,356	141,645	0.96%
City of Capitola	<u>10,194</u>	<u>10,312</u>	<u>10,451</u>	<u>10,622</u>	<u>10,809</u>	<u>1.39%</u>
<b>Resource Conservation District</b>	<b>147,085</b>	<b>148,208</b>	<b>149,556</b>	<b>150,978</b>	<b>152,454</b>	<b>1.18%</b>

*Source: AMBAG 2018 Regional Growth Forecast*

### Disadvantaged Unincorporated Communities

State law requires LAFCO to identify and describe all "disadvantaged unincorporated communities" (DUCs) located within or contiguous to the existing spheres of influence of cities and special districts that provide fire protection, sewer, and/or water services. DUCs are defined as inhabited unincorporated areas within an annual median household income that is 80% or less than the statewide annual median household income.

In 2017, the California statewide median household income was \$67,169, and 80% of that was \$53,735. Based on the criteria set forth by Senate Bill 244, RCD does not provide fire, sewer, or water services to its service area, and therefore, not subject to further staff analysis.

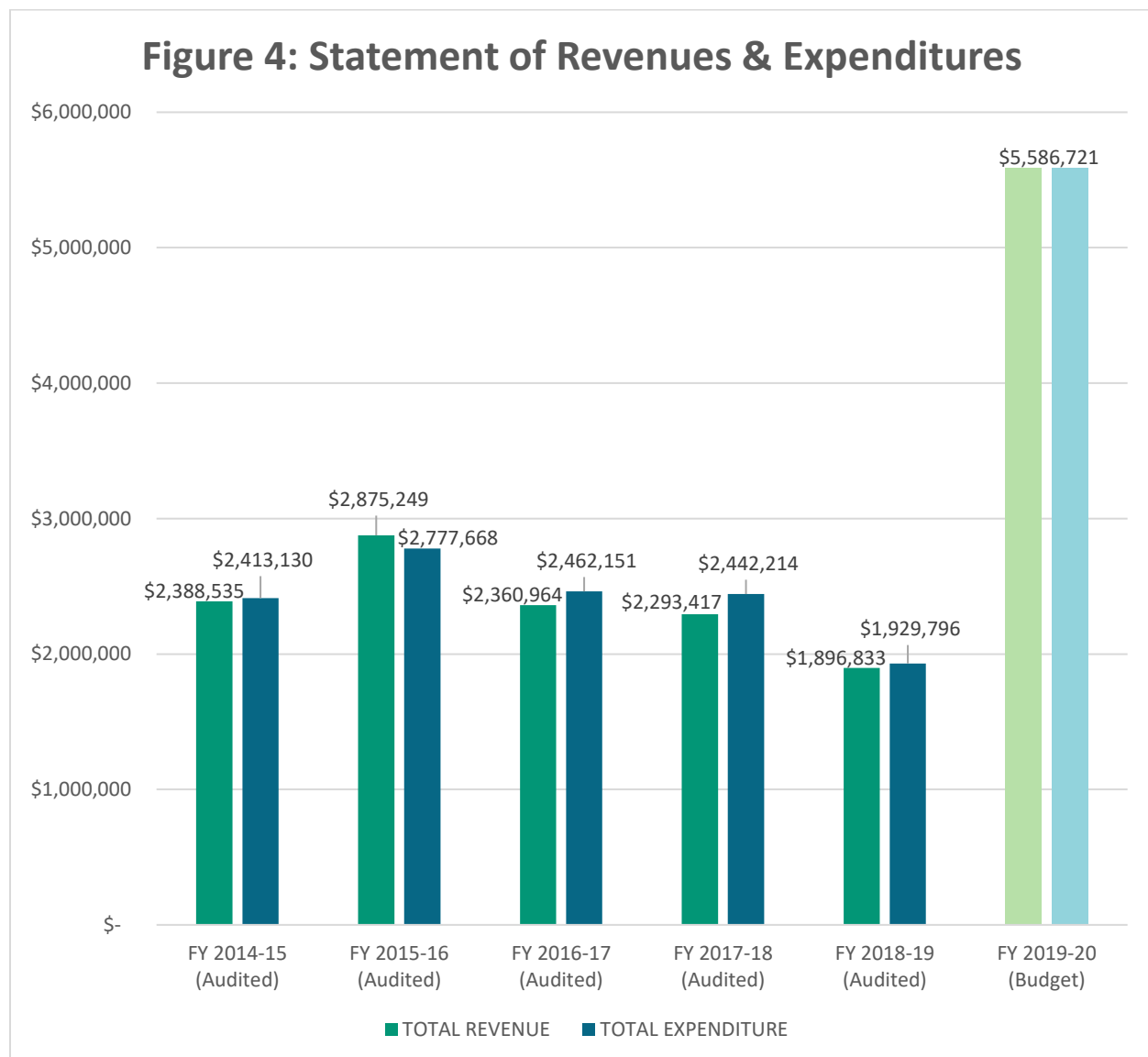
While the District does not fall under the purview of Senate Bill 244, RCD has implemented several projects and programs that benefit disadvantaged communities, such as Davenport, areas surrounding Boulder Creek, and the City of Watsonville. Many of these projects were implemented in partnership with several non-governmental organizations, including the Watsonville Wetlands Watch and the Land Trust of Santa Cruz County. Projects have included technical studies, wetlands and stream restoration. Many of these projects have multiple benefits that not only address resource concerns, but also provide recreational opportunities and open space for the City's residents. The District has also worked extensively with the agricultural community surrounding the City of Watsonville to address serious water supply concerns that could affect sustainability of the agricultural industry that supports many of the jobs in the community. Much of this work has targeted Spanish speaking growers.



## FINANCES

This section will highlight the District's financial performance during the most recent fiscal years. Fiscal Year 2018-19 is the latest audited financial statement available. LAFCO evaluated RCD's financial health from 2014 to 2020, including the recently adopted FY 2019-20 budget. A comprehensive analysis of the District's financial performance during the past five years is shown in **Table 3** on page 17. The sources used by LAFCO are available in **Appendix A**.

At the end of Fiscal Year 2018-19, total revenue collected was approximately \$1.9 million, representing a 17% decrease from the previous year (\$2.3 million in FY 17-18). Total expenses for FY 2018-19 were approximately \$1.9 million, which decreased from the previous year by 21% (\$2.4 million in FY 17-18). Other than Fiscal Year 2015-16, the District has ended in a deficit each year since 2014, as shown in **Figure 4**. Even though RCD projects that FY 2019-20 will earn up to \$5.5 million, LAFCO staff believes the negative trend may continue unless operational and/or budgetary changes are made.





### Operational/Budgetary Changes

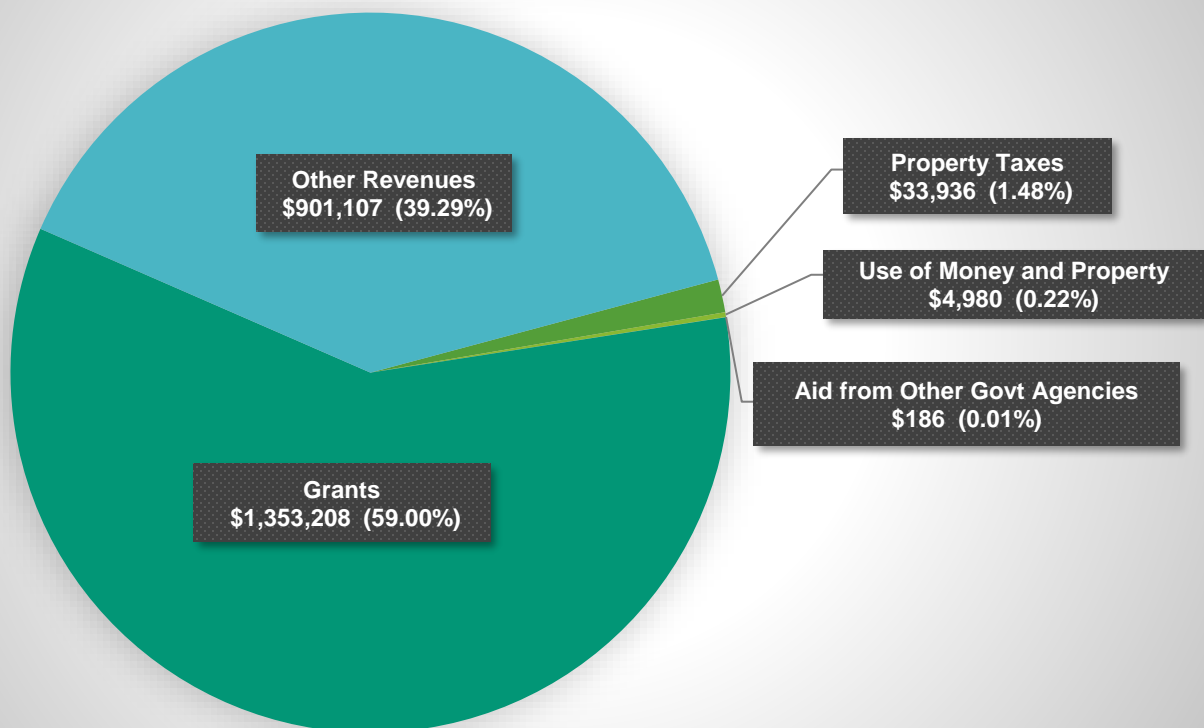
The District has implemented several changes to improve its financial health and continues to address past fiscal performances. These changes include:

- **Cost Allocation Plan:** Completed a Cost Allocation Plan (CAP) in 2015 based on FY 2013-14 audited financials. RCD began using the CAP to better build rates to incorporate all benefits and allowable indirect costs. The District is currently updating the CAP based on FY2018-19 audited financials.
- **Expenditure Reduction:** Continues to find ways to decrease overhead and administrative costs (for example consolidating office space to save on rent).
- **Diversification:** Learning to diversify funding sources to better cover full cost of projects/programs.
- **Staffing Improvements:** Moved to a central staff member (Grants Manager) to work with all staff to build budgets more reflective of actual project/program costs.

### **Revenues**

RCD's primary source of revenue is from Grants. In FY 2018-19, Grants totaled approximately \$1.3 million which represents over half of the District's entire revenue stream. Other revenue sources include Other Revenues (\$901,000 or 39%), Property Taxes (\$34,000 or 2%), Use of Money and Property (\$5,000 or less than 1%), and Aid from Other Government Agencies (\$186 or less than 1%). **Figure 5** provides a breakdown each revenue stream.

**Figure 5: Total Revenue (FY 2018-19)**



*Footnote: Other revenue includes Special District Augmentation Fund, Contributions & Donations, and RDA Pass-Throughs.*

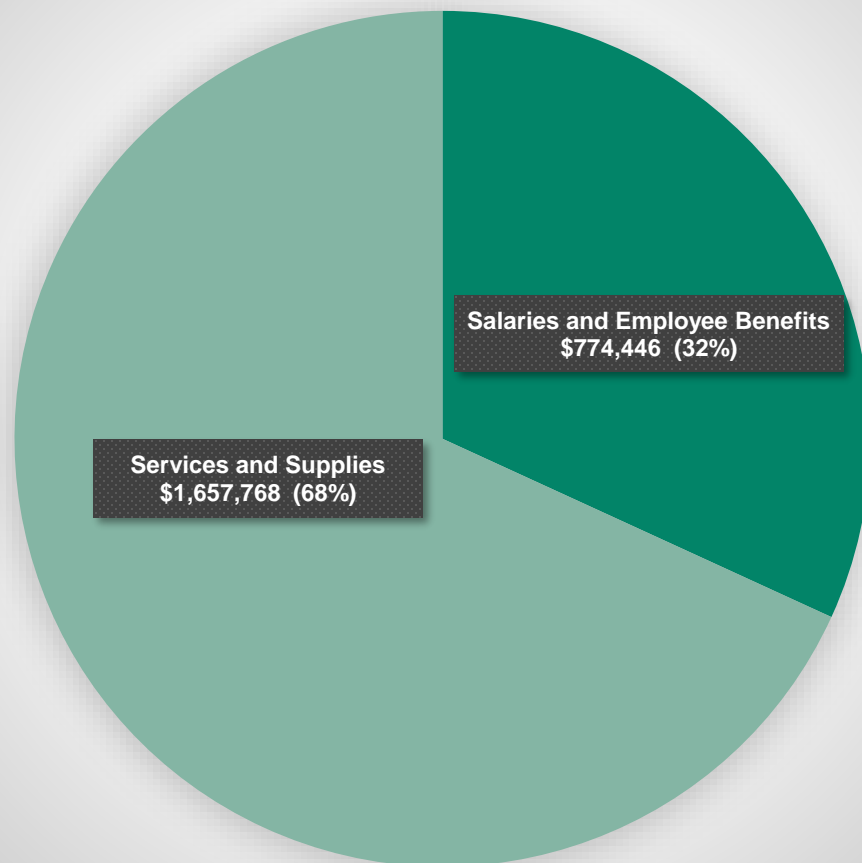
### Maximizing Grant Opportunities

One of the District's strengths is its ability to leverage a small local tax fund through effective grant writing to bring significant resources to the county for resource conservation. The RCD has actively sought to expand its funding sources and has been successful in obtaining public and private grant funding through the competitive process. Grants provide funding for specifically identified programs with stated objectives and tasks. Therefore, the District is able to tailor its programs and services in accordance with the grant funding requirements. The District has adequate funding to deliver services for which grant funding has been awarded. The RCD has also leveraged its property tax revenue to significantly enhance the level of conservation services provided within Santa Cruz County.

### **Expenditures**

RCD's total expenditures can be categorized into two budgetary groups: Salaries and Benefits and Services and Supplies. **Figure 6** shows that Services and Supplies represented approximately 68% of the District's entire operational expenses in FY 2018-19. The remaining expenditures are based on Salaries and Employee Benefits (32%).

**Figure 6: Total Expenditure (FY 2018-19)**



## Fund Balance / Net Position

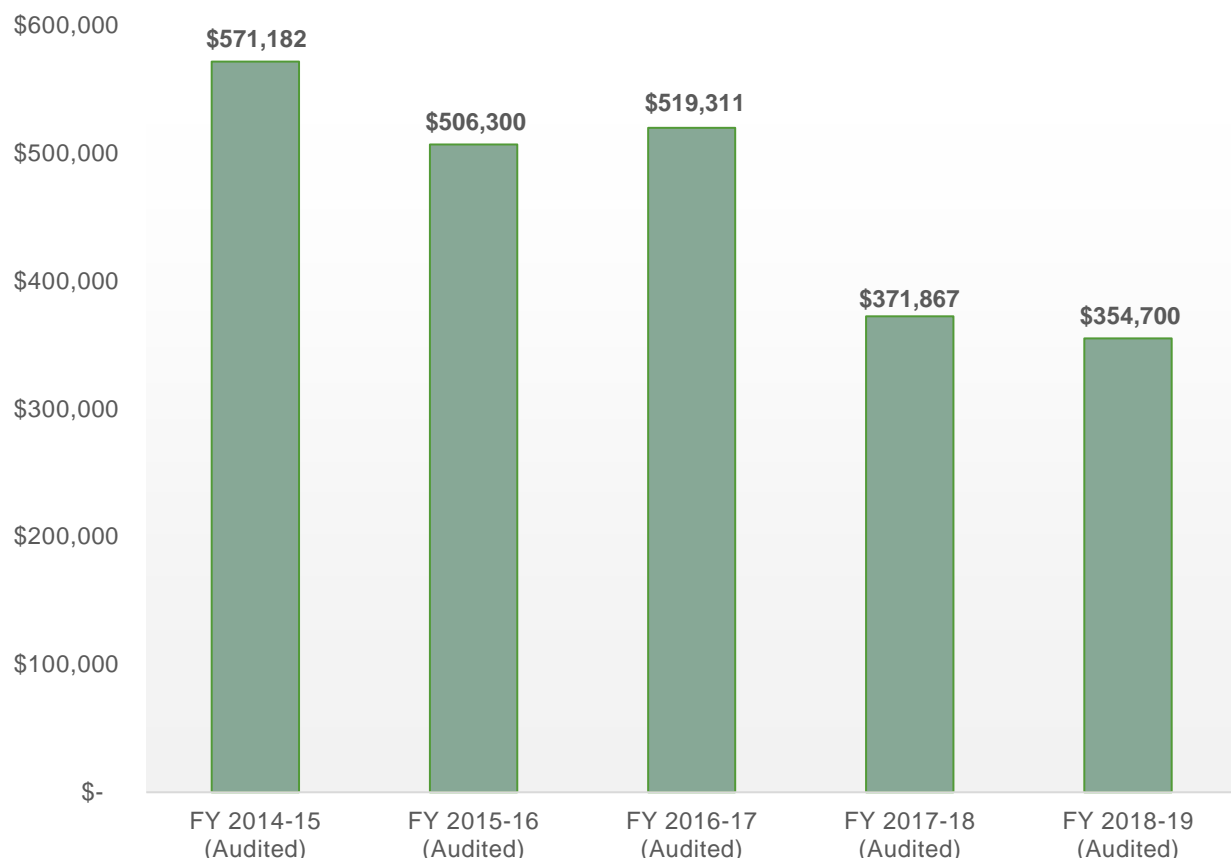
As of June 30, 2019, the total net position balance ended with approximately \$355,000. The following table highlights the net position balance from 2014 to 2019. As shown in **Table 2** and **Figure 7**, the District's fund balance has experienced a relatively steady decrease each year since FY 2014-15. At this rate, the District may exhaust its entire balance within the next few years.

**Table 2: Net Position (2014 to 2019)**

	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
Beginning Balance	\$726,904	\$571,182	\$506,300	\$519,311	\$371,867
Ending Balance	<u>\$571,182</u>	<u>\$506,300</u>	<u>\$519,311</u>	<u>\$371,867</u>	<u>\$354,700</u>
Difference	-\$155,722	-\$64,882	+\$13,011	-\$147,444	-\$17,167

*Footnote: During FY 14-15, Deferred Revenues were given their own line item; which required deducting from the cash/fund balance line item.*

**Figure 7: Net Position (2014 to 2019)**



**Table 3: Total Revenues & Expenditures**

	FY 2014-15 (Audited)	FY 2015-16 (Audited)	FY 2016-17 (Audited)	FY 2017-18 (Audited)	FY 2018-19 (Audited)
<b>REVENUE</b>					
<b>Property Taxes</b>					
Current Secured	\$ 24,517	\$ 26,226	\$ 28,112	\$ 29,685	\$ 31,516
Current Unsecured	\$ -	\$ -	\$ -	\$ 577	\$ 633
Current Secured - Supplemental	\$ 502	\$ 523	\$ 565	\$ 682	\$ 956
Current Unsecured - Supplemental	\$ 305	\$ 539	\$ 517	\$ 13	\$ 42
Current Unsecured - Supplemental	\$ 7	\$ 38	\$ 20	\$ 2,883	\$ 3,416
Residual Distribution	\$ -	\$ -	\$ -	\$ 86	\$ 82
Prior Years	\$ 1,245	\$ 1,833	\$ 2,290	\$ 10	\$ 10
<b>Total Property Taxes</b>	<b>\$ 26,576</b>	<b>\$ 29,159</b>	<b>\$ 31,504</b>	<b>\$ 33,936</b>	<b>\$ 36,655</b>
<b>Use of Money and Property</b>					
Interest	\$ 1,170	\$ 1,917	\$ 4,077	\$ 4,980	\$ 9,003
<b>Total Use of Money and Property</b>	<b>\$ 1,170</b>	<b>\$ 1,917</b>	<b>\$ 4,077</b>	<b>\$ 4,980</b>	<b>\$ 9,003</b>
<b>Aid from Other Govt Agencies</b>					
Homeowners' Property Tax Relief	\$ 188	\$ 189	\$ 188	\$ 186	\$ 186
Contribution from Other Govt Agencies	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Aid from Other Govt Agencies</b>	<b>\$ 188</b>	<b>\$ 189</b>	<b>\$ 188</b>	<b>\$ 186</b>	<b>\$ 186</b>
<b>Grants</b>					
State Water Resources Control Board	\$ -	\$ -	\$ -	\$ 105,546	\$ 117,404
State - Other	\$ 2,061,852	\$ 2,186,124	\$ 1,340,769	\$ 1,084,689	\$ 869,663
Federal - Other	\$ 77,358	\$ 209,166	\$ 180,558	\$ 162,973	\$ 160,423
<b>Total Grants</b>	<b>\$ 2,139,210</b>	<b>\$ 2,395,290</b>	<b>\$ 1,521,327</b>	<b>\$ 1,353,208</b>	<b>\$ 1,147,490</b>
<b>Other Revenues</b>					
Other Taxes - Special Dist Augmentation	\$ 37,160	\$ 41,289	\$ 41,289	\$ 41,289	\$ 41,289
Contributions and Donations	\$ 125	\$ 8,008	\$ 28,050	\$ 22,364	\$ 2,517
RDA Pass-Throughs	\$ -	\$ -	\$ -	\$ 57	\$ 97
Other Revenue	\$ 184,106	\$ 399,397	\$ 734,529	\$ 837,397	\$ 659,596
<b>Total Other Revenues</b>	<b>\$ 221,391</b>	<b>\$ 448,694</b>	<b>\$ 803,868</b>	<b>\$ 901,107</b>	<b>\$ 703,499</b>
<b>TOTAL REVENUE</b>	<b>\$ 2,388,535</b>	<b>\$ 2,875,249</b>	<b>\$ 2,360,964</b>	<b>\$ 2,293,417</b>	<b>\$ 1,896,833</b>
<b>EXPENDITURE</b>					
<b>Salaries and Employee Benefits</b>					
Regular Pay	\$ 643,973	\$ 656,577	\$ 708,024	\$ 646,128	\$ 621,827
Social Security	\$ 46,699	\$ 48,216	\$ 52,512	\$ 48,145	\$ 46,250
Employee Insurance and Benefits	\$ 69,717	\$ 70,636	\$ 74,580	\$ 71,544	\$ 81,784
Unemployment Insurance	\$ 5,568	\$ 6,122	\$ 6,800	\$ 4,774	\$ 4,359
Workers' Compensation	\$ 2,983	\$ 3,426	\$ 4,600	\$ 3,855	\$ 3,239
<b>Total Salaries and Employee Benefits</b>	<b>\$ 768,940</b>	<b>\$ 784,977</b>	<b>\$ 846,516</b>	<b>\$ 774,446</b>	<b>\$ 757,459</b>
<b>Services and Supplies</b>					
Telephone	\$ 5,759	\$ 5,368	\$ 5,862	\$ 5,372	\$ 5,526
Insurance	\$ 12,023	\$ 12,063	\$ 14,312	\$ 9,571	\$ 9,616
Memberships	\$ 2,661	\$ 2,526	\$ 2,640	\$ 4,683	\$ 1,195
Postage	\$ 1,131	\$ 775	\$ 346	\$ 78	\$ 529
Supplies	\$ 10,527	\$ 11,262	\$ (46)	\$ 1,526	\$ 1,082
Accounting and Auditing	\$ 32,641	\$ 27,919	\$ 26,702	\$ 25,628	\$ 27,296
Legal Services	\$ 1,935	\$ 3,585	\$ 9,234	\$ 3,600	\$ 10,450
Professional Services	\$ 1,457,414	\$ 1,805,586	\$ 1,387,541	\$ 1,408,413	\$ 980,945
Publication Printing Costs	\$ 5,738	\$ 20,058	\$ -	\$ -	\$ -
Legal Notices	\$ -	\$ -	\$ -	\$ -	\$ -
Rents and Leases - Structures	\$ 61,337	\$ 62,248	\$ 38,748	\$ 41,980	\$ 46,833
Special District Expense - Services	\$ 33,411	\$ 29,815	\$ 122,671	\$ 151,870	\$ 80,977
Mileage	\$ 16,091	\$ 8,709	\$ 4,799	\$ 2,395	\$ 4,725
Utilities	\$ 3,522	\$ 2,777	\$ 2,779	\$ 2,617	\$ 3,139
Credit Card Fees	\$ -	\$ -	\$ 47	\$ 35	\$ 24
<b>Total Services and Supplies</b>	<b>\$ 1,644,190</b>	<b>\$ 1,992,691</b>	<b>\$ 1,615,635</b>	<b>\$ 1,657,768</b>	<b>\$ 1,172,337</b>
<b>Fixed Assets</b>					
Equipment	\$ -	\$ -	\$ -	\$ 10,000	\$ -
<b>Total Fixed Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 10,000</b>	<b>\$ -</b>
<b>Appropriations for Contingencies</b>					
Contingencies	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Appropriations for Contingencies</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>TOTAL EXPENDITURE</b>	<b>\$ 2,413,130</b>	<b>\$ 2,777,668</b>	<b>\$ 2,462,151</b>	<b>\$ 2,442,214</b>	<b>\$ 1,929,796</b>
<b>Surplus/(Deficit)</b>	<b>\$ (24,595)</b>	<b>\$ 97,581</b>	<b>\$ (101,187)</b>	<b>\$ (148,797)</b>	<b>\$ (32,963)</b>



## GOVERNANCE

### Legal Authority

The Resource Conservation District of Santa Cruz County operates according to Public Resources Code Sections 9000 et seq. and is authorized to: conduct surveys and research relating to conservation of resources, prevention and control measures and improvements needed; development and distribution of water; make improvements or conduct operations on public or private lands in furtherance of erosion control, water conservation and distribution, agricultural and wildlife enhancement, erosion stabilization, including but not limited to terraces, ditches, levees, and dams or other structures and the planting of trees, shrubs, grasses or other vegetation; and provide public education and technical assistance. As a public resource agency, the District does not have regulatory power but is designated by the Board of Supervisors to review applications for grading permit exemptions related to development in unincorporated areas.

The RCD collaborates with landowners and managers, technical advisors, local jurisdictions, government agencies, and others to protect, conserve and restore natural resources in coastal Santa Cruz County. The District includes several acres of mostly rural, agricultural and open space lands, and includes all watersheds in Santa Cruz County. RCDs have a close working relationship with the USDA Natural Resource Conservation Service (NRCS) and through the local RCD, an NRCS conservationist and other specialists provide local landowners technical assistance. The RCD acts as a liaison between local property owners and land management organizations and the NRCS federal program administration. The California Association of Resource Conservation Districts describes the relationships of local conservation districts and the NRCS as: a unique partnership to work with private landowners and operators to deliver the technical and financial assistance needed to help them apply complex conservation treatments to control erosion and improve the quality of our soil resources; protect and improve water and air quality; enhance fish and wildlife habitat; and manage woodlands, pasturelands and rangelands.





## Local Accountability & Structure

RCD is governed by a seven-member Board of Directors, which is appointed by the Santa Cruz County Board of Supervisors. In 1996, the Board of Supervisors accepted responsibility for appointing Directors to the Resource Conservation District. The current Board is as follows:

**Table 4: Board of Directors**

Board Member	Term of Office
<b>Jim McKenna, President</b>	Appointed: November 20, 2018 Term Limit Ends: November 25, 2022
<b>Mike Manfre, Vice-President</b>	Appointed: October 18, 2016 Term Limit Ends: November 25, 2020
<b>Howard Liebenberg</b>	Appointed: October 18, 2016 Term Limit Ends: November 25, 2020
<b>John Ricker</b>	Appointed: October 18, 2016 Term Limit Ends: November 25, 2020
<b>Kelley K. Bell</b>	Appointed: November 20, 2018 Term Limit Ends: November 25, 2022
<b>Robert Ketley</b>	Appointed: November 20, 2018 Term Limit Ends: November 25, 2022
<b>Vacant</b> <i>(previously held by Steve R. Auten)</i>	Appointed: January 15, 2019 Term Limit Ends: November 25, 2020

The Board holds regularly-scheduled meetings on the second Wednesday of each month at 6:30 PM in the RCD's office in Capitola. In light of the pandemic, board meetings are being held remotely. Public notice is provided through posting, press releases, direct mailing, and website. The District's Long Range Conservation Program states that all meetings are to be conducted in accordance with "Roberts Rules of Order" and all meetings shall follow the guidelines set forth in the Brown Act. Meeting agendas are emailed out to a listserv, posted on the window of the District's office and posted on the District's website at least three days (72 hours) in advance of any meeting. RCD traditionally adopts an annual reports including comprehensive overviews, permit coordination programs, and financials (budget and audits). These reports are also available on the District's website: <http://www.rcdsantacruz.org/annual-reports>. The annual reports from 2010 to 2019 are available as **Appendix B**.

## Management Efficiencies

The Santa Cruz County Resource Conservation District officially began operations January 1, 1978, in conformity with Santa Cruz County Board of Supervisors Resolution 744-77. This resolution authorized the consolidation of the Pajaro Resource Conservation District and the Redwood Conservation District to form the Santa Cruz County Resource Conservation District. The District is comprised of the land areas of the former Pajaro and Redwood Resource Conservation Districts. In September 2007, the Santa Cruz County Resource Conservation District was renamed Resource Conservation District of Santa Cruz County. The mission of the District is to help people protect, conserve, and restore natural resources through information, education, and technical assistance programs. At present, staffing includes 9 full-time staff (defined as 30+ hours a week) with an additional 1 part-time staff with occasional interns. **Table 5** highlights the current managerial roles:

**Table 5: High-Level Staff Members**

Name	Title
Lisa Lurie	Executive Director
Sharon Corkrean	Finance Director
Sacha Lozano	Ag Program Manager
Daniel Nylen	Restoration Program Manager
Ari Rettinger	Grants Manager

## Opportunities and Challenges

RCD is authorized to provide a broad range of conservation-related services that provide benefit throughout the District's service area. The District's boundaries currently exclude the incorporated cities of Santa Cruz, Scotts Valley, and Watsonville. However, RCD has developed a network of strategic partnerships beyond its boundaries. This has led to recent achievements, best practices, and other success stories. The following section discusses how the District can continue exploring opportunities to improve efficiencies while addressing current and future challenges.

### Local and Regional Collaborations

Strategic partnerships are a critical component to RCD. The District specializes in bridging gaps between private landowners and public agencies, and solving problems through the creation of partnerships, traditional and non-traditional. **Appendix C** depicts the various partnerships. At present, RCD has over 60 strategic partnerships at the local, state and federal level. Such collaboration is a great example of collaborative efforts among local agencies in pursuit of economies of scale, service efficiency, and overall "good government." These partnerships are based on separate contracts or agreements and based in informal, trust-based relationships. For example, the District has formed a "Durable Collaboration" with San Mateo, Monterey County, and Upper Salinas-Las Tablas RCD to strengthen their ability to share staff, skills, and resources. This partnership also improves their ability to address regional priorities like forest health, watershed management, and species recovery through collaborative programs and grant proposals.

LAFCO staff believes that it may be beneficial to explore additional opportunities to combine or establish a regional agreement through a Countywide Memorandum of Understanding (MOU) or the creation of a Joint Powers Authority (JPA).

- **Memorandum of Understanding** - A Memorandum of Understanding describes an agreement between two or more parties: in this case, the local agencies' overarching conservation goals. The MOU expresses a convergence of will between the parties, specifying an intended common line of action or goal. The purpose of a MOU is to formally agree on the objectives, roles and ground rules of the partnership between the local governments that holds the mandate for service provision and the implementing organization. Establishing a clear agreement can help prevent conflict and reputational harm because expectations discussed, agreed and documented at an early stage leaves less room for misinterpretation. It also increases transparency in the relationship with the public authority and allows holding either party accountable to their commitments.
- **Joint Powers Authority** - defined by the California State Legislature Senate Local Government Committee is a formal, legal agreement between two or more public agencies that share a common power and want to jointly implement programs, build facilities, or deliver services. Officials from those public agencies formally approve a cooperative arrangement. JPAs offer another way for governments to deliver services. With a joint powers agreement, a member agency agrees to be responsible for delivering a service on behalf of the other member agencies.

***LAFCO Staff Recommendation:*** *The District should continue collaborating with other local agencies to maximize efficiencies, improve internal operations, and/or explore cost-saving opportunities.*

### Governance Options

The original purpose of resource conservation districts was to manage soil and water resources for conservation, these powers were expanded in the early 1970s to include related resources, including fish and wildlife habitat. This expansion of powers was reflected in the change of name from Soil Conservation Districts to Resource Conservation Districts in 1971. As the understanding of resource challenges has expanded over the years, the scope of services has also shifted to addressing impacts of urbanized areas, as well as the governance structure of these agencies. The RCD of Santa Cruz County was a direct result of a consolidation. This governance restructuring allowed for further utilization of existing facilities, maximization of economies of scale, and cost-savings towards internal and external operations. Since RCD has been experiencing financial constraints over the years, and has built a network through other strategic partnerships, it may be beneficial to explore consolidation once again – this time through a regional approach. The following summarizes the benefits of regional consolidation and/or annexation.

- **Annexation** – Pursuant to state law, RCD may consider annexing the incorporated cities of Santa Cruz, Scotts Valley, and Watsonville. Annexation may increase levels of service and programs within incorporated areas. As previously discussed, environmental protection and natural resource conservation, in particular with

regard to storm water, fire preparedness and species recovery, have expanded to more urbanized areas, and the annexation would reflect that. The District provides a broad range of conservation services and could provide services that improve environmental quality and address resource concerns in the incorporated cities. Additionally, grant awards to the RCD for this work could result in lower costs for water quality, species recovery or flood management that are ultimately borne by taxpayers. It may also provide a greater opportunity for implementing watershed plans and programs on a watershed-based approach that is not constrained by political boundaries.

- **Consolidation** - Pursuant to its principal act, RCD may be located within multiple counties. Therefore, RCD is eligible to consolidate with adjacent resource conservations districts should they determine that it is feasible and beneficial. There are four resource conservation districts surrounding Santa Cruz County: San Mateo County RCD, Loma Prieta RCD, San Benito RCD, and RCD of Monterey County (refer to **Appendix D**). Benefits include cost-savings in overhead and administrative costs, unified conservation efforts among the coastal region, and further expansion of strategic partnerships.

***LAFCO Staff Recommendation:*** *The District should consider exploring governance options, including annexation, which may help reduce costs, improve service provisions, and expand its conservation efforts throughout the coastal region.*

#### Website Requirements

Senate Bill 929 was signed into law in September 2018 and requires all independent special districts to have and maintain a website by January 1, 2020. The District currently maintains a detailed website. It is LAFCO staff's understanding that all independent special districts within Santa Cruz County now have a website. SB 929 states that the Internet Web Site, maintained by the independent special district, shall conform with various laws in Government Code Sections 6270.5, 53893, 53908, 54954.2, and Section 32139 of the Health and Safety Code. In summary, the District's Internet Website is required to have the following:

- Contact information;
- Adopted budgets;
- List of current board members;
- Information regarding public meetings (Brown Act);
- Service Reviews adopted by LAFCO;
- Recipients of grant funding or assistance provided by the district, if any;
- Audits (pursuant to GCS 26909);
- Adopted annual policies; and
- Any other information the board deems relevant

***LAFCO Staff Recommendation:*** *The District should continue updating its website to fulfill the legal requirements under Senate Bill 929.*

## SPHERE OF INFLUENCE

### **Cortese-Knox-Hertzberg Act**

City and special district spheres of influence define the probable physical boundaries and service area of a local agency, as determined by the Commission (Government Code Section 56076). The law requires that spheres be updated at least once every five years either concurrently or subsequently to the preparation of Municipal Service Reviews. Spheres are determined and amended solely at the discretion of the Commission. In determining the sphere of influence for each local agency, the Commission is required by Government Code Section 56425(e) to consider certain factors, including:

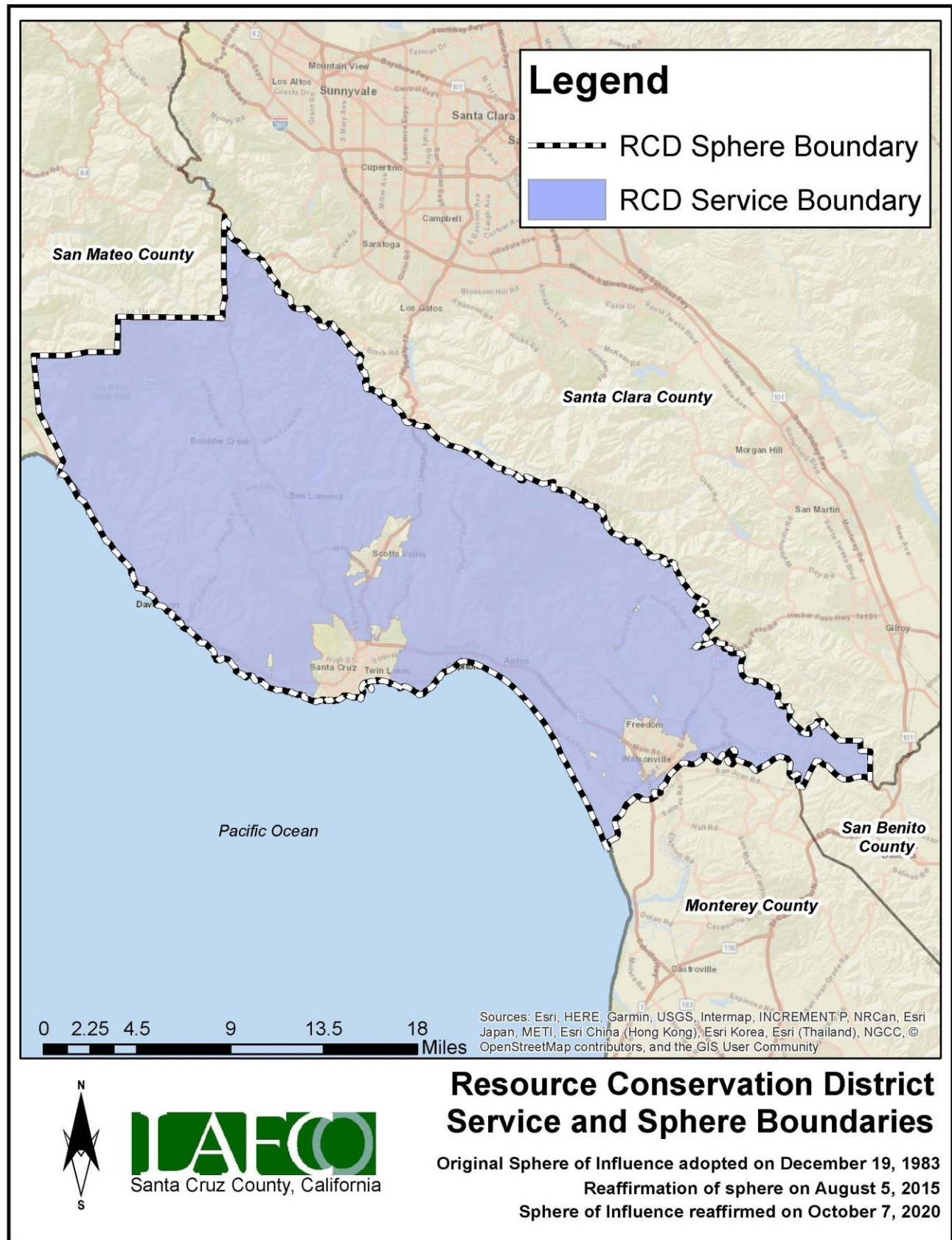
- The present and planned uses in the area, including agricultural and open-space lands;
- The present and probable need for public facilities and services in the area;
- The present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide;
- The existence of any social or economic communities of interest in the area if the commission determines that they are relevant to the agency; and
- For an update of a sphere of influence of a city or special district that provides public facilities or services related to sewers, municipal and industrial water, or structural fire protection, that occurs pursuant to subdivision (g) on or after July 1, 2012, the present and probable need for those public facilities and services of any disadvantaged unincorporated communities within the existing sphere.

### **Current Sphere Boundary**

Santa Cruz LAFCO adopted the first sphere of influence for RCD on December 19, 1983. The adopted sphere of influence is watershed-based. It includes the entire watersheds of the North Coast streams, the San Lorenzo River, Soquel Creek, Aptos Creek, and the portion of the Pajaro River watershed located in Santa Cruz County. As a result, the District's sphere is the entire County of Santa Cruz, including all four cities. The last sphere update occurred in August 2015, which resulted in the reaffirmation of the existing sphere boundary. **Figure 8** on page 24 shows the current sphere of influence. LAFCO staff is recommending that the sphere boundary be reaffirmed once again as part of this service and sphere review.



Figure 8: District Sphere Map



## DISTRICT SUMMARY

Resource Conservation District of Santa Cruz County	
<b>Formation</b>	California Public Resources Code §9000 et seq. (Resource Conservation District Act)
<b>Board of Directors</b>	Governed by a seven-member Board of Directors. Board members are appointed to four-year terms by the Santa Cruz County Board of Supervisors.
<b>Contact Person</b>	Lisa Lurie, Executive Director
<b>Employees</b>	9 full-time employees (defined as 30+ hours per week) and 1 part-time staff member
<b>District Area</b>	Entire County, excluding the Cities of Santa Cruz, Scotts Valley and Watsonville (Approximately 419 square miles)
<b>Sphere of Influence</b>	The sphere boundary is countywide and coterminous with the District's jurisdictional limits.
<b>FY 2019-20 Budget</b>	<p>Total Revenue = \$5,586,721</p> <p>Total Expenditure = \$5,586,721</p> <p>Projected Net Position (Beginning Balance) = \$354,700</p>
<b>Contact Information</b>	<p>Mailing Address: 820 Bay Avenue, Suite 136, Capitola, CA 95010</p> <p>Phone Number: 831-464-2950</p> <p>Email Address: <a href="mailto:info@rcdsantacruz.org">info@rcdsantacruz.org</a></p> <p>Website: <a href="http://www.rcdsantacruz.org/">http://www.rcdsantacruz.org/</a></p>
<b>Public Meetings</b>	Meetings are typically held on the second Wednesday of the month, at 6:30 pm. These Board meetings are typically held at the RCD's administrative office in Capitola and are open to the public.
<b>Mission Statement</b>	The mission of the Resource Conservation District of Santa Cruz County is to help people protect, conserve, and restore natural resources through information, education, and technical assistance programs.

## SERVICE AND SPHERE REVIEW DETERMINATIONS

The following service and sphere review determinations fulfill the requirements outlined in the Cortese-Knox-Hertzberg Act.

### Service Provision Determinations

Government Code Section 56430 requires LAFCO to conduct a municipal service review before, or in conjunction with, an action to establish or update a sphere boundary. Written statements of determination must be prepared with respect to each of the following:

**1. Growth and population projections for the affected area.**

RCD encompasses over 400 square miles. It is estimated that approximately 145,000 residents currently live within the District's jurisdiction. LAFCO staff projects that the District's population may reach 152,000 by 2040.

**2. The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence.**

RCD is not subject to SB 244 because it does not provide water, sewer, or fire service.

**3. Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies including needs or deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged, unincorporated communities within or contiguous to the sphere of influence.**

RCD provides non-discriminatory assistance and educational opportunities to agricultural producers, land users, educators, and anyone with land-based resource conservation needs. RCD's services include conservation education, soil erosion control, water quality enhancement, fire prevention, and watershed enhancement.

**4. Financial ability of agencies to provide services.**

RCD's primary source of revenue is from Grants. The District has experienced an annual deficit between 2014 to 2019, excluding FY 2015-16. Audited financial statements indicate that the fiscal shortage has ranged from approximately \$25,000 to \$150,000. As a result, the District has been depleting its reserves each year. It is LAFCO staff's understanding that the District is currently addressing this issue.

**5. Status of, and opportunities for, shared facilities.**

At present, RCD has over 60 strategic partnerships at the local, state and federal level. Such collaboration is a great example of collaborative efforts among local agencies in pursuit of economies of scale, service efficiency, and overall "good government."

**6. Accountability for community service needs, including governmental structure and operational efficiencies.**

RCD is highly reliant on irregular grants. The District should continue sharing expertise and explore sharing staffing with RCDs in the adjacent counties.

**7. Any other matter related to effective or efficient service delivery, as required by commission policy.**

No additional local LAFCO policies are specifically relevant to this service review.

## **Sphere of Influence Determinations**

Government Code Section 56425 requires LAFCO to periodically review and update spheres of influence in concert with conducting municipal service reviews. Spheres are used as regional planning tools to discourage urban sprawl and encourage orderly growth. Written statements of determination must be prepared with respect to each of the following:

**1. The present and planned land uses in the area, including agricultural and open-space lands.**

The present and planned land uses are based on the general plans from the County and the City of Capitola, which range from urban to rural uses. General plans anticipate growth centered on existing urban areas and the maintenance of agricultural production, rural residential uses, and environmental protection in rural areas. The planned land uses within the five applicable general plans are a mix of urban, rural and mountain residential, agricultural, timber, public recreation, and open-space lands.

**2. The present and probable need for public facilities and services in the area.**

The area within the adopted sphere of influence needs, and will continue to need, the soil management, wildland fuel load reduction, riparian restoration, and watershed management services provided by the District.

**3. The present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide.**

The services and programs of RCD substantially rely on grant funding, which may vary on an annual basis. The District's services may change based upon the types and levels of grant funds received during any given year.

**4. The existence of any social or economic communities of interest in the area if the commission determines that they are relevant to the agency.**

The adopted sphere of influence is watershed-based. It includes the entire watersheds of the North Coast streams, the San Lorenzo River, Soquel Creek, Aptos Creek, and the portion of the Pajaro River watershed located in Santa Cruz County.

**5. For an update of a sphere of influence of a city or special district that provides public facilities or services related to sewers, municipal and industrial water, or structural fire protection, that occurs pursuant to subdivision (g) on or after July 1, 2012, the present and probable need for those public facilities and services of any disadvantaged unincorporated communities within the existing sphere of influence.**

The District does not provide services related to sewers, municipal and industrial water, or structural fire protection. Therefore, this determination is not applicable.



## APPENDICES

### Appendix A: Financial Sources (2014 – 2019)

### Appendix B: Annual Reports (2010 - 2019)

### Appendix C: Strategic Partnerships (List)

### Appendix D: Coastal Region RCDs (Map)

**our mission**  
The mission of the Resource Conservation District (RCD) of Santa Cruz County is to help people protect, conserve, and restore natural resources through information, education and technical assistance programs.

**what is the RCD?**  
The RCD of Santa Cruz is a special district organized under state law and a public resource agency with no enforcement or regulatory functions. We work closely with the USDA Natural Resources Conservation Service (NRCS) in responding to soil and water management needs of Santa Cruz County land users.

**PROGRAMS AVAILABLE**  
Agriculture  
Livestock (including horses)  
Rural Roads  
Habitat Restoration  
Permitting Assistance  
Watershed Education

**our funding**  
Operating funds are drawn from local taxes, county programs, grants, partnerships and fundraising activities. The RCD has been very successful in leveraging minimal local tax funds to bring in financing for natural resource projects from sources such as the State Water Resources Control Board, the Coastal Conservancy, the California Department of Fish and Game, the California Department of Parks and Recreation, the Bureau of Land Management, The Community Foundation of Santa Cruz County, the David and Lucile Packard Foundation and others.

**board of directors**  
The RCD is managed by seven, non-salaried directors who reside in the district and know local problems. They are landowners and working people like you who volunteer their time for the benefit of all. The RCD works closely with groups and individuals to provide practical solutions for the soil and water management problems of Santa Cruz County.

**join the cause**  
I believe in the work of the Resource Conservation District and want to help the continuing efforts to promote conservation and environmental enhancement in Santa Cruz County.

— \$25 — \$50 — \$100 — Other

Please make your check payable to the "Resource Conservation District" and mail to 820 Bay Avenue, Suite 128, Capitola, CA 95010.

**RESOURCE**  
CONSERVATION DISTRICT  
OF SANTA CRUZ COUNTY

protect • conserve • restore  
our county's natural resources

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MANAGEMENT DISTRICT OF SANTA CRUZ COUNTY  
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# **APPENDIX A:**

**RCD**

**Financial Sources  
(2014 to 2019)**

RESOURCE CONSERVATION DISTRICT OF SANTA CRUZ COUNTY

Budgetary Comparison Schedule - Revenues

Budget and Actual - General Fund

For the Year Ended June 30, 2015

	2015			
	<u>Final Budget</u>	<u>Adjusted Final Budget</u>	<u>Actual</u>	<u>Variance Favorable (Unfavorable)</u>
Revenues				
Property taxes				
Current secured	\$ 22,000	\$ 22,000	\$ 24,517	\$ 2,517
Current unsecured	-	-	502	502
Current secured - supplemental	-	-	305	305
Current unsecured - supplemental	-	-	7	7
Prior years	-	-	1,245	1,245
Total property taxes	<u>22,000</u>	<u>22,000</u>	<u>26,576</u>	<u>4,576</u>
Use of money and property - interest	<u>1,500</u>	<u>1,500</u>	<u>1,170</u>	<u>(330)</u>
Aid from other governmental agencies				
Homeowners' property tax relief	-	-	188	188
Contributions from other governmental agencies	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total aid from other governmental agencies	<u>-</u>	<u>-</u>	<u>188</u>	<u>188</u>
Grants				
State - other	3,101,346	3,101,346	2,061,852	(1,039,494)
Federal - other	<u>193,926</u>	<u>193,926</u>	<u>77,358</u>	<u>(116,568)</u>
Total grants	<u>3,295,272</u>	<u>3,295,272</u>	<u>2,139,210</u>	<u>(1,156,062)</u>
Other revenue				
Other funds - special district augmentation fund	40,900	40,900	37,160	(3,740)
Contributions and donations	-	-	125	125
Other revenue	-	-	33	33
Other revenue	<u>254,168</u>	<u>254,168</u>	<u>184,073</u>	<u>(70,095)</u>
Total other revenue	<u>295,068</u>	<u>295,068</u>	<u>221,391</u>	<u>(73,677)</u>
Total revenues	<u>\$ 3,613,840</u>	<u>\$ 3,613,840</u>	<u>\$ 2,388,535</u>	<u>\$ (1,225,305)</u>

RESOURCE CONSERVATION DISTRICT OF SANTA CRUZ COUNTY

Budgetary Comparison Schedule - Expenditures -

Budget and Actual - General Fund

For the Year Ended June 30, 2015

	2015			
	Final Budget	Adjusted Final Budget	Actual	Variance Favorable (Unfavorable)
Expenditures				
Salaries and employee benefits				
Regular pay	\$ 718,095	\$ 718,095	\$ 643,973	\$ 74,122
Social security	44,522	44,522	46,699	(2,177)
Employee insurance and benefits	172,343	172,343	69,717	102,626
Unemployment insurance	35,059	35,059	5,568	29,491
Workers' compensation	6,165	6,165	2,983	3,182
Total salaries and employee benefits	<u>976,184</u>	<u>976,184</u>	<u>768,940</u>	<u>207,244</u>
Services and supplies				
Telephone	4,500	4,500	5,759	(1,259)
Insurance	20,804	20,804	12,023	8,781
Memberships	3,474	3,474	2,661	813
Postage	2,877	2,877	1,131	1,746
Supplies	57,676	57,676	10,527	47,149
Accounting and auditing	41,548	41,548	32,641	8,907
Legal services	18,258	18,258	1,935	16,323
Professional services	2,416,337	2,416,337	1,457,414	958,923
Publication printing costs	12,098	12,098	5,738	6,360
Legal notices	881	881	-	881
Rents and leases - structures	61,781	61,781	61,337	444
Special district expense - services	36,353	36,353	33,411	2,942
Mileage	22,978	22,978	16,091	6,887
Utilities	3,224	3,224	3,522	(298)
Total service and supplies	<u>2,702,789</u>	<u>2,702,789</u>	<u>1,644,190</u>	<u>1,058,599</u>
Fixed assets - equipment	<u>26,228</u>	<u>26,228</u>	<u>-</u>	<u>26,228</u>
Appropriations for contingencies	<u>251,105</u>	<u>251,105</u>	<u>-</u>	<u>251,105</u>
Total expenditures	<u>\$ 3,956,306</u>	<u>\$ 3,956,306</u>	<u>\$ 2,413,130</u>	<u>\$ 1,543,176</u>

RESOURCE CONSERVATION DISTRICT OF SANTA CRUZ COUNTY

Budgetary Comparison Schedule - Revenues

Budget and Actual - General Fund

For the Year Ended June 30, 2016

	2016			
	Final Budget	Adjusted Final Budget	Actual	Variance Favorable (Unfavorable)
Revenues				
Property taxes				
Current secured	\$ 22,000	\$ 22,000	\$ 26,226	\$ 4,226
Current unsecured	-	-	523	523
Current secured - supplemental	-	-	539	539
Current unsecured - supplemental	-	-	38	38
Prior years	-	-	1,833	1,833
Total property taxes	<u>22,000</u>	<u>22,000</u>	<u>29,159</u>	<u>7,159</u>
Use of money and property - interest	<u>510</u>	<u>510</u>	<u>1,917</u>	<u>1,407</u>
Aid from other governmental agencies				
Homeowners' property tax relief	-	-	189	189
Contributions from other governmental agencies	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total aid from other governmental agencies	<u>-</u>	<u>-</u>	<u>189</u>	<u>189</u>
Grants				
State - other	3,329,064	3,329,064	2,186,124	(1,142,940)
Federal - other	<u>547,905</u>	<u>547,905</u>	<u>209,166</u>	<u>(338,739)</u>
Total grants	<u>3,876,969</u>	<u>3,876,969</u>	<u>2,395,290</u>	<u>(1,481,679)</u>
Other revenue				
Other funds - special district augmentation fund	40,900	40,900	41,289	389
Contributions and donations	-	-	8,008	8,008
Other revenue	-	-	58	58
Other revenue	<u>679,488</u>	<u>679,488</u>	<u>399,339</u>	<u>(280,149)</u>
Total other revenue	<u>720,388</u>	<u>720,388</u>	<u>448,694</u>	<u>(271,694)</u>
Total revenues	<u>\$ 4,619,867</u>	<u>\$ 4,619,867</u>	<u>\$ 2,875,249</u>	<u>\$ (1,744,618)</u>

RESOURCE CONSERVATION DISTRICT OF SANTA CRUZ COUNTY  
 Budgetary Comparison Schedule - Expenditures -  
 Budget and Actual - General Fund  
 For the Year Ended June 30, 2016

	2016			
Expenditures	Final Budget	Adjusted Final Budget	Actual	Variance Favorable (Unfavorable)
Salaries and employee benefits				
Regular pay	\$ 719,965	\$ 719,965	\$ 656,577	\$ 63,388
Social security	44,638	44,638	48,216	(3,578)
Employee insurance and benefits	191,151	191,151	70,636	120,515
Unemployment insurance	5,304	5,304	6,122	(818)
Workers' compensation	4,680	4,680	3,426	1,254
Total salaries and employee benefits	<u>965,738</u>	<u>965,738</u>	<u>784,977</u>	<u>180,761</u>
Services and supplies				
Telephone	6,840	6,840	5,368	1,472
Insurance	15,000	15,000	12,063	2,937
Memberships	4,000	4,000	2,526	1,474
Postage	3,342	3,342	775	2,567
Supplies	43,237	43,237	11,262	31,975
Accounting and auditing	30,000	30,000	27,919	2,081
Legal services	12,000	12,000	3,585	8,415
Professional services	3,359,653	3,359,653	1,805,586	1,554,067
Publication printing costs	4,500	4,500	20,058	(15,558)
Legal notices	-	-	-	-
Rents and leases - structures	66,000	66,000	62,248	3,752
Special district expense - services	113,082	113,082	29,815	83,267
Mileage	10,691	10,691	8,709	1,982
Utilities	3,900	3,900	2,777	1,123
Total service and supplies	<u>3,672,245</u>	<u>3,672,245</u>	<u>1,992,691</u>	<u>1,679,554</u>
Fixed assets - equipment	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Appropriations for contingencies	<u>197,505</u>	<u>197,505</u>	<u>-</u>	<u>197,505</u>
Total expenditures	<u>\$ 4,835,488</u>	<u>\$ 4,835,488</u>	<u>\$ 2,777,668</u>	<u>\$ 2,057,820</u>



**Resource Conservation District of Santa Cruz County**  
**Budget Comparison Schedule - Revenues**  
**Budget and Actual - General Fund**  
**For the Year Ended June 30, 2017**

	Budgeted Amounts		Actual	Variance with Final Budget
	Original	Final	Amounts	Positive (Negative)
REVENUES:				
Property taxes				
Current secured	\$ 22,000	\$ 22,000	\$ 28,112	\$ 6,112
Current unsecured	-	-	565	565
Current secured - supplemental	-	-	517	517
Current unsecured - supplemental	-	-	20	20
Prior years	-	-	2,290	2,290
Total property taxes	22,000	22,000	31,504	9,504
Use of money and property - interest	750	750	4,077	3,327
Aid from other governmental agencies				
Homeowners' property tax relief	-	-	188	188
Total aid from other governmental agencies	-	-	188	188
Grants				
State - Department of Parks and Recreation	110,958	110,958	-	(110,958)
State - Water Resources Control Board	644,464	644,464	-	(644,464)
State - other	1,204,090	1,204,090	1,340,769	136,679
Federal - other	206,059	206,059	180,558	(25,501)
Total grants	2,165,571	2,165,571	1,521,327	(644,244)
Other revenue				
Other funds - special district augmentation fund	40,900	40,900	41,289	389
Contributions and donations	-	-	28,050	28,050
RDA Pass-Throughs	-	-	56	56
Other revenue	778,605	778,605	734,473	(44,132)
Total other revenue	819,505	819,505	803,868	(15,637)
Total revenues	\$ 3,007,826	\$ 3,007,826	\$ 2,360,964	\$ (646,862)

**Resource Conservation District of Santa Cruz County**  
**Budget Comparison Schedule - Expenditure**  
**Budget and Actual - General Fund**  
**For the Year Ended June 30, 2017**

Expenditures	Budgeted Amounts		Actual Amounts	Variance with Final Budget Positive (Negative)
	Original	Final		
Salaries and employee benefits				
Regular pay	\$ 693,191	\$ 693,191	\$ 708,024	\$ (14,833)
Social security	42,978	42,978	52,512	(9,534)
Employee insurance and benefits	184,043	184,043	74,580	109,463
Unemployment insurance	11,486	11,486	6,800	4,686
Workers' compensation	7,209	7,209	4,600	2,609
Total salaries and employee benefits	938,907	938,907	846,516	92,391
Services and supplies				
Telephone	7,218	7,218	5,862	1,356
Insurance	15,000	15,000	14,312	688
Memberships	4,500	4,500	2,640	1,860
Postage	600	600	346	254
Supplies	23,000	23,000	(46)	23,046
Accounting and auditing	24,000	24,000	26,702	(2,702)
Legal Services	5,000	5,000	9,234	(4,234)
Professional services	2,098,415	2,098,415	1,387,541	710,874
Publication printing costs	3,750	3,750	-	3,750
Rents and leases - structures	42,900	42,900	38,748	4,152
Special district expense - services	34,146	34,146	122,671	(88,525)
Mileage	4,542	4,542	4,799	(257)
Utilities	3,400	3,400	2,779	621
Credit Card Fees	-	-	47	(47)
Total Services and supplies	2,266,471	2,266,471	1,615,635	650,836
Appropriations for contingencies	145,614	145,614	-	145,614
Total expenditures	\$ 3,350,992	\$ 3,350,992	\$ 2,462,151	\$ 888,841

**Resource Conservation District of Santa Cruz County**  
**Budget Comparison Schedule - Revenues**  
**Budget and Actual - General Fund**  
**For the Year Ended June 30, 2018**

	Budgeted Amounts		Actual	Variance with Final Budget Positive (Negative)
	Original	Final	Amounts	
REVENUES:				
Property taxes				
Current secured	\$ 22,000	\$ 22,000	\$ 29,685	\$ 7,685
Current unsecured	-	-	577	577
Current secured - supplemental	-	-	682	682
Current unsecured - supplemental	-	-	13	13
Residual distribution	-	-	2,883	2,883
Prior years	-	-	86	86
In-lieu taxes other			10	10
Total property taxes	22,000	22,000	33,936	11,926
Use of money and property - interest	1,250	1,500	4,980	3,480
Aid from other governmental agencies				
Homeowners' property tax relief	-	-	186	186
Total aid from other governmental agencies	-	-	186	186
Grants				
State - Water Resources Control Board	367,195	334,363	105,546	(228,817)
State - other	2,125,085	2,143,259	1,084,689	(1,058,570)
Federal - other	218,048	211,944	162,973	(48,971)
Total grants	2,710,328	2,689,566	1,353,208	(1,336,358)
Other revenue				
Other funds - special district augmentation fund	40,900	40,900	41,289	389
Contributions and donations	-	-	22,364	22,364
RDA pass-throughs	-	-	57	57
Other revenue	668,989	895,226	837,397	(57,829)
Total other revenue	709,889	936,126	901,107	(35,019)
Total revenues	\$ 3,443,467	\$ 3,649,192	\$ 2,293,417	\$ (1,355,785)

**Resource Conservation District of Santa Cruz County**  
**Budget Comparison Schedule - Expenditure**  
**Budget and Actual - General Fund**  
**For the Year Ended June 30, 2018**

Expenditures	Budgeted Amounts		Actual Amounts	Variance with Final Budget Positive (Negative)
	Original	Final		
Salaries and employee benefits				
Regular pay	\$ 650,845	\$ 690,448	\$ 646,128	\$ 44,320
Social security	40,353	42,809	48,145	(5,336)
Employee insurance and benefits	185,814	197,119	71,544	125,575
Unemployment insurance	4,616	4,863	4,774	89
Workers' compensation	8,138	8,632	3,855	4,777
Total salaries and employee benefits	889,766	943,871	774,446	169,425
Services and supplies				
Telephone	6,540	6,540	5,372	1,168
Insurance	15,000	15,000	9,571	5,429
Memberships	7,250	6,000	4,683	1,317
Postage	1,200	1,200	78	1,122
Supplies	1,200	1,200	1,526	(326)
Accounting and auditing	27,000	24,000	25,628	(1,628)
Legal Services	8,700	8,700	3,600	5,100
Professional services	2,740,068	2,725,264	1,408,413	1,316,851
Publication printing costs	1,200	1,200	-	1,200
Rents and leases - structures	42,660	42,660	41,980	680
Special district expense - services	75,399	178,818	151,870	26,948
Mileage	6,185	9,007	2,395	6,612
Utilities	3,000	3,000	2,617	383
Credit Card Fees	-	-	35	(35)
Total Services and supplies	2,935,402	3,022,589	1,657,768	1,364,821
Equipment	10,000	10,000	10,000	-
Appropriations for contingencies	90,055	172,698	-	172,698
Total expenditures	\$ 3,925,223	\$ 4,149,158	\$ 2,442,214	\$ 1,706,944

**Resource Conservation District of Santa Cruz County**  
**Budget Comparison Schedule - Revenues**  
**Budget and Actual - General Fund**  
**For the Year Ended June 30, 2019**

	Budgeted Amounts		Actual	Variance with Final Budget Positive (Negative)
	Original	Final	Amounts	
REVENUES:				
Property taxes				
Current secured	\$ 30,516	\$ 30,516	\$ 31,516	\$ 1,000
Current unsecured	-	-	633	633
Current secured - supplemental	-	-	956	956
Current unsecured - supplemental	-	-	42	42
Residual distribution	-	-	3,416	3,416
Prior years	-	-	82	82
In-lieu taxes other	-	-	10	10
Total property taxes	30,516	30,516	36,655	6,139
Use of money and property - interest	4,000	4,000	9,003	5,003
Aid from other governmental agencies				
Homeowners' property tax relief	-	-	186	186
Total aid from other governmental agencies	-	-	186	186
Grants				
State - Water Resources Control Board	481,418	481,418	117,404	(364,014)
State - other	1,594,292	1,594,292	869,663	(724,629)
Federal - other	300,812	300,812	160,423	(140,389)
Total grants	2,376,522	2,376,522	1,147,490	(1,229,032)
Other revenue				
Other funds - special district augmentation fund	42,538	42,538	41,289	(1,249)
Contributions and donations	-	-	2,517	2,517
RDA pass-throughs	-	-	97	97
Other revenue	927,044	927,044	659,596	(267,448)
Total other revenue	969,582	969,582	703,499	(266,083)
Total revenues	\$ 3,380,620	\$ 3,380,620	\$ 1,896,833	\$ (1,483,787)



**Resource Conservation District of Santa Cruz County**  
**Budget Comparison Schedule - Expenditure**  
**Budget and Actual - General Fund**  
**For the Year Ended June 30, 2019**

Expenditures	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final		Positive (Negative)
Salaries and employee benefits				
Regular pay	\$ 684,882	\$ 684,882	\$ 621,827	\$ 63,055
Social security	41,832	41,832	46,250	(4,418)
Employee insurance and benefits	114,466	114,466	81,784	32,682
Unemployment insurance	4,665	4,665	4,359	306
Workers' compensation	8,561	8,561	3,239	5,322
Total salaries and employee benefits	854,406	854,406	757,459	96,947
Services and supplies				
Telephone	7,980	7,980	5,526	2,454
Insurance	15,470	15,470	9,616	5,854
Memberships	4,000	4,000	1,195	2,805
Postage	600	600	529	71
Supplies	5,900	5,900	1,082	4,818
Accounting and auditing	30,000	30,000	27,296	2,704
Legal Services	11,850	11,850	10,450	1,400
Professional services	2,308,368	2,308,368	980,945	1,327,423
Publication printing costs	600	600	-	600
Rents and leases - structures	45,000	45,000	46,833	(1,833)
Special district expense - services	221,017	221,017	80,977	140,040
Mileage	10,075	10,075	4,725	5,350
Utilities	3,300	3,300	3,139	161
Credit Card Fees	-	-	24	(24)
Other	-	-	-	-
Total Services and supplies	2,664,160	2,664,160	1,172,337	1,491,823
Appropriations for contingencies	140,851	140,851	-	140,851
Total expenditures	\$ 3,659,417	\$ 3,659,417	\$ 1,929,796	\$ 1,729,621

**APPENDIX B:**

**RCD**

**Annual Reports**

**(2010 to 2019)**

2010-2012 Annual Report

# Resource Conservation District *of Santa Cruz County*



local solutions. real results.



# Our Mission

*To help people protect, conserve and restore natural resources through information, education and technical assistance programs.*

## Inside this report

- 3** Executive Director's Report
- 4** Managing Stormwater at the Source
- 5** Partnerships Help Weed Management Areas Stay Active
- 5** Uncovering the Economic Benefits of Natural Resource Conservation
- 6** Reducing the Impacts of Wildfire
- 6** RCD Chipper Program
- 8** Removing Permitting Barriers for Environmental Projects Gets Results
- 9** AmeriCorps Program Supports Natural Resource Conservation and Provides Opportunities for College Graduates
- 10** RCD Helps Put the Coast Dairies Property Plan into Action
- 11** Opportunities for Integrated Watershed Restoration
- 12** Expanded Conservation Support for Spanish Speaking Growers
- 12** Assisting Growers with Irrigation and Nutrient Efficiency
- 14** Pajaro Valley Community Water Dialogue
- 16** The RCD and NRCS Partnership Benefitting Landowners for More than 70 Years
- 17** Connecting Kids to Conservation
- 18** Strategic Fund Development Plan Helps Secure the Future of the RCD Mission
- 18** Watsonville Slough Farm Management Plan Completed
- 19** Performance-Based Conservation Incentives in the Pajaro Valley

## RCD Board of Directors

Jim McKenna, President  
Mike Manfre, Vice President  
Gordon Claassen, Director  
Howard Liebenberg, Director  
David Moeller, Director  
John Ricker, Director  
Roberta Smith, Director

## RCD Staff

Karen Christensen, Executive Director  
Sharon Corkrean, Director of Finance  
Kelli Camara, Program Director  
Susan Pearce, Program Director  
Nik Strong-Cvetich, Program Development Manager  
Arianne Rettinger, Grant Manager  
Angela Gruys, Communications Specialist  
Karl Fieberling, Grant Administrator  
Bryan Frueh, Program Specialist  
Soonil Gillett, Program Specialist  
Michael Johnson, Program Specialist  
Sacha Lozano, Program Specialist  
Stacie Ruffoni, Program Specialist  
Deborah Nares, Agricultural Program Specialist  
Tangi Chapman, Executive Assistant  
Lea Haratani, Program Assistant  
John Morley, Program Assistant  
Ingrid Gain, IT Support

Technical Assistance is Provided in Cooperation with the Natural Resources Conservation Service (NRCS) LPO Staff

Richard Casale, District Conservationist  
Angie Quintana-Jones, Soil Conservationist



## Executive Director's Report

Since 2010, the Resource Conservation District of Santa Cruz County has focused on new and innovative ways to serve our community, even in the face of funding cuts, a slow economy, and fiscal uncertainties. We have recovered from the economic meltdown and California state budget crisis of the 2008-2009 fiscal year and have been able to continue and even expand on our important work.

We have continued our efforts on watershed protection, stewardship and restoration, primarily using the Integrated Watershed Restoration Program (IWRP) planning and framework. We achieved great results by utilizing our Permit Coordination Program. The Program was renewed in 2010 for an additional 10 years. We were able to continue work and complete more livestock and land and road improvement projects, reducing large amounts of sediment, nitrogen and fecal coliform going into local waterways.

We have greatly expanded our services for the agricultural community in Santa Cruz, primarily focusing in the Pajaro Valley and the Watsonville Sloughs watershed. We launched a large outreach and assistance program providing services to Spanish speaking growers. We are providing one on one

technical assistance for growers seeking to reduce their water and nutrient use and are working with farmers countywide to develop new frameworks that incentivise conservation actions based on performance.

In addition, the RCD, with funding from the Gordon and Betty Moore Foundation and in partnership with the Sonoma County Open Space and Ag Preservation District and the Santa Clara Open Space District has begun an Ecosystem Services Initiative which aims to assess the economic value of natural systems in the region. The initiative will build tools, analyses and policy conditions over time that are expected to shift how conservation is understood by decision makers and the public and expand the breadth and depth of conservation investments.

On top of these programs and specific assistance we are offering to the community, the RCD continues to focus on finding innovative solutions to conservation through partnership and cooperative approaches.



*Karen Christensen, Executive Director*

### RCD Fiscal Year 2010–2011 Budget

July 1, 2010–June 30, 2011

Income Sources		Expenses	
Interest	\$4,587.00	Professional Services & Project Implementation	\$2,023,388.00
Local & Private Sources	\$22,979.00	Salaries	\$792,543.00
Augmentation Funds	\$28,902.00	Operating Expenses	\$158,074.00
Other Revenue Grants	\$2,962,395.00		
Donations	\$10,020.00		
<b>Total</b>	<b>*\$3,028,883.00</b>	<b>Total</b>	<b>*\$2,974,005.00</b>

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

### RCD Fiscal Year 2011–2012 Budget\*\*

July 1, 2011–June 30, 2012

Income Sources		Expenses	
Interest	\$3465.74	Professional Services & Project Implementation	\$ 1,653,652.97
Local & Private Sources	\$22,928.62	Salaries	\$954,956.54
Augmentation Funds	\$28,902.00	Operating Expenses	\$170,278.96
Other Revenue Grants	\$2,487,142.70		
Donations	\$16,060.00		
<b>Total</b>	<b>*\$2,558,499.06</b>	<b>Total</b>	<b>*\$ 2,778,888.47</b>

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

\*\* The 2011-2012 Fiscal Year budget has NOT been finalized and audited



## Managing Stormwater at the Source

Since 1996, the RCD has been coordinating and managing the Rural Roads Erosion Control Assistance Program (RRECAP). The RRECAP program works directly with landowners to improve eroding rural roads in order to reduce the amount of sediment entering local waterways. Sediments have direct and indirect impacts to coho and steelhead, which are found in local watersheds, as well as coastal marine ecosystems that are part of the Monterey Bay National Marine Sanctuary.

In 2009 the “Home Drainage” component was added to the program. It works to reduce the impacts of road runoff at the source by working with landowners who own properties adjacent to roads. Through outreach, workshops and tours, technical assistance, and financial incentives, RRECAP has helped private road associations, road managers, private landowners and public entities improve the conditions of their roads, thus reducing sediment transport to nearby waterways. The program not only assisted with direct improvements to rural roads but worked with adjacent property owners to reduce runoff from individual properties, leading to more easily managed drainage erosion control on the surrounding roads.

In December 2010, the RCD completed a fourth EPA Clean Water Act 319(h) grant managed by the State Water Resources Control Board. Some of the key accomplishments were assessing over 88 miles of rural private roads, designing, permitting and implementing 18 rural road demonstration projects, and completing 14 home drainage designs and five demonstration projects. As part of this grant, the RCD published the popular *Slow it. Spread it. Sink it!* home drainage guide and a rural roads

newsletter for distribution throughout the community. The RCD also facilitated nine workshops and technical trainings for landowners, contractors, and resource professionals, plus conducted a tour of successful and exemplary project sites.

In 2011, the RCD, with assistance from NRCS, designed, permitted and constructed two additional rural roads projects in partnership with the non-profit Sempervirens Fund and the California Department of Fish and Game. The projects represent examples of road management and maintenance techniques that can be transferred to other locations managed by these organizations.

The RCD also contracted with the City of Santa Cruz to conduct home drainage outreach to city residents and distribute the *Slow it. Spread it. Sink it!* guide. We held a public workshop that addressed stormwater issues and highlighted practical changes that homeowners could make on their own properties to reduce stormwater impacts. We also displayed the guide at several local landscape and home improvement stores and tabled at various events.

In 2011 the RCD and the Soquel Creek Water District applied for and were awarded an Urban Greening grant from the California Natural Resources Agency. The grant helped to fund the installation of a variety of Low Impact Development features at the Water District headquarters that mimic the *Slow it. Spread it. Sink it!* concepts of keeping runoff away from streets and infiltrating it back into the ground. The first phase of the project was installed in 2010 with funds from the 319(h) grant and the second and final phase is due to be installed in the fall of 2012 with funds from the Urban Greening grant.

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**Phase I of the Soquel Creek Water District Project includes a rain garden, cistern for irrigation, an infiltration pit, and site appropriate planting.**

## Partnerships Help Weed Management Areas Stay Active

The Santa Cruz County Weed Management Area (WMA) continues to serve as an informational hub for both private and public parties interested in invasive plant species management. In 2011, the WMA was chaired by RCD and led by a steering committee made up of invasive species specialists from around the county. Budget cuts forced the California Department of Food and Agriculture to cut funding for WMAs, forcing them to seek out alternative sources of financing to remain active and effective. Partnerships with RCDs, CAL-IPC, California Native Plant Society, California State Parks, Swanton Pacific Ranch, the US Fish and Wildlife Service, and the National Fish and Wildlife Foundation will be integral to a viable future for the WMA's continued efforts to curb the heavy-handed influence of invasive species on our native plant communities and, in turn, our native fauna.

In partnership with the Monterey County WMA, the Santa Cruz WMA and a number of other local entities presented the 13th Annual Central Coast Invasive Species Symposium at Laguna Seca Raceway in 2011. The Symposium featured presentations from experts on invasive threats and

management strategies, and offered continuing education credits for professionals in the weed management field. The Symposium received positive reviews from attendees and another Symposium is planned for November of 2012 in Felton.



**AmeriCorps Watershed Stewards Project member Leah Healy removes invasive weeds as part of her service project.**

## Uncovering the Economic Benefits of Natural Resource Conservation

Most people think of investments in natural resource conservation as *costs*, which can only be afforded in times of economic affluence (a luxury of sorts), and justifiably need to be cut back in times of economic stagnation. This viewpoint results from an incomplete assessment of the true value of the ecosystem and the impact of conservation investments in the regional economy. Only rarely do cost/benefit analyses of such investments (and others like built infrastructure or economic development projects) actually include the economic benefits of natural systems and conservation in the picture. But this is soon to be changed for at least three counties in California.

Courtesy of a generous grant from the Gordon and Betty Moore Foundation, the Resource Conservation District of Santa Cruz County (RCD), with Santa Clara County Open Space Authority (SCCOSA), and Sonoma County Agricultural Preservation and Open Space District (SCAPOSOD)---collectively known as SC3 --- are working collaboratively to

evaluate the economic benefits (e.g. avoided costs, market and non-market value flow, increased property value, jobs) associated with conservation and *natural capital* in their counties. This project, known as the SC3 Ecosystem Services Initiative, is beginning in 2012.

The Initiative aims at assessing the economic value of natural systems in the region, return on past investments in conservation (over the past 30 years) and establishing a defensible baseline and model to predict potential economic return of alternative future investment scenarios. To do this, the SC3 collective is partnering with an expert team from the non-profit *Earth Economics* to conduct a rigorous valuation of ecosystem services in the three counties, and produce powerful information tools that can be used to assess and communicate the economic significance of natural resource conservation in the region to a broad range of audiences. Ultimately, the three participating agencies seek to better inform various decision-making processes affecting land use and economic development, and to form new alliances with non-traditional partners, to support conservation efforts in the three counties.

*“I can’t tell you how excited we are to partner with [the Santa Cruz RCD] and the SC3 group.”*

—David Batker, Executive Director, Earth Economics

## Reducing the Impacts of Wildfire

Since 2008, five large wildfires have burned over 13,900 acres in Santa Cruz County, destroying over 233 structures and costing the state over \$35.3 million in suppression costs. There continues to be significant potential for catastrophic fires near large numbers of homes in Santa Cruz County. Because many wildland areas adjacent to communities have not burned for more than 100 years, there is a significant buildup of vegetation which creates fuel for future wildfires. Further, Santa Cruz County lacks a network of strategically located fuelbreaks which are critical for accessing and halting the progress of wildfire.

The RCD is administering the Fuels Reduction Partnership grant which relies on the collaboration of a number of community and agency stakeholders to complete three large scale fuel load reduction projects. These shaded fuelbreaks located along strategic ridgelines will serve as a major development in creating an integrated fire defense system. Such a system has been identified as a high priority for Santa Cruz County in the Santa Cruz and San Mateo Counties' Community Wildfire Protection Plan. The Bonny Doon project will create 2.4 miles of fuel reduction zone along Empire Grade, a main public road and ridgeline in Bonny Doon. The Hinckley Ridge project is located on the western boundary of Nisene Marks State Park and will act as a two mile long fuelbreak along the northeast to southwest trending ridge from Sand Point down to the top of Glen Haven Road. Approximately 212 highly flammable eucalyptus trees will be removed and the project will tie into a CAL FIRE ridgeline fuelbreak from Buzzard Lagoon

Road toward Sand Point on Aptos Creek Fire Road. The South Skyline project, including Kings Creek Truck Trail (KCTT) and Highway 35 fuelbreaks, will create four miles of fuelbreak along existing ridge roads and will connect to previously implemented fuel load reduction zones to create a more contiguous fuelbreak. RCD and its partners will create these fuelbreaks using several methods, including hand labor for falling, thinning, limbing, bucking, piling and pile burning, as well as using heavy machinery for chipping and mastication.

In addition to the creation of these fuelbreaks, the Fuels Reduction Program has been part of an important partnership effort for both fuels reduction work and for education and outreach. The RCD has worked closely with CAL FIRE and local Fire Safe Councils, including Bonny Doon Fire Safe Council, Soquel Fire Safe Council, and South Skyline Fire Safe Council to identify and implement these fuelbreaks and also to educate and inform local residents regarding wildfire prevention and defensible space.

*"The RCD Chipper Program is a critical component of vegetative fuel load reduction projects. With the high number of homes in the Wildland Urban Interface, this program is a huge benefit to homeowners by helping them create and maintain defensible space."*

—Angela Bernheisel, CAL FIRE  
Soquel Demonstration State Forest Manager

## RCD Chipper Program

Large wildfires in the Santa Cruz Mountains in 2008 and 2009, including the Summit Fire and the Lockheed Fire, highlighted the need for increased fuel load reduction outreach and coordinated activities in Santa Cruz County. This inspired the RCD, in coordination with CAL FIRE and the local Fire Protection Districts and Fire Safe Councils, to develop the RCD Chipper Program. The Chipper Program offered a monetary incentive for fuel load reduction projects in "high fire risk" areas and provided educational and informational outreach to County residents. Grant-funded chipping service were available to organized communities in Santa Cruz County's Wildland Urban Interface (WUI) neighborhoods to assist residents in home protection and to comply with State and County defensible space regulations.

A total of 24 fuel reduction projects in the Santa Cruz County WUI were completed through the RCD Chipper Program. Defensible space was enhanced around homes and structures and roadway clearance on over 108 acres, benefitting 3,143 residents in 975 homes. This program also generated an array of informational and educational materials designed to educate County residents about fire safety, wildfire threats and defensible space. In addition, the RCD and its partners gave a number of presentations and workshops intended to foster a cultural shift in wildfire threat awareness and prevention strategies. This outreach has enabled the RCD to connect with thousands of County residents to improve their understanding of the critical significance of and need for wildfire prevention, as identified in the recently adopted Santa Cruz/San Mateo Community Wildfire Protection Plan.





**before**



**Before clearing the thick understory vegetation is fuel for fire and allows fire to easily spread. Note the obscured barn.**

**after**



**Post project, the vegetation is thinned to reduce fire danger along the road. Note the visibility of the barn after the project.**

## Removing Permitting Barriers for Environmental Projects Gets Results

The Santa Cruz Countywide Partners in Restoration Permit Coordination Program (Program) was developed by the RCD and partners in order to assist landowners in navigating the complex array of permits needed when completing conservation projects. Working in and around streams and riparian areas and in sensitive habitat can be prohibitively difficult, costly, and time consuming. The Program permit was renewed in 2009-2010 for another (10 years) and has secured pre-approved permits for 15 types of restoration projects that meet specific criteria. This has allowed landowners to move forward with important conservation projects in Santa Cruz County and beyond.

Between 2010 and 2011, 16 conservation projects were implemented by the RCD. The projects improved 0.2 miles of salmonid streams, restored 11 acres of wetland, grassland, and riparian habitat, and prevented more than 2,600 tons of sediment from entering impaired water bodies. Three example projects are described below.

In partnership with the Natural Resources Conservation Service (NRCS) and the City of Santa Cruz, two deteriorated road culverts were removed and replaced with low maintenance open channel conveyance systems to improve water quality in Arana Gulch. The outfalls

were stabilized by creating boulder cascades to dissipate turbulent flows.

The RCD and NRCS completed Phase II of the California Red-legged Frog (CRLF) Enhancement Project. This project is part of a larger effort to support CRLF breeding recovery on Watsonville Slough Farms (owned by the Land Trust of Santa Cruz County) and in the Watsonville Sloughs system. The project improved critical habitat for CRLF and will provide expanded habitat opportunities for a suite of native amphibians, reptiles, and birds, along with improving water quality in the Middle Watsonville Slough system. With the collaborative efforts of Watsonville Wetlands Watch, the project improved habitat, water quality, and provided educational opportunities for volunteers and students at Pajaro Valley High School.

The RCD and NRCS implemented a gully repair project to reduce the negative impacts on Larkin Valley wetland habitat from sedimentation in order to improve habitat for the Santa Cruz Long-toed Salamander and the California Red-legged Frog. Enhancements to migration corridors through the connection of upland habitat with existing breeding ponds were also achieved. This project was part of the RCD's Salamander Recovery Program, launched in 2010 in partnership with the US Fish and Wildlife Service, the California Department of Fish and Game, and the California Coastal Conservancy.

after



**As part of the California Red-legged Frog Enhancement Project, the RCD and NRCS completed construction of a pond at Watsonville Slough Farms to support frog breeding and provide habitat for other native amphibians, reptiles and birds.**

before





## 2010-2011 Permit Coordination Project Highlights

**RESTORED** ..... **11 acres of wetland, grassland, and riparian habitat**

**IMPROVED** ..... **0.2 miles of salmonid streams**

**PREVENTED** ..... **2,600 tons of sediment from entering impaired water bodies**



## AmeriCorps Program Supports Natural Resource Conservation and Provides Opportunities for College Graduates

The AmeriCorps Watershed Stewards Project (WSP) is another important partner to the RCD. The WSP places AmeriCorps volunteers in coastal watersheds throughout California to work toward the mission to conserve, restore, and enhance anadromous watersheds for future generations.

The RCD is currently in its second year as an AmeriCorps volunteers hosting site. The volunteers work in teams of two for 10 ½ month terms on projects that serve both the RCD and WSP missions. Volunteers get hands on experience working in the field of natural resource management and the RCD gets help with project support, maintenance and monitoring. Nicolas Viveros and John Morley joined the RCD team from October 2009 through 2010. They built upon existing relationships and also fostered new connections within the community to further the mission of soil and water conservation.

In 2011, Leah Healy and Carmen Tan came on board and furthered many of the responsibilities and relationships that started during the first year of WSP's partnership with the RCD. Carmen and Leah spearheaded Volunteers to Save Soquel Creek, an effort to manage invasive plant species on a riparian easement. On December 21, 2011, they were spotlighted in the Santa Cruz Sentinel describing their work in local watersheds and the partnership they had found with the RCD.

Each member must undertake an Individual Service Project (ISP) and recruit a minimum of 15 volunteers to assist in completing the project. Members' ISPs have included invasive species removal in critical California Red-legged Frog habitat and Cape Ivy removal along Soquel Creek.

The RCD looks forward to continuing its partnership with WSP and hosting another team of volunteers to help restore and improve Santa Cruz County watersheds in 2012-2013.



## RCD Helps Put the Coast Dairies Property Plan into Action

In 2009, the federal Bureau of Land Management (BLM) hired the RCD to provide an updated assessment of land resources and conditions on the Coast Dairies property in northern Santa Cruz County. As the BLM prepared to take ownership of the property, the agency wanted to get a sense of the current conditions on the property, the resource concerns to be aware of, and any potential for restoration or conservation projects that might be undertaken. One of the key opportunities identified was restoration of San Vicente Creek, which is the only stream on the Coast Dairies property currently known to support remnant populations of coho salmon and steelhead trout. San Vicente Creek is also designated by the National Marine Fisheries Service (NMFS) as a priority watershed for recovery of Central California Coast coho salmon. Following the 2009 recommendations, the RCD implemented two major restoration projects on San Vicente Creek to improve habitat for salmonids.

The first of the two projects was installed in 2009 in the upper reach of the creek and involved reconnecting a backwater area along the creek with the main channel. This created a series of pools that provide winter refuge and summer rearing habitat for coho (*Oncorhynchus kisutch*) and steelhead (*Oncorhynchus mykiss*).

The second project, completed in 2011, is downstream from the first along a reach of San Vicente Creek severely lacking in woody material, pools, and spawning gravels. The RCD, with assistance from its partners, installed eight large structures, consisting of large logs, root wads and boulders, placed and/or anchored along and within the stream channel. The project is intended to enhance adult and juvenile coho salmon and steelhead rearing habitat, increase channel complexity, and reactivate nearby floodplains while the natural process of large

**Soonni Gillett of the RCD and AmeriCorps volunteers complete a survey of the large woody material project on San Vicente Creek.**



woody material accumulation takes place and creates new pools. The National Marine Fisheries Service Public Draft Recovery Plan for Central California Coast Coho Salmon Evolutionarily Significant Unit specifically indicates that large woody material structures clearly influences the health and recovery of salmonid populations, thus this project was intended to respond to that directive.

These restoration projects represent an important example of the successful collaboration of Federal, State, and local partners, including the RCD, the USDA Natural Resources Conservation Service, National Oceanic and Atmospheric Administration, State Coastal Conservancy, Department of Fish and Game, the Bureau of Land Management, The Nature Conservancy, the Trust for Public Land and the Moore Family Foundation. A portion of the funds for this project were part of the American Recovery and Reinvestment Act of 2009 and the Clean Water State Revolving Fund.

## Education and Outreach on San Vicente Creek

San Vicente Creek has provided diverse educational opportunities for both children and adults. In 2009, the RCD held a public tour of the large woody material restoration projects underway in the San Vicente Creek Watershed and highlighted their importance for proper stream function and health with local landowners and the community. Also in 2009, the Salmonid Restoration Federation held a workshop discussing off-channel habitat use by coho and showed examples of such features in the San Vicente Creek watershed for the annual conference attended by agency staff and state-wide professionals.

In partnership with the RCD and Reikes Center, Pacific Elementary School in Davenport has utilized the San Vicente Creek restoration projects as an outdoor laboratory for 5th and 6th graders. Their curriculum included water quality, Native American studies, the concept of “watershed”, salmonid migration, creek habitats, plant and animal identification, including animal track identification. Lastly, Cal Poly’s Swanton Pacific Ranch undergraduate and graduate students visited the project sites in 2011 for their Advanced Watershed Hydrology field trip.



## Opportunities for Integrated Watershed Restoration

The Integrated Watershed Restoration Program (IWRP) has been a critical conservation tool in Santa Cruz County since 2003. While IWRP remains focused on the core mission of helping both our public and private conservation partners identify, prioritize, and implement various projects to improve water quality, restore local habitats, and recover threatened and endangered species, IWRP's success has enabled the program to expand well beyond its original geographic and thematic boundaries.

With the help of the California Coastal Conservancy and our partners at the San Mateo County RCD and RCD of Monterey County, IWRP has been expanded to provide support for high priority conservation projects in San Mateo and Monterey counties. Our partner RCDs have developed functional Technical Advisory Committees (TAC) and are moving forward on an array of projects ranging from road assessments to multi-benefit agricultural water supply and habitat projects.

In addition to expanding the program's geographic range, the RCD has been able to develop new partnerships over the past two years through IWRP. We have forged a strong relationship with the Regional Transportation Commission (RTC) and implemented a pilot project with the RTC and the City of Watsonville this summer. Through IWRP and with support from the California Coastal Conservancy, the RCD was able to facilitate the use of local mitigation funds from the current Highway 1 widening project to construct the final phase of the Manabe Wetlands Restoration Project in Watsonville. Identified as a high priority by the IWRP TAC in 2005, IWRP grant monies were able to pay for the design and permit work and implementation of the first two phases. With the mitigation funds from the RTC, we will be able to ensure the final phase is completed in Fall 2012.

Another result of IWRP partnerships was the RCD being asked by our partner agency, National Oceanic Atmospheric Administration Fisheries (NOAA), to work with the RTC and Caltrans to develop the first countywide Memorandum

of Understanding (MOU) for Advance Mitigation Planning. This MOU would allow the transportation agencies to work with the RCD and other conservation partners to identify future off-site mitigation needs and develop both a funding and an accountability framework to implement mitigation action prior to the occurrence of construction impacts. If successful, this effort could provide a funding source for conservation projects in the county and save significant expenditures by our transportation partners through streamlining and simplifying the mitigation process. Building off a similar effort that has been completed for the Elkhorn Slough watershed, the Santa Cruz County MOU has been drafted and reviewed by most of the necessary state and federal resource agencies and approved by the RTC. The MOU is slated to be finalized in early 2013.

In 2010, NOAA requested that the RCD utilize IWRP to facilitate an on-going dialogue regarding coho recovery with CAL FIRE and the Soquel Demonstration State Forest. The RCD staff and IWRP Coordinator accepted the offer and have worked with NOAA and CAL FIRE, as well as California Department of Fish Game (CDFG), to develop a pilot coho recovery project on the Soquel Demonstration State Forest. IWRP was able to assist CAL FIRE by 1) providing technical support, 2) utilizing the IWRP Technical Advisory Committee to address design and permit questions, and 3) helping guide the permitting process. This effort has led CAL FIRE to take an active leadership role in coho recovery and convene a coast-wide working group to develop new tools to simplify the permitting process for Coho recovery projects on actively managed forest lands.

Through the IWRP process, the recovery of the Santa Cruz Long-toed Salamander was identified by both US Fish and Wildlife Service and the CDFG as a priority. The agencies requested that the RCD play a pivotal role in the identification and implementation of key restoration projects aimed at the enhancement of wetland and upland habitat for the species. The Salamander Recovery Program was launched in 2010 and the first of a series of species recovery projects was implemented in 2011.

## Expanded Conservation Support for Spanish Speaking Growers

In 2010 the RCD was awarded funding from the US Department of Agriculture's Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers Program. For the past three years, this program, called Manejo Agrícola con Nuevos Amigos (MANA) has been supporting the Resource Conservation District of Santa Cruz County (RCD) initiative to provide better conservation and education assistance to Spanish speaking growers.

The MANA program has three main goals. First, the program seeks to improve RCD and Natural Resources Conservation Service (NRCS) relationships with Spanish speaking growers. Second, MANA aims to reduce barriers farmers may have with putting conservation measures into practice due to language or

economic factors. The third goal of the MANA program is to improve economic outcomes for Spanish speaking growers, by designing programs that improve access to markets and help implement cost saving conservation measures. We accomplished these goals by initiating new relationships with more than 120 Spanish speaking farmers and/or managers in Santa Cruz County, conducting an in-depth growers' needs assessment, providing in-field technical assistance, supporting partners' workshops, and assisting growers interested in participating in federal farm bill programs, such as the Environmental Quality Incentives Program (EQIP).

One important early milestone was the completion of a comprehensive needs assessment—a process of interviewing and communicating with a wide range of Spanish speaking growers to determine what services they might consider useful or beneficial. The results identified four priority

*“Trabajar con el RCD fue una buen experiencia, porque cosas que no sabes tú, ellos te lo enseñan y te ayudan en los proyectos de conservación. Ellos tienen personal preparado.”*

*“Working with the RCD was a great experience. They can teach you things you don't know about and help you implement conservation projects. They have well prepared staff to do so.”*

—Rogelio Fernandez, Grower

## Assisting Growers with Irrigation and Nutrient Efficiency

In 2011, the Resource Conservation District of Santa Cruz County (RCD) launched the Irrigation and Nutrient Management (INM) Program, focused initially on the Pajaro River Watershed. The INM program is funded by the California State Water Resources Control Board (SWRCB) and the Natural Resources Conservation Service (NRCS), and is designed to address rising concerns of declining water quality and water supply in the region.

The Pajaro River Watershed stretches over four counties (San Benito, Santa Clara, Santa Cruz and Monterey), covers approximately 1300 square miles of land and is heavily

dominated by agricultural production. The SWRCB has identified the Pajaro River Watershed as having significant water quality impairments. The Pajaro River Watershed, several of its tributary streams and the Watsonville Sloughs, which all drain into the Monterey Bay National Marine Sanctuary, are now listed on the prioritized 303d list of water bodies impaired by nutrients, sediments, and pesticides.

It is widely understood that overuse of irrigation water and applied nitrogen is costly to growers and contributes to water quality concerns. Through the INM program, RCD Staff and regional agronomists work cooperatively with growers to assess current irrigation and nutrient delivery practices and equipment, in order to find ways to increase water and nutrient efficiency while maximizing production and crop





areas where Spanish speaking growers required additional assistance and support: 1) support for increased resource efficiency in production (irrigation efficiency, nutrient management, erosion control and pest management); 2) improve understanding of and compliance with agricultural regulations (specifically the rules and regulations surrounding Central Coast RWQCB's "Ag Waiver"); 3) improve growers' access to markets; and 4) support growers on strategic business planning, finance and record keeping. Based on the needs assessment, we developed five technical assistance workshops, including a bilingual option, outlining the RCD and NRCS' technical assistance services related to water-risk and a workshop on winter erosion control. The MANA team also provided support to partners' workshops by providing Spanish language translation and interpretation and helping recruit Spanish speaking participants.

Additionally, the MANA program developed other tools and resources specifically targeted to Spanish speaking farmers in Santa Cruz County, including: erosion control assistance, farm water quality and compliance assistance, and irrigation and nutrient management assistance. In addition, RCD applied for and received a USDA grant to start a farmer's market, specifically targeted at providing new markets for local Spanish speaking growers. We also assisted growers with conservation planning practices and completing all necessary steps in the application for EQIP and the Ag Waiver Enhancement Program (AWEP). Over the last two years, we have made great strides in reaching out and providing assistance to Spanish speaking growers in our community, and our hope is to expand the program services throughout the Central Coast region.



**Spanish speaking growers attend an RCD sponsored educational event at a local farm.**

quality. Building on a long history of conservation efforts in the Pajaro Watershed, the INM program is conducting on-site irrigation evaluations and collecting data to monitor fertilizer inputs and make recommendations on how systems can be improved to conserve grower resources and mitigate impacts of agricultural run-off. So far, the program has identified many small low cost management changes, such as modifying irrigation scheduling that will improve system efficiency, thereby benefiting both the grower and the watershed.

We are looking forward to supporting continued collaboration among the agricultural community, RCDSCC staff and regional agronomists to further explore and develop ways to address the needs of growers and conservation concerns in the Pajaro Watershed.

**Michael Johnson of the RCD demonstrates various tools for assisting growers with irrigation fertilization evaluations.**





**USDA Deputy Secretary Kathleen Merrigan (center) tours Managed Aquifer Recharge Basin**

## Pajaro Valley Community Water Dialogue

The issues surrounding water in the Pajaro Valley have been extraordinarily divisive over the past several decades. One issue that has been particularly contentious and complicated has been the issue of aquifer overdraft. Overdraft in the Pajaro has created uncertainties for agricultural water supply and long term viability, and has also contributed to the problem of saltwater intrusion from coastal areas. In July 2010, a group of landowners in the valley created the Community Water Dialogue (CWD) to find community based solutions to the valley's water issues. Since then the group has expanded to include a wide variety of stakeholders, including other landowners, growers, academics, nonprofits, rural residents, government representatives, and environmental leaders. Fifty to sixty

members of this group have met quarterly since its formation. The RCD has played a lead role in the group, providing leadership and technical assistance to the effort. The solutions-based approach of the Community Water Dialogue has had the effect of uniting people around this common challenge of the fundamental principles of the effort which include:

- » A commitment to protect the Pajaro Valley as an important agriculture resource;
- » A recognition that the solution will not be a water importation pipeline; and
- » A willingness to pursue diverse strategies which entail costs and sacrifices in order to bring our aquifer into balance.

*“The Community Water Dialogue is one of the best things that has happened in the Pajaro Valley in the last 20 years.”*

Chuck Allen, Real Estate Specialist



The Community Water Dialogue has already had several important successes and accomplishments since its formation in 2010. Among these are:

- » **Fostering Collaboration.** The CWD has been successful in getting groups who previously worked in isolation from one another to come together and work collaboratively towards positive solutions. Tangible outcomes include successful collaborative projects, and a more civil tone in the Pajaro Valley Water Management Agency (PVWMA) processes.
- » **Ensuring Broad Representation.** Involvement on an ongoing basis of 50-60 people from a broad variety of stakeholders is common at the general CWD meetings.
- » **Strengthening the PVWMA Relationship.** The Pajaro Valley Water Management Agency (PVWMA) sees CWD as a collaborator and forum for developing solutions. Input from the CWD Ad hoc Basin Management Planning (BMP) Committee has guided the conservation aspects of PVWMA's BMP long-term planning process.
- » **Acting as a Knowledgeable Resource on Water Issues.** The CWD has established itself as the place to go to learn about water issues.
- » **Implementing Successful Collaborative Projects.** The CWD has launched its first two collaborative projects to reduce water use through conservation and to increase aquifer recharge:

#### 1. Wireless Irrigation Monitoring Network

The partners in the CWD developed the idea to create a wireless irrigation network (entitled Project WIN) in the Pajaro Valley to help growers improve irrigation efficiency. This project involves installation of soil tension probes and a network of communication towers to transfer data in real time to growers. This allows for improved irrigation decision-making, with 15-30% water savings and little or no yield loss being common among growers using the system. There are currently five towers and two repeaters in the Valley that form the core of this network, with 15 additional repeaters to be installed in the coming months. Creating this central network will drastically reduce the investment required for widespread adoption of this technology by the growers and the RCD will act as the central administrator of the network.

#### 2. Managed Aquifer Recharge

The RCD, along with CWD partners Driscoll's Strawberry Associates and Reiter Affiliated Companies, the Natural Resource Conservation Service, the University of California at Santa Cruz, California

State University Monterey Bay, and landowners, have worked collaboratively to develop a "managed aquifer recharge" pilot project that will help to improve water supply. The first construction project has just been completed, recharging excess (rainy season) surface flows into available aquifers. Location-specific strategies were tested for routing runoff, minimizing siltation, cycling nutrients, and achieving other water quality benefits as excess surface water is percolated into underlying aquifers. Monitoring and quantification of improvements (e.g. amount of water put into aquifers, benefits to water quality) are conducted as essential components of these projects.

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### Nik Strong-Cvetich of the RCD talks about community solutions to the aquifer overdraft issue.





## The RCD and NRCS Partnership Benefitting Landowners for More than 70 Years

The 1941 formation of the Pajaro Soil Conservation District and subsequent partnership with the Federal Soil Conservation Service sparked the beginning of a productive relationship between what is now the Resource Conservation District of Santa Cruz County and the United States Department of Agriculture Natural Resources Conservation Service (NRCS). Since that time both agencies have worked together to help both private and public landowners' complete hundreds of voluntary conservation projects. The RCD's local knowledge, outreach capabilities, and planning experience complement the NRCS technical assistance and farm bill programs. Our

cooperative agreement allows us to share an office and offer a full suite of no-cost and low-cost services to landowners interested in conservation projects.

Between 2010 and 2012, the RCD and NRCS worked together to complete assessments and project designs for the Livestock and Land, Home Drainage, Rural Roads, and Permit Coordination programs, as well as design and construct a wide array of restoration projects. The NRCS also provided financial and technical support to the RCD to help implement and expand its Irrigation and Nutrient Management (INM) services offered to local farmers. The RCD, in turn, has provided support to NRCS by assisting in outreach to and translation services for Spanish speaking farmers interested in NRCS and farm bill funded programs.



**NRCS engineer  
Jim Kjelgaard and  
grower Manuel  
Alvarez Jr. discuss  
farm conservation  
practice options in  
the field.**

*“The work and visible presence of NRCS in Santa Cruz County would not have been possible without an organized, active, and progressive RCD. I believe the natural resources of Santa Cruz County are much enhanced because of our combined and cooperative efforts. I look forward to many more conservation success stories in the future as a result of this very unique and successful partnership.”*

—Rich Casale, District Conservationist, USDA  
Natural Resources Conservation Service



## Connecting Kids to Conservation

Environmental education encourages youth to value the natural world and become active in conservation later in life. Watershed Stewards Project (WSP) members, hosted by the RCD, have been visiting classrooms from Davenport to Watsonville for the last two years in support of the educational component of the RCD's mission. Through a variety of partnerships between October of 2010 and May of 2012, WSP members provided educational programs to more than 500 students from 5th grade through high school.

The WSP program requires each member to teach a series of six one-hour lessons using the program's Real Science curriculum. Topics include watersheds and land use, the water cycle, and salmonid anatomy, habitat, and life cycle. The kids seem to enjoy and retain the information with at least 75% of students improving their post-test scores by 20% or more over their pre-tests.

The WSP members also coordinated with Julia Davenport, an education consultant, to support the Santa Cruz City Schools Wetlands and Watersheds program through classroom visits and assisting with field trips to the San Lorenzo River. In class activities and presentations were focused on water conservation while field trips introduced students to water quality testing and nature journaling.

At Pacific Elementary in Davenport, WSP members Leah Healy and Carmen Tan taught 5th and 6th graders about watersheds and salmonids through a series of presentations, games, and hands-on activities. The series culminated with students dressing up in hand-sewn costumes to act in a salmon life cycle pageant.

Finally, through a partnership with Watsonville Wetlands Watch, WSP members assisted with field trips at Pajaro Valley High School. The students learned about sampling for aquatic macroinvertebrates—invertebrates that live in the water and are visible with the naked eye—as water quality indicators and conducted plant population monitoring to evaluate the success of a native grassland restoration project.

**Students at Pacific Elementary School were able to use San Vicente Creek, located next to their school, as an outdoor classroom.**



## Strategic Fund Development Plan Helps Secure the Future of the RCD Mission

Following the state budget crisis of 2008-2009, the Resource Conservation District of Santa Cruz County (RCD) embarked on an effort to create more diverse and therefore more stable and secure, sources of funding. Funded by a generous grant from the Community Foundation of Santa Cruz, the RCD developed a strategic fund development plan. There were three main goals in this process: (1) create a cohesive, understandable message for internal and external stakeholders regarding the RCD's core mission and business; (2) create a plan with specific steps for achieving the objectives of developing new financial resources; and (3) develop a plan for communicating about the RCD to core audiences with the intention of diversifying funding resources.

To achieve our goal of creating a clear message, we developed a new tagline, "Local Solutions. Real Results." We also

clarified our "core business" into two distinct areas: (1) Watershed Restoration and Protection and (2) Conservation and Stewardship in Agriculture. While we have many different programs and initiatives, all of the RCD's programs fall into these two organizing themes. To achieve our second goal, we created a plan for developing new financial resources. Some of the initiatives include formalizing our grant solicitation process, developing fee-based services, soliciting private foundations, local businesses, and individual benefactors, increasing program efficiency, and developing additional revenue generating activities. Our final goal was achieved by creating a marketing plan to communicate our clearer and more cohesive message to specific audiences.

The RCD believes that both the process of creating this plan and the specific objectives that the RCD is implementing as a result of this plan will bring additional and more diverse sources of revenue to the District, and therefore allow us to continue to execute our mission to the fullest extent.

## Watsonville Slough Farm Management Plan Completed

The Land Trust of Santa Cruz County's Watsonville Slough Farms property sits at the center of the lower Pajaro River watershed and intersects with four of the six individual sloughs that sustain this large and complex ecosystem—Harkins, Hanson, Struve and Watsonville Sloughs. The property and surrounding area represent a substantial opportunity where uplands, wetlands, and critical transition zones can be effectively managed to address impairments and restore a landscape with a mosaic of grasslands, riparian woodlands, and a variety of seasonal and perennial wetlands.

The RCD, in partnership with the Land Trust and Watsonville Wetlands Watch, led the development of a comprehensive plan for the management of the Watsonville Slough Farm. The plan was guided by and benefitted significantly from the participation of a Technical Advisory Committee (TAC), comprised of local farmers, biologists, planners, and community experts, including representatives from the RCD, California Department of Fish and Game, California Coastal Conservancy, Farm Bureau, United States Fish and Wildlife Service, United States Department of Agriculture Natural Resource Conservation Service, Pajaro Valley Water Management Agency, and the City of Watsonville, among others.

While the Watsonville Slough Farms Management Plan focuses primarily on the lands owned by the Land Trust, the data and recommendations are nested within a long-term conservation and management vision for the larger Watsonville Sloughs system and surrounding preservation and conservation efforts. This Plan is viewed as a 10-year guidance document for the farm's onsite resources in an effort to achieve ecological restoration, conservation and protection for key natural resources while maintaining agricultural viability and production. In 2011, the collaborative effort of the Middle Watsonville Slough Wetland Protection and Water Quality Partnership was nationally recognized with the Coastal America Partnership Award.





## Performance-Based Conservation Incentives in the Pajaro Valley

When it comes to water resources, the Pajaro Valley has no shortage of challenges. Over the last 50 years the aquifer providing water to the agricultural community, rural citizens and the city of Watsonville has been significantly overdrafted, leading to saltwater intrusion. Additionally, the Pajaro River and other tributaries have been shown to have some of the highest concentrations of nitrates across the state.

In response to these complex issues, the RCD and Driscoll's Strawberry Associates Inc., with support from non-profit Sustainable Conservation, began looking at how incentives can motivate positive change in the condition of the aquifer and watershed. This led the partnership to develop the Performance-Based Conservation Incentive Pilot, made possible by a grant from the United States Department of Agriculture's Conservation Innovation Program.

As noted above, the pilot program seeks to improve aquifer and water quality conditions in the Pajaro Valley, by creating a series of standardized metrics to measure water quality and quantity of water used. It also is currently developing a structure of economic and non-economic incentives (e.g. regulatory relief) to motivate grower action, and testing these models on the ground.

This overall approach is unique, uniting private industry, the public and non-profit sectors to use business and policy related incentives to improve environmental conditions. By incentivizing outcomes rather than practices, farmers can find their own strategies to reduce nutrients and improve water quality in ways that are more economically feasible and practical for their own business models. The lessons learned from this pilot will be distributed on a larger scale to be further implemented in other regions and industries when the pilot project is complete in September 2012.

*“By uniting private industry, public and non-profits, the conservation incentives project is able to take a new approach to incentivizing progress on water related issues.”*

—Daniel Mountjoy, Director of Conservation on Private Lands  
Sustainable Conservation

## 2010–2012 FISCAL YEAR FUNDING SOURCES

### American Rivers

**California Association of Resource Conservation Districts**

**Community Foundation of Santa Cruz**

**Gordon and Betty Moore Foundation**

**Land Trust of Santa Cruz County**

**Moore Family Foundation**

**National Fish and Wildlife Foundation**

**Sempervirens Fund**

**City of Santa Cruz**

**County of Santa Cruz**

**California Department of Conservation**

**California Department of Fish and Game**

**California Department of Food and Agriculture**

**California Department of Water Resources**

**California Fire Safe Council**

**California Natural Resources Agency**

**California State Coastal Conservancy**

**California State Parks**

**State Water Resources Control Board**

**Bureau of Land Management**

**Environmental Protection Agency**

**National Oceanic and Atmospheric Administration**

**Natural Resources Conservation Service**

**US Fish and Wildlife Service, Coastal Program**

**RCD of Santa Cruz County**  
820 Bay Avenue, Suite 136  
Capitola, CA 95010



[www.rcdsantacruz.org](http://www.rcdsantacruz.org)

## **Put Your Money to Work for Local Resource Conservation**

The Resource Conservation District of Santa Cruz County is primarily funded by grants and contracts with public and non-public entities. Private donations help to further the mission of the District and can be targeted toward your area of interest.

The RCD can receive tax deductible donations under Internal Revenue Service Code Section 170 (b) and 170 (c) (1). This section says that contributions to a governmental entity are deductible (up to 50% of the taxpayer's adjusted gross income). The RCD may accept all forms of contributions including, but not limited to, gifts, property, cash, stocks and securities. Feel free to contact us with any questions at [831.464.2950](tel:831.464.2950).

### **Programs include:**

- ☐ K-12 educational Programs
- ☐ Watershed Restoration
- ☐ Rural Roads
- ☐ Residential and Commercial Stormwater
- ☐ Livestock and Land
- ☐ Agricultural Programs
- ☐ Community Wildfire Protection

Your contribution can be mailed to **820 Bay Ave, Suite 136, Capitola, CA 95010**



**RESOURCE**  
CONSERVATION DISTRICT  
OF SANTA CRUZ COUNTY



2013 Annual Report

# RESOURCE CONSERVATION DISTRICT *of Santa Cruz County*



local solutions. real results.







## *Our Mission:*

*Help people protect, conserve and restore natural resources through information, education and technical assistance programs*

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 Deborah Nares, Agricultural Program Specialist  
 Tangi Chapman, Executive Assistant  
 John Morley, Program Assistant  
 Ingrid Gain, IT Support

### Natural Resources Conservation Service Staff

Richard Casale, District Conservationist  
 Angie Quintana-Jones, Soil Conservationist  
 Bruce Quintana-Jones, Engineer

### Watershed Stewards Project AmeriCorps Interns

2012-2013: Graham Wesolowski and Jessica Missaghian  
 2013-2014: John Drips and Chris Loomis

## 2013 FISCAL YEAR FUNDING SOURCES

American Rivers  
 Bureau of Land Management  
 California Association of Resource Conservation Districts  
 California Department of Conservation  
 California Department of Fish and Wildlife  
 California Department of Food and Agriculture  
 California Department of Water Resources  
 California Fire Safe Council  
 California Natural Resources Agency  
 California State Coastal Conservancy  
 California State Parks  
 Community Foundation of Santa Cruz  
 County of Santa Cruz  
 Gordon and Betty Moore Foundation  
 James Irvine Foundation  
 Moore Family Foundation  
 National Fish and Wildlife Foundation  
 Natural Resources Conservation Service  
 Sempervirens Fund  
 State Water Resources Control Board  
 US Fish and Wildlife Service, Coastal Program  
 US Department of Agriculture

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### RCD Fiscal Year 2013 Budget\*\*

July 1, 2012–June 30, 2013

Income Sources		Expenses	
Interest	\$1,936.00	Professional Services & Project Implementation	\$ 2,121,736.00
Local & Private Sources	\$25,002.00	Salaries	\$1,015,103.00
Augmentation Funds	\$28,902.00	Operating Expenses	\$192,729.00
Other Revenue Grants	\$3,107,470.00		
Donations	\$1,455.00		
<b>Total</b>	<b>*\$3,164,765.00</b>	<b>Total</b>	<b>*\$ 3,329,568.00</b>

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

\*\* The 2013 Fiscal Year budget has NOT been finalized and audited



## EXECUTIVE DIRECTOR'S REPORT

This year has been an exciting one for the Resource Conservation District of Santa Cruz County. The RCD's mission of achieving local solutions with real results has had an increasing impact at the statewide level. In January, I was honored by the James Irvine Foundation, whose mission and goals include engaging a broad cross section of Californians in the civic and cultural life of their communities and the state, as one of their 2013 Leadership Award recipients. This award was particularly meaningful for the Foundation's recognition of the RCD of Santa Cruz's ability to make impacts at the statewide level, as well as raising the profile of all of California's RCDs as instruments of change statewide.

Some examples of the work we are doing that have a statewide impact include our Ecosystem Services project, in which we are producing an economic valuation of services and the benefits from natural resources, which will help guide restoration and conservation activities in Santa Cruz County. We have also been leading the county and the state in developing new incentives and incentive frameworks for conservation in agriculture with our Performance-based Incentives for Conservation in Agriculture (PICA) project. We are excited to spread our model of voluntary partnerships between private landowners and public agencies through projects like the Community Water Dialogue. We are proud to be leading and participating in non-traditional partnerships such as our work with the Santa Cruz County Regional Transportation Commission.

On top of these new innovations, we are continuing to provide services for soil, water, and species conservation throughout Santa Cruz County. Every day, we are restoring and improving habitat, assisting growers one on one to improve their water and nitrogen efficiency, and helping landowners, residents, and policy makers make informed decisions about land and water use. In 2013, we completed an assessment of the San Vicente Watershed, following which we will develop a salmonid recovery plan for the watershed. We removed a dam in the San Lorenzo watershed to improve passage for steelhead. We continued conducting hydrologic assessments of Watsonville's College Lake and Watsonville Slough in order to study the hydrologic conditions of various possible planning scenarios. We completed the first phase of developing a recovery plan for native amphibians in the Larkin Valley area. Our MANA program delivered advice and technical assistance to Spanish speaking farmers in the Pajaro Valley.

We are enthusiastic about the work we have been able to accomplish in 2013 and are eagerly awaiting the new challenges and accomplishments that lie ahead. We believe that through partnership and cooperative approaches, great things are possible.

Karen Christensen

Executive Director, January 2014



## RCD PARTNERS WITH LOCAL TECHNICAL EXPERTS TO DEVELOP A SALMONID RECOVERY PLAN IN DAVENPORT

Through the RCD's Integrated Watershed Restoration Program (IWRP), the RCD has partnered with the National Marine Fisheries Service (NMFS) and California Department of Fish and Wildlife (DFW) since 2005 to improve a variety of projects and efforts on the north coast, particularly to increase habitat complexity in San Vicente Creek. The goal is improving survival rates of coho salmon and steelhead at all life stages. Efforts to date have included enhancement and restoration of two backwater ponds that were built on footprints of historic agricultural ponds within the San Vicente's floodplain for the purpose of creating winter high-flow refugia and installation of eight large woody debris structures to increase instream habitat complexity and encourage floodplain connectivity. In addition, limited cape ivy (*Delairea odorata*) removal has occurred to encourage the presence of more robust and diverse floral communities and to facilitate natural scour and deposition in floodplains.

In 2012, the RCD, with funding from the California Department of Fish and Wildlife (DFW), partnered with local technical experts to develop a watershed assessment project that will culminate in a single regional repository of existing data on priority resources (biological, physical, and socio-economic) and a comprehensive Restoration Plan for Salmonid Recovery within the watershed. This planning effort includes the following components: a summary of existing data on watershed conditions related to salmonid recovery; four new assessments focus on known data gaps and potential limiting factors; and a final Restoration Plan with specific recommendations based on the existing data and new assessments. The Restoration Plan will be informed by various assessments (including a geomorphic, fisheries, large woody debris and invasive species assessments) conducted by technical experts and guided by a Local Watershed Steering Committee (a group of interested local stakeholders, large land-holders and local technical experts that will provide existing resource information, technical review, outreach and liaison with the larger community). The Restoration Plan for Salmonid Recovery will be completed and shared with the Davenport community and interested parties in 2014 and will be implemented over the next 10 years.

## PACHECO RESERVOIR HYDROLOGIC STUDY UNDERWAY TO IMPROVE STEELHEAD HABITAT AND WATER SUPPLY MANAGEMENT

Through grant funding awarded by the California Department of Fish and Wildlife (CDFW), the RCD is working in collaboration with a technical team, state and federal resource agencies, and stakeholders on a two-year project to explore alternative operating strategies for the Pacheco Reservoir, located on Pacheco Creek in the upper Pajaro River Watershed. Pacheco Creek supports habitat for federally listed steelhead trout as well as downstream water supply operations for the Pacheco Water District. The goals of this project are to develop a comprehensive strategy and specific guidelines for reservoir releases that will improve aquatic habitat downstream of the reservoir while at the same time providing for adequate water supply. Balancing water supply and habitat needs can often be difficult and contentious but according to lead consultant, Jeff Micko, preliminary results indicate that alternative operation strategies can be developed that will be favorable to all parties' interests. The project started in summer 2013 and will continue through spring of 2015. The beginning phase of the project included the technical team completing field work and analysis to begin characterizing and understanding the Pacheco Creek watershed and associated hydrology, habitat and water supply systems. Stakeholder outreach will continue through the process while the technical team works on developing a technical guide for timing and management of reservoir releases into Pacheco Creek. A management plan will be used for the long term management of reservoir releases to provide critical instream flows for steelhead trout while also providing water supply for downstream uses.



Habitat evaluation work being completed on Pacheco Creek



## 2013 Permit Coordination Project Highlights

**RESTORED .....5.86 acres of rare or declining habitats**

**IMPROVED .....270 linear feet of salmonid streams**

**REDUCED .....1.5 miles of haul road sediment from entering impaired water bodies from**

### LARKIN VALLEY PLANNING EFFORT IN PROGRESS TO REDUCE LOCALIZED FLOODING AND ASSIST IN NATIVE AMPHIBIAN RECOVERY

Over the last decade, the RCD has worked with landowners and residents in the Larkin Valley community to address flooding, property access and safety, habitat enhancement, sediment management, and fuel load reduction, particularly after the Trabing Fire. Because Larkin Valley is home to two native amphibian species, the Santa Cruz long-toed salamander (SCLTS) and the California red-legged frog (CRLF), the RCD has also assisted landowners with working in these sensitive habitat areas. This area is especially important habitat for SCLTS as this species is endemic to the coastal areas of Monterey and Santa Cruz Counties, which means they exist nowhere else in the world! The Santa Cruz population has continued to decline due to several factors, including a lack of breeding ponds and a reduction in upland habitat where the species spend most of their life. Through past and present collaboration with Larkin Valley property

owners, residents and the resource agencies, the RCD has heard a need to look more closely these various resource interests and concerns about regulatory uncertainty, the cost and time to obtain permits for activities such as sediment removal that has accumulated in the channel or to cut down Eucalyptus trees. As such, the RCD secured funds through the California Department of Fish and Wildlife (CDFW) to conduct a preliminary hydrologic and biological assessment to look at the resource interests and permitting challenges in Larkin Valley. Particularly focused around flooding issues, which can limit access to homes and limit emergency vehicle access during winter storms, the RCD is working in coordination with federal, state, and local agencies, to identify measures that could be installed by local residents to help address resource management concerns while also enhancing habitat for both amphibian species. This initial assessment will be finalized in 2013 but is just the first phase of a long term effort in Larkin Valley.



Future pond sites were identified in Larkin Valley Recovery Plan to benefit native amphibian species and reduce localized flooding.



## CALTRANS MITIGATION MONIES HELP FUND FINAL PHASE OF THE MANABE WETLANDS RESTORATION PROJECT

In 2012, the City of Watsonville, with support from the Resource Conservation District of Santa Cruz County (RCD), the Santa Cruz County Regional Transportation Authority (RTC) and Caltrans, completed the final phase of the Manabe Wetland Restoration Project in Watsonville. Completion of this project represents the success of a groundbreaking pilot program spearheaded by the RCD that links transportation mitigation funds to implementation of high priority restoration projects here in the County—a major accomplishment for all of the partners involved.

The Manabe project is part of the county wide Integrated Watershed Restoration Program (IWRP). Since 2003, this program has brought together local partners and a Technical Advisory Committee (TAC) comprised of state, federal, and local resource protection agencies to identify, prioritize, and implement the most beneficial restoration projects across the County. Under the auspices of IWRP, the City of Watsonville was able to work directly with the RCD, RTC and Caltrans to ensure that mitigation dollars from the current Highway 1 widening project were kept within the County and used to complete an already vetted local project. “This represents a great model for ensuring that mitigation funds from local projects are used to support the local economy and natural resources,” explains Karen Christensen, executive Director of the RCD. “Being able to utilize the existing IWRP TAC to work with the partners was a significant component in facilitating this project in a timely manner.” This collaboration not only will result in completion of a key restoration effort in the local Sloughs, but will save the taxpayers money. By having a pre-identified restoration project, the required mitigation process for the Highway 1 project was expedited, reducing the potential for costly delays. Regional Transportation Commission Executive Director George Dondero noted “This project represents a win-win for the community; a heavily traveled section of our major

transportation corridor was improved that will help keep traffic out of neighborhoods, and the Regional Transportation Commission was able to dedicate mitigation funds to a local project to restore critical wildlife habitat in south Santa Cruz County.”

The City of Watsonville committed to restoring 25 acres of wetlands on the Manabe property as part of the Manabe-Burgstrom annexation agreement. With the first 17 acres of wetland restoration and adjacent trails completed in 2007 and 2008, the final phase was completed in November of 2012. The overall purpose of the restoration activities was to create additional high quality wetland habitat and to provide passive recreation opportunities, such as nature trails, in the restored upland areas. The project also greatly increases the flood detention capacity within the Watsonville Slough upstream of the Highway 1 site, providing additional flood-protection benefits to the City of Watsonville and downstream agricultural enterprises. “This is the kind of project we can be proud of,” explains Steve Palmisano, Director of Public Works and Utilities at the City of Watsonville. “It brings such a great value to our community, providing both critical wetland habitat and an opportunity for our residents to easily access that habitat through the trails. We have had so much positive feedback on our wetlands; the community seems to love them. It is important to note that we could have never completed this project without the financial resources provided by the partnership. We are grateful for this opportunity.”

This project represents the fruits of a long-term relationship between the City and the RCD as the two agencies have worked together since 2003 to fund the engineering designs, obtain required permits, and develop funding sources for the construction of the project. The bulk of the design and permit work was funded through the RCD’s IWRP with a generous planning grant from the California Coastal Conservancy and initial construction was funded by Prop 13 and Prop 40 grants obtained jointly by the City and the RCD. This final portion was funded through the agreement with Caltrans and the RTC as well as additional Prop 50 funds through the RCD.

*“This project represents a win-win for the community; a heavily traveled section of our major transportation corridor was improved which will help keep traffic out of neighborhoods, and the Regional Transportation Commission was able to dedicate mitigation funds to a local project to restore critical wildlife habitat in south Santa Cruz County.”*

*- George Dondero, Regional Transportation Commission Executive Director*





**before**

Overview of project looking east-west toward Ohlone Parkway.



**during**

Both ditch line banks were excavated and graded to widen the channel.



**after**

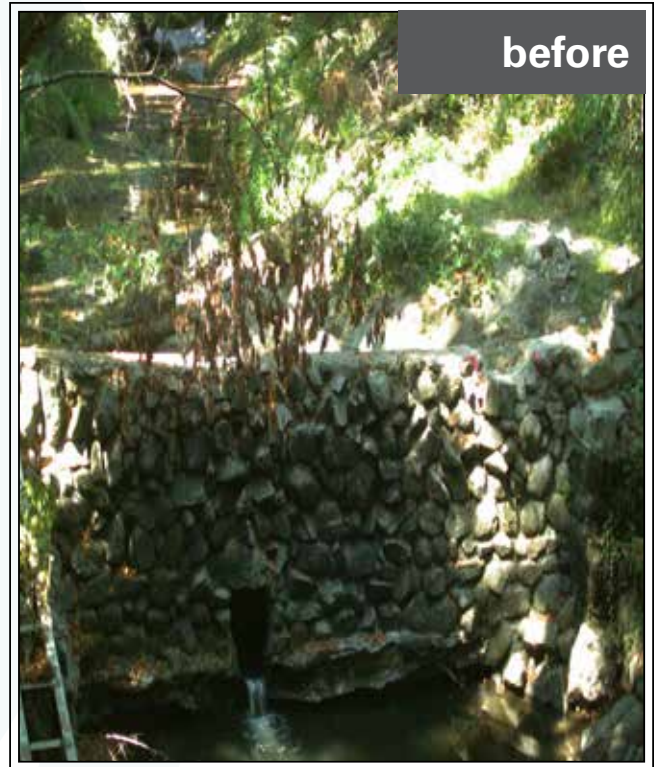
Banks have been revegetated with native plants to enhance upland habitat and function as a water quality buffer.



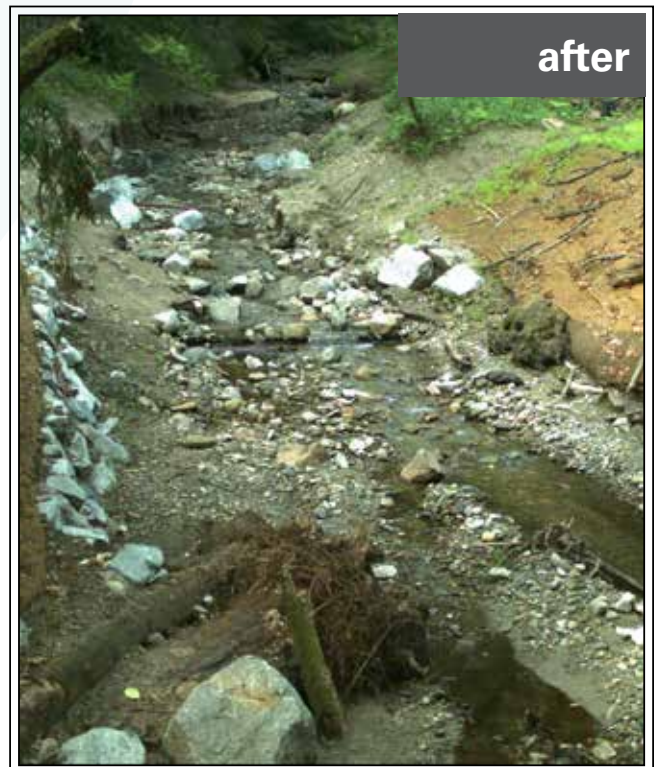
## SAN LORENZO RIVER WATERSHED IMPROVED FOR STEELHEAD PASSAGE BY REMOVAL OF DAM

This fall, the RCD worked in collaboration with local, state and federal partners, technical consultants and two landowners on the removal of a dam in the San Lorenzo River Watershed to improve passage and access for steelhead trout to three miles of upstream rearing and spawning habitat. The dam was originally constructed in 1931 for water supply and recreation. This project is a decade long effort by the National Oceanic and Atmospheric Administration (NOAA), California Department of Fish and Wildlife (CDFW) and the County of Santa Cruz to remove a known fish passage barrier in the watershed. As this project was a high priority for resource agencies, the project was selected and developed through the RCD's Integrated Watershed Restoration Program (IWRP), which is a collaborative program that brings together federal, state and local resource and funding agencies to select and oversee the design and implementation of high priority projects to restore watersheds and improve water quality. The State Coastal Conservancy played a pivotal role in the development of this project, by providing critical funding for designs and permits, technical assistance to develop projects with the resource agency guidance, and helping leverage funding for implementation.

The goals of the project were to: a) remove the dam to improve passage to three miles of upstream spawning and rearing habitat; b) improve in-stream habitat conditions by allowing deposited sediment, on the upstream side of the dam, to transport downstream and allow buried substrates to re-surface where it can be utilized by spawning salmonids, and; c) improve habitat complexity within the stream reach through the installation of a large woody debris structure. The goals were accomplished and several adjustments to the channel and bank morphology will continue over the long term that the RCD will continue to monitor for the next 3-5 years. The project was permitted through the RCD and NRCS' streamlined Partners in Restoration Permit Coordination Program. Project implementation was funded through the American Rivers/NOAA's Community-Based Restoration Program, U.S. Fish and Wildlife's Fish Passage Forum and the County of Santa Cruz.



**An 8 foot tall dam limited access to upstream habitat for steelhead.**



**After removal over 3 miles of upstream habitat is available for steelhead.**

## WATSONVILLE SLOUGHS STUDY COMPLETED TO BETTER UNDERSTAND SLOUGH HYDROLOGY

The Watsonville Sloughs are a highly valued and unique freshwater wetland resource on the Central Coast. The Slough wetland complex has been modified significantly over the last 100 years, both in size and function. Agriculture and urban uses have encroached on wetland boundaries, portions of the system have been drained to allow farming, and urban development encircles the upper watersheds of three principle sloughs in the six slough system. There are significant draws of deep groundwater to support these activities and there are subsurface drainage structures that discharge shallow groundwater back to the sloughs. Many hydrologic control structures have been installed on surface waters throughout the watershed, including pumps, gates, culverts, bridges, and road crossings. Many of these structures modify the rate at which water flows through various portions of the system, dewatering habitat in some areas while contributing flooding in others. In addition to these control structures and extensive upstream/upland development, recent conversion of highly erodible rangelands to strawberry production has led to further modifications of the hydrologic system with elevated erosion rates resulting in deposition of fine sediments into the sloughs and drainage systems.

With these changes, and because of the system's hydrologic complexity, local planners, policymakers, and conservationists have been seeking a means to better understand the hydrologic function and the potential effects of possible future modifications in and around the sloughs. Funded by grants from the California Department of Water Resources and the State Coastal Conservancy, the RCD and its partners recently completed an extensive hydrologic study of the Sloughs, with technical and oversight support from a steering team composed of local stakeholders and academics with a history of engagement in resource management and data collection in the Watsonville Sloughs watershed.

RCD consultant Balance Hydrologics used existing monitoring equipment and historic measurement records, and installed 11 new measurement gauges in the Sloughs and monitored how the Sloughs responded to rainfall and other movement of water over two water years (2011-2012 and 2012-2013) to develop extensive hydraulic and hydrologic models of the entire slough system. The models provide a means to better understand many questions, including:

- » Understanding the overall function of the Sloughs;
- » Providing data to support restoration and conservation planning and permitting of restoration projects;
- » Understanding how the system might be better managed for water supply and recharge;
- » Determining whether land is subsiding in sloughs and if so, by how much; and
- » Understanding how water moving through the sloughs may provide opportunities to enhance habitat, water supply and quality, and flood management.

The complete final report, which includes the results and conclusions from the study, as well as recommendations for future work to refine the models and better understand the functioning of the Sloughs, can be found on the RCD website. Both the RCD and the Pajaro Valley Water Management Agency will retain electronic copies of the model for future use by local agencies, partners, and planners for projects including enhancement of water supply, flood management, ecosystem restoration, water quality, and recreational opportunities.



*“The Watsonville Sloughs Study was the product of extensive data collection, wide collaboration between stakeholders throughout the lower Pajaro Valley and expert scientists and engineers. The resulting hydraulic and hydrologic models will be important tools for local water resource planners for years to come.”*

*- Brian Lockwood, PVWMA*



## COMMUNITY WATER DIALOGUE HAS ANOTHER ACTION PACKED YEAR IN 2013

Founded in July 2010, the Pajaro Valley Community Water Dialogue (CWD) is a group of local stakeholders who have gathered to address the issue of groundwater overdraft through local solutions. In 2013, the CWD made great strides towards local solutions that will begin to bring the basin into balance. We strengthened our organizational structure to expand our ability to execute on solutions and reach more people. Members of the CWD are moving ideas forward through Action Teams focused on Land Management and Irrigation Best Practices, Managed Aquifer Recharge, Big Projects, Communications, and (coming soon!) Money and Metrics. Advisory groups of Landowners and Ag Industry representatives help further inform these activities. A Guidance Team made up of diverse community members provides ongoing leadership to keep the momentum going. The RCD provides coordination and funding administration to support and elevate action. A few examples of accomplishments from 2013 include:

- » Thanks to 11 landowners who are hosting communications towers on their lands, the Wireless Irrigation Network is in place, providing coverage to nearly all of the Pajaro Valley. 35 ranches are currently using the system to access real-time data on soil moisture tension, improving their irrigation management and reducing water use by up to 30%.
- » Data from the Bokariza Managed Aquifer Recharge (MAR) site show that the fraction of precipitation that became runoff from areas that drain into the infiltration basin was much higher in Water Year 2013 (WY13) than in WY12. Projecting to conditions that are more typical of the long-term average, the Bokariza MAR system should capture and infiltrate 80-100 ac-ft/yr of runoff, which meets a key goal for the project. Identification and evaluation of priority sites for future MAR projects continues.
- » The Community Water Dialogue has connected with agencies at the regional, state, and national levels who support the collaborative, solutions-oriented approach of the CWD. Over the last several months the RCDSCC and CWD partners hosted a field tour for the Regional Water Quality Control Board and State Water Quality Control Board liaison, and hosted the Chief of the USDA Natural Resources Conservation Service. These tours have been powerful opportunities to positively influence agencies' understanding of agriculture, what it takes to address complex issues around water, and some of the proactive strategies being implemented in the Pajaro Valley.



CWD hosts the Regional Water Quality Control Board to discuss the local solutions being pursued in the Pajaro Valley to address water issues.



## HEALTH LANDS AND HEALTHY ECONOMIES: NATURE'S VALUE IN SANTA CRUZ COUNTY

There are three main types of capital - built (such as pipes, buildings and the like), human, and natural (such as forests, grasslands, wetlands, etc). While the first two types of capital are well captured by traditional accounting, natural capital is usually not captured in any economic accounting. As such, Demonstrating the Economic Value of Natural Areas and Working Landscapes is a regional collaboration intended to document and articulate the economic value of natural capital and the foundational role it plays in maintaining sustainable local economies and communities in Santa Clara, Santa Cruz and Sonoma Counties. This initiative is the first-ever comprehensive economic valuation of natural capital and ecosystem services completed in the greater San Francisco Bay Area. This effort is funded by generous grants from the Gordon and Betty Moore Foundation, S.D. Bechtel Jr. Foundation, and the State Coastal Conservancy, and is being led by the Sonoma County Agricultural Preservation and Open Space District, the Santa Clara County Open Space Authority, and the RCD with technical support from Earth Economics and Alnus Ecological.

This collaborate group is evaluating the multiple benefits of protecting and restoring natural capital assets in each county, and has documented that these assets provide substantial value to local economies. According to the Santa Cruz study, natural capital in our County provides a stream of ecosystem services, such as reduction of peak flood flows downstream and clean water supply, valued at \$800 million to \$2.2 billion to the local and regional economy every year. Based on this annual flow of value, over a 100-year period, the estimated Net Present Value (or Asset Value) of Santa Cruz County's natural capital ranges from:

- » \$22 billion to \$61 billion at a discount rate of 3.5%, which treats natural capital like a short lived built capital asset, or
- » \$81 billion to \$220 billion at a discount rate of 0%, which assumes 100 years from now people will enjoy the same level of benefits from this natural capital as we enjoy today

Taking the long view, the sustainability of the greater San Francisco Bay Region will increasingly depend on integrating our planning decisions, collaborating across sectors, developing new conservation tools and incentives, and implementing new metrics that measure our region's economic health by the condition of our natural capital.

## PERFORMANCE-BASED INCENTIVES FOR CONSERVATION IN AGRICULTURE (PICA) TRACKS PROGRESS IN WATER MANAGEMENT

In the context of over-drafted aquifers and strong regulatory scrutiny around surface and groundwater quality, specialty crop growers on California's Central Coast are increasingly compelled to find ways to demonstrate good environmental performance while protecting privacy and profitability of their operations. Through a public-private partnership, the RCD is working to address this need by developing Performance-based Incentives for Conservation in Agriculture (PICA). PICA is a voluntary program assisting growers to confidentially track and report annual water use and nitrogen movement (via surface runoff and leaching below the root zone) on their farms. Participating growers can use this information to adjust management decisions, demonstrate environmental performance, and qualify for potential incentives, which are currently being developed. To date, project partnerships and field work have focused exclusively on berry growers in the Pajaro valley, but the RCD intends to expand the program to vegetable crops that rotate fields with berry crops, and to a broader geographic region within the CA central coast.

PICA is helping participating growers to keep track of and assess irrigation water applied, fertilizer applied, plant uptake and available nitrate in the soil throughout the season to calculate a nutrient budget and inform management decisions; quantify water savings due to management actions and estimate the potential loss of nutrients due to leaching below the root zone (if any); and identify causes of any potential nitrate loss from their farm, and identify management actions to reduce losses.



**RCD staff working collaboratively with growers to measure soil nitrate, part of evaluating potential nitrate leaching below the root zone in the PICA program.**

## RCD EXECUTIVE DIRECTOR KAREN CHRISTENSEN WINS JAMES IRVINE FOUNDATION LEADERSHIP AWARD

Every year, the James Irvine Foundation recognizes a small group of Californians who are implementing effective solutions to significant state issues. The awards are designed to:

- » Advance innovative, proven and replicable solutions to critical issues facing California
- » Contribute to better public policies and practices in the field

Leadership Award winners are selected based upon factors such as significance, effectiveness, innovation, inclusiveness, timing of recognition, and field leadership.

This year, Karen Christensen was one of six recipients of the James Irvine Leadership Award, for “her dedication and commitment to demonstrating the power of diverse alliances to protect water quality and supply on public and private lands.” The Foundation was particularly inspired by Karen’s work shaping the Pajaro Valley Community Water Dialogue, and her innovative work creating and building IWRP, the Integrated Watershed Restoration Program.

The James Irvine Foundation honored Karen and her fellow Leadership Award winners at a luncheon in Sacramento. Following that event, Karen was honored on the floor of the California State Legislature, and was presented with a resolution honoring her for her service and accomplishments. Back in Santa Cruz, Karen’s partners and colleagues gathered for a celebration at the Seymour Center Long Marine Lab, sponsored by the RCD Board of Directors and the Community Foundation of Santa Cruz County.



**Karen Christensen being honored for her James Irvine Foundation award.**

## RCD TEAMS UP WITH THE SANTA CRUZ WARRIORS TO SAVE SOQUEL CREEK AND THE FROGS

This year was the inaugural season for the Santa Cruz Warriors, an NBA Development League (“D League”) team affiliated with the Golden State Warriors. For the NBA’s “Green Week” in April, several local environmental groups, including the RCD, were invited to participate in events and activities with the team to raise environmental awareness in the community.

In partnership with the Santa Cruz Warriors and Volunteers to Save Soquel Creek, the RCD held a special volunteer restoration event where volunteers cleared multiple truckloads of invasive weeds from the banks of Soquel Creek, in order to restore and improve riparian habitat and improve water quality in the creek. Mav’Rik the Sea Turtle, the Warriors mascot, came out to support the effort and meet the volunteers. Volunteers entered a raffle where one lucky person won a free pair of tickets to a Warriors game.

The RCD also was invited to attend a Warriors game during Green Week and help provide information and entertainment to the fans. The RCD joined with partners Friends of State Parks, the Santa Cruz Natural History Museum, and the Coastal Watershed Council to feature an evening around the theme “What’s Your Nature Lifestyle?” The partners put together a slide show featuring information about all four organizations, featuring Mav’Rik the Sea Turtle. The RCD created a fun time out game, called “Save the Frogs,” where four local kids raced to collect as many rubber frogs as they could, and carry them to safety. The staff and board of the RCD and more than 100 friends and partners attended the game and cheered on the home team.



**Mav’Rik supporting a volunteer creek clean up effort with the RCD.**



**RCD of Santa Cruz County**  
820 Bay Avenue, Suite 136  
Capitola, CA 95010



[www.rcdsantacruz.org](http://www.rcdsantacruz.org)

## **Put Your Money to Work for Local Resource Conservation**

The Resource Conservation District of Santa Cruz County is primarily funded by grants and contracts with public and non-public entities. Private donations help to further the mission of the District and can be targeted toward your area of interest.

The RCD can receive tax deductible donations under Internal Revenue Service Code Section 170 (b) and 170 (c) (1). This section says that contributions to a governmental entity are deductible (up to 50% of the taxpayer's adjusted gross income). The RCD may accept all forms of contributions including, but not limited to, gifts, property, cash, stocks and securities. Feel free to contact us with any questions at **831.464.2950** or [info@rcdsantacruz.org](mailto:info@rcdsantacruz.org).

The RCD offers outreach and education, on-site technical help, permitting assistance, and costshare in each of the program areas. For a detailed description of each program, please visit our web site at [www.rcdsantacruz.org](http://www.rcdsantacruz.org). All services are dependant on available funding.

### **Programs include:**

- ☐ Species Recovery and Riparian Health
- ☐ Livestock and Equine Assistance
- ☐ Rural Roads
- ☐ Residential and Commercial Stormwater
- ☐ Agricultural Programs
- ☐ Fire Prevention
- ☐ Special Programs
- ☐ Other \_\_\_\_\_

Your contribution can be mailed to **820 Bay Ave, Suite 136, Capitola, CA 95010**



**RESOURCE**  
CONSERVATION DISTRICT  
OF SANTA CRUZ COUNTY



# Resource Conservation District of Santa Cruz County

## 2014 Annual Report



RESOURCE  
CONSERVATION DISTRICT  
OF SANTA CRUZ COUNTY

local solutions. real results.







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Sacha Lozano, Program Specialist  
Lisa Lurie, Program Specialist  
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## **Watershed Stewards Project AmeriCorps Interns**

2013-2014: John Drips and Chris Loomis  
2014-2015: Crystal Garcia and Mark Seelos



*Helping people protect, conserve and  
restore natural resources through  
information, education and technical  
assistance programs.*

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## Executive Director's Report

*Chris Coburn, Executive Director*

Santa Cruz County is experiencing a fourth year of drought and I can't help but wonder - is this the new normal? Climate models and several local studies have predicted that a changing climate could lead to a compressed rainfall season with larger, more intense storms followed by long dry periods. Obviously, such a scenario suggests significant implications for the natural resources of Santa Cruz County and provides all the more impetus for the important work that we do here at the Resource Conservation District of Santa Cruz County (RCD).

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**Chris Coburn joins RCD staff, board members, and Watershed Steward Programs interns at the annual RCD board tour highlighting new projects.**

While I had a fairly good understanding of how and what the RCD did before I arrived, I am truly awed and inspired after seeing staff in action firsthand. The RCD is a non-regulatory special district with a mission to help people voluntarily protect, conserve and restore natural resources through information, education and technical assistance programs. The RCD receives a small amount of base funding from the County each year, but the majority of our revenue comes from grants. Grant funding supports discrete project implementation, but it does not fund day to day operations and expenses. Despite this challenging structure, the RCD is able to leverage funds through effective partnerships and innovative programs, several of which are highlighted in this report.

County that are showing great success. On the other side of the County, the RCD has worked in

collaboration with Swanton Pacific Ranch / Cal Poly to install a number of in stream wood structures along Scotts Creek to provide habitat for endangered coho and steelhead. Later this year, we look to continue similar recovery efforts along Soquel Creek, Larkin Valley and along San Vicente Creek.

Even before the drought occurred, all of the County's groundwater aquifers were stressed and in a state of overdraft, conditions that will only get worse if the climate change predictions become reality. Responding to this concern, the RCD is collaborating with a team from UCSC, led by Dr. Andy Fisher, to conduct a county-wide effort to map where the best opportunities are to capture runoff and return it to the aquifers. In line with our historic role, we continue our efforts





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**Blue Circle February 2014 where over 50 attendees gather to hear cutting edge work and reconnect with one another in an informal setting.**

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to partner with NRCS to provide services for soil and water conservation in agriculture and are also looking to develop programs to build soil health. We will also be increasing the scope of technical services we provide to growers to improve irrigation efficiency and nutrient management while identifying opportunities for the implementation of conservation practices.

One of the RCD's major accomplishments this past year was our partnership with two other Bay Area counties and Earth Economics to complete an analysis of ecosystem services for Santa Cruz County. That report, entitled Nature's Value in Santa Cruz County, looks at the economic value of our natural resources and the critical importance of stewardship. Not a surprise to many, the value of local natural resources is staggering and we are looking to engage in discussions about how we can better support and leverage stewardship efforts to support these values. In addition, this report, along with the Conservation Blueprint, provides a framework for thought as our community discusses a possible open space district.

The RCD continues our role as a hub for recovery efforts in Santa Cruz County. With funding from the Wildlife Conservation Board and the State Coastal Conservancy, among others, we are responding to amphibian and coho recovery needs. In partnership with California Fish and Wildlife, we have restored or created several amphibian breeding ponds in south

As our community faces ever-evolving challenges to conserving our natural resources, I continue to find inspiration in the partnerships and creative solutions being pursued throughout the County. We find even more motivation for the role of the RCD in collaborating to provide support and resources to our community. I look forward to more awe and inspiration!



## What is Nature's Value in Santa Cruz County?

*Sacha Lozano, Program Manager*

What is the economic benefit of maintaining the integrity of natural ecosystems and working lands in Santa Cruz County? How do land conservation and stewardship activities support the local and regional economies? Why is this relevant in the context of climate change and drought? These are all important questions that are addressed in the recently published report *Nature's Value in Santa Cruz County*.

*Nature's Value in Santa Cruz County* offers an important complement to the County's Conservation Blueprint, which already identified conservation goals and priority areas. Together, these two documents provide valuable guidelines to strategically invest in conservation and stewardship of landscapes in order to boost the County's resiliency to climate change and drought impacts. It can also serve as a guide for the community as it discusses the possible complexion of an open space district.

This report is the second of three county-wide economic valuations of ecosystem services being completed in the greater San Francisco Bay area as part of the Healthy Lands and Healthy Economies (HLHE) regional initiative. Included in the report is an overview of the HLHE initiative, a basic introduction to the field of ecosystem services economic valuation, and a county-wide appraisal of natural capital assets and services in Santa Cruz County. Put simply, this is a process to monetize and communicate the number of benefits we derive from different landscapes and ecosystems, which are not represented or traded in markets but provide significant contributions to the County. In the same way that economies require built capital assets such as roads, pipelines and machinery to function, natural capital such as open space, natural areas, parks, farms, working lands, wetlands and water resources are all foundational inputs into our economy.

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**Natural ecosystems and working lands in Santa Cruz County provide significant natural capital and assets to the community.**

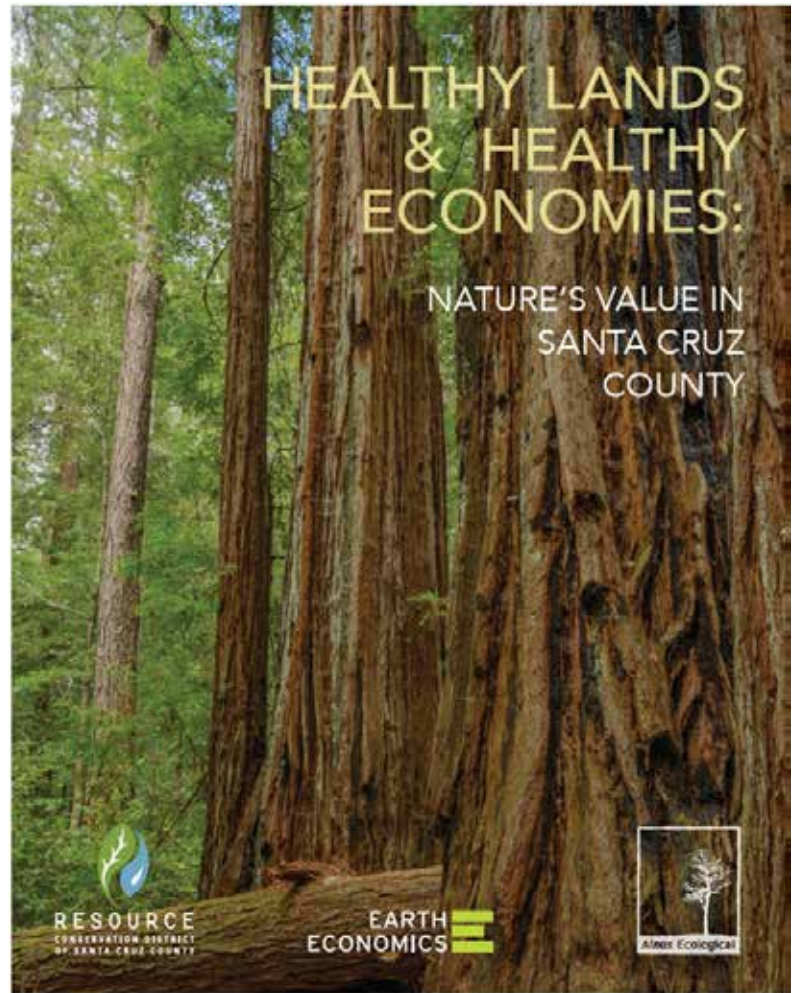




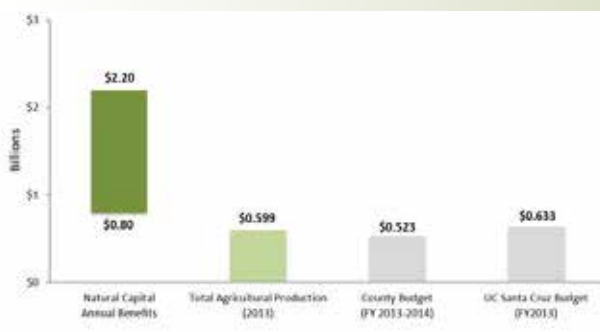
In addition, the report emphasizes the role of active management and stewardship in ensuring the long-term integrity and continued provision of value from natural ecosystems and working lands. It also features a number of illustrative stories that demonstrate the opportunity for optimizing economic and environmental trade-offs and achieving multiple benefits through partnership-based land management. Three local case studies are also highlighted with more in-depth economic analyses of specific conservation and stewardship investments.

Specific to Santa Cruz County, the case studies elaborate on the successes of partnership-based land management at varying scales. One case study looks at the benefit-cost ratio of acquisition and management of protected areas under State Park jurisdiction, including non-market ecosystem services values on the benefits side of the equation. The second case study looks at the return on investment of a managed aquifer recharge project in the Pajaro Valley, considering not only the value of water supply but the provision of additional services such as aquatic wildlife habitat, flood mitigation and prevention, and water quality. The third case study looks at leveraged dollars, direct economic output and jobs created through investments in the regional Integrated Watershed Restoration Program (IWRP) over the past ten years.

Finally, the report discusses the economic study in the context of land use planning, policy and investment decision-making, and provides recommendations to further support public and private stewardship of the County's abundant natural capital. A copy of the report is available on the RCD's website: [www.rcdsantacruz.org/publications](http://www.rcdsantacruz.org/publications).



### Annual Value of Ecosystem Services in Santa Cruz County Relative to other Revenue Streams



### Natural Capital Asset Value ranges relative to the Value of Assessed Property and Structures in Santa Cruz County





## Acacia Removal Improves Habitat Conditions for Steelhead in the Pajaro Watershed

*Stacie Ruffoni, Program Specialist*

In November, over 140 acacia trees were removed in an on-going effort to improve habitat conditions for steelhead and other riparian species along Uvas Creek, a tributary to the Pajaro River.

Uvas Creek maintains a population of South-Central California Coast (S-CCC) steelhead (*Oncorhynchus mykiss*), a federally listed species in the Pajaro River watershed. Acacia is a non-native, evergreen tree that outcompetes native trees and creates a dense canopy that shades large portions of the stream channel year-round, decreasing primary productivity and macroinvertebrate abundance. Macroinvertebrates feed newly emerged juveniles as well as smolts and pre-smolts during a time of year when they experience rapid growth, prior to ocean entry. Greater availability of food usually translates directly to increased individual fitness and carrying capacity for steelhead in freshwater.

Through removal of acacia in the Uvas Creek corridor, existing riparian vegetation willow, sycamore and cottonwood is likely to thrive.

This project marks the first of two phases of acacia removal along the 1000 Trails Campground being funded by Santa Clara Valley Water District. The funding will also allow the RCD to implement three other steelhead spawning enhancement projects along Uvas Creek over the next two years.



**Acacia was removed along the stream edge to reduce year-round canopy cover and conserve existing riparian species diversity.**





**Santa Cruz long-toed salamander heading to the ponds.**

## Amphibian Species Recovery Efforts Take Advantage of Drought Conditions

*Kelli Camara, Program Director*

Did you know that there are more than 6,000 species of amphibians living today? This includes toads, frogs, salamanders, newts, and caecilians. Approximately 75 of these can be found in California and 15 are known to occur in Santa Cruz County. Lack of water coupled with habitat loss and degradation has resulted in more than 1,800 amphibian species being threatened with extinction worldwide. Four of those species are here in Santa Cruz County, including the California tiger salamander, Santa Cruz long-toed salamander, California red-legged frog, and Foothill yellow-legged frog. In 2014, the RCD focused our species recovery actions on restoring local wetlands, which provide breeding habitat for the first three of these species.

To help the salamanders and frogs, local agencies and partners, including the RCD, US Fish and Wildlife Service, Natural Resource Conservation Service, Wildlife Conservation Board, and California

Department of Fish and Wildlife took advantage of this year's dry season to restore function in two breeding ponds that have been degraded over time by invasive species, sedimentation and hydrologic modification. The December rains were more than just a blessing to the water supply, they also put our efforts to the test, and so far the results are promising. Monitoring during this winter revealed thousands of salamanders on their way to existing and restored ponds, to breed. After three years of drought, we're keeping our fingers crossed for a good reproductive year for these incredible species!

## RCD Continues Program to Support Growers in Tracking Water Use and Quality

*Sacha Lozano, Program Manager*

As California enters its fourth year of consecutive drought, agricultural producers on the central coast have renewed concerns over long-term water supply reliability to support their industry. The County's agricultural industry is almost exclusively reliant on groundwater supply, which has been impacted by persistent aquifer overdraft and seawater intrusion. Farmers are constantly compelled to reinforce risk management and build system's resiliency on their farms to ensure their long-term viability. From a conservation point of view, this involves managing water, soil and nutrients in a way that reduces pressure and dependence on limited supplies, as well as improving precision and timing of input application (i.e. use less water, applied when the plants need it and no more than they can use). Traditional irrigation and nutrient management assessments, known as practice-based assessments, determine how much water and fertilizer was applied and how uniformly it

was done across the field. While useful, this approach does not account for climate and other factors that make performance difficult to determine.

Through a public-private partnership, the Resource Conservation District of Santa Cruz County (RCD) is working to address water supply and water quality protection on the central coast by developing Performance-based Incentives for Conservation in Agriculture (PICA). PICA is a voluntary program assisting growers to confidentially track, and anonymously compare against peers, their total water use and nitrogen loss (via surface runoff and leaching below root zone) on their ranches during a single crop cycle. Participating growers can use this information to adjust management decisions, demonstrate environmental performance, and qualify for potential incentives.

In 2014, RCD staff worked with nine strawberry growers in the Pajaro Valley and Elkhorn Slough watersheds to track water and nitrogen use efficiency on their farms during the 2013-2014 crop.

PICA is helping participating growers to:

- ☐ Keep track of irrigation water applied, fertilizer applied, plant uptake and available nitrate in the soil throughout the season to calculate a nutrient budget and inform management decisions.
- ☐ Establish a water and nitrogen use efficiency baseline to track changes over time, assess performance relative to peers, and identify opportunities for improvement.
- ☐ Quantify and document water savings resulting from management actions.
- ☐ Assess if (and how much) a farm might be losing nutrients through surface runoff during storms and leaching below the root zone.
- ☐ Identify potential causes of nitrate losses from the farm and management actions to reduce losses.

Results of this monitoring indicated that, overall, growers are irrigating in a manner that generally meets the crops needs. However, the results also suggest that growers could benefit from additional technical assistance related to irrigation during establishment period and better matching of fertilizer applications to specific crop needs.

### Flow meters are installed and data is collected in a growers field.





## Pajaro Valley Community Out in Front of the Drought

*Lisa Lurie, Program Manager*

2014 was a historic year for water and agriculture in California. The unprecedented drought, passage of state groundwater legislation, and the approval by voters of the water bond all bring the need for local solutions for sustainable groundwater management into heightened focus. We are fortunate in the Pajaro Valley to be out in front on these issues through the ground breaking community-led effort of the Community Water Dialogue and partnerships with the Pajaro Valley Water Management Agency (PV Water) to implement the Basin Management Plan.

Formed in 2010, the Community Water Dialogue (CWD), a collaborative group of landowners, growers, and business, community and agency leaders has been working from the ground up to find innovative solutions to the groundwater deficits threatening the Valley. In 2014 we continued to make great progress by increasing use of delivered water for irrigation in the coastal zone, improving water use efficiency, supporting PV Water led projects to increase supply, and advancing managed aquifer recharge projects.

On April 10, 2014 the CWD, in partnership with the RCD, PV Water, and the Santa Cruz County Farm Bureau hosted the 2014 Drought and Irrigation Conference at the Santa Cruz County Fairgrounds in response to the community concern over the drought. CWD organized a forum for growers and other experts to share best practices, and vendors to show the latest technological advances in water management.

Irrigation efficiency also continues to be a key community based solution to conservation. The Wireless Irrigation Network (WIN) helps growers to better understand how much water their plants need through real-time soil moisture tension data. Over 60 ranches are now using the WIN network to improve irrigation management. The RCD also administers the WIN loaner program that provides low cost equipment to growers who might not otherwise be able to utilize the technology. With additional support from PV Water, there are now eight sets of field level sensors available for growers to try for three months at minimal cost to see how the technology can benefit their operation and help conserve water.



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**The CWD Drought and Irrigation Conference had over 120 people in attendance and provided information on tools, technology and resources for growers to improve water use efficiency and save money.**

The USDA Natural Resource Conservation Service (NRCS) selected the CWD for funding through the new Regional Conservation Partnership Program. This and additional funding from Department of Water Resources will allow us to provide technical and financial assistance to growers to help meet water conservation and managed aquifer recharge goals.

Our work to date makes the Pajaro Valley well positioned to meet the challenge of sustainable groundwater management, but our work isn't done. While water use efficiency may be improving, overall groundwater pumping is increasing as growers have less precipitation to rely on during this record-breaking drought. We still have challenges, and we must continue to come together as a community in the spirit of shared sacrifice to bring our aquifer into balance. Through the Community Water Dialogue we can work together to not only respond to the drought today, but to develop and implement pro-active solutions to improve the resiliency of the Pajaro Valley basin over the long term.



## Rural Roads and Rain Barrels Workshops

*Angie Gruys, Communications Specialist*

Most who live in the Santa Cruz Mountains were drawn here by its natural beauty and rural lifestyle. But living here has its own unique set of challenges. Homes are built on steep terrain and along creeks and streams. Rural roads meander through the hills altering water flow and forested areas pose high fire danger. These issues can threaten the very natural resources that make this place desirable and unique.

On June 4, 2014, the Felton Fire Station pulled out the engines to make room for over 90 Santa Cruz mountain residents interested in measures they could take that protect both the environment and their properties.

Topics included Best Management Practices for managing rural roads, tips for working with road associations, water quality and conservation measures, stormwater management and fire protection. The workshop was part of the RCD Rural Roads Technical Assistance Program (RRECAP) funded through a grant from the EPA managed through the Regional Water Quality Control Board. Additional funds were provided by the Community Foundation of Santa Cruz County and the California Coastal Conservancy allowing for expanded topics such as fire protection to be included in the evenings discussions.

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**Over 90 participants attended workshops focused around rural road best management practices and rainwater catchment options for their properties.**



Presenters spoke throughout the three hour workshop. John Martinez and Andy Hubbs from Cal Fire discussed fire protection and creating defensible space along roads, as well as the importance of road maintenance for fire emergency access. LeAnne Ravinale, Water Use Efficiency Coordinator from the Scotts Valley Water District, educated the audience on residential stormwater management and water conservation. Bill Birmingham, Conservation Program Manager from the Napa County Resource Conservation District, outlined best management practices for reducing sediment contributions to local waterways from rural roads. Tom Bird, president of a large road association in the San Lorenzo River Watershed, shared how road associations can work together to create and plan long-term road maintenance and repairs. The final speaker was Angie Gruys, Program Specialist with the RCD who highlighted technical and financial assistance programs offered by the RCD, local water agencies, and fire districts that help landowners implement conservation practices on their private properties.

Attendees also browsed informational tables staffed by local non-profits and agencies including the Bonny Doon Fire Safe Council, Valley Women's Club, San Lorenzo Valley Water District, Central Coast Greywater Alliance and the RCD staffed information tables. Materials were provided on fire protection, watershed conservation and protection, water supply, ground water, a grey water demonstration, data sheets and brochures on rural roads, stormwater management, drainage, erosion control and a request for assistance form for those seeking on-site technical help.



### **Presenters spoke about rural road management, fire protection, water conservation, stormwater management and best management practices for reducing erosion and sediment run off into local impaired waterways.**

A survey at the end of the workshop revealed that over 80% of respondents intend to complete a conservation project in the next 12 months. When asked what the barriers were to completing conservation projects and best management practices, 73% of respondents said cost, 53% said lack of "how to" information and 27% said lack of time. When posed the question "what resources might help overcome these barriers?," the top two answers were cost-share or rebate programs and on-site technical assistance.

Following the workshop the RCD received over 40 requests for technical and on-site assistance. Four landowners received cost-share and rebates for installing road and drainage improvements like large rain cisterns. The Rural Road Program will continue to offer rebates through 2015.



## Arana Gulch Surveys and Projects Aim to Reduce Sediment Erosion Throughout the Watershed

*Chris Coburn, Executive Director*

Arana Gulch supports an important, highly-valued riparian community and creek corridor at the eastern edge of the City of Santa Cruz. It is one of the smaller streams on the Central Coast of California, but it has historically sustained steelhead, is an important area for groundwater recharge and serves an important area of open space. The watershed is also important because it is home to the Santa Cruz Harbor, and the relationship between the needs of the harbor and the watershed demonstrates the need for ongoing combined management activities.

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**Multiple field days in Arana Gulch provided critical data to the movement of sediment in the system.**



In 2014, the RCD was awarded a grant from the Santa Cruz Port District and the City of Santa Cruz to address resource concerns and opportunities in the Arana Gulch watershed. Of principal concern to the Port District is the need to reduce erosion in the watershed and the resulting sedimentation of the Harbor. The amount of sediment from the watershed that enters the harbor has been a problem for decades. Over the course of an average winter, sediment from the watershed fills in portions of the upper harbor, which results in the loss of slips and requires costly dredging.

The RCD, working with the City of Santa Cruz, Port District and number of other partners, including County of Santa Cruz, Soquel Creek Water District, WSP Stewards, Private Consultants (Don Alley and Balance), CCC, Americorps and NRCS, has implemented several sediment reduction projects in the watershed over the past 15 years that have reduced an estimated tens of thousands of cubic yards of sediment from eroding into the watershed. Work under the existing grant continued to identify opportunities within the watershed for additional sediment reduction projects.

While upland erosional features like gullies that require action still exist, recent surveys, conducted by Balance Hydrologics under this grant, found that a significant portion of sediment now comes from the stream channel itself – a result of the changing hydrology resulting from the development of the watershed. One of the reasons why sediment is such a problem in the watershed is because it is carved from the sandy Purisima geologic formation – a formation that is one of the County's primary sources of domestic groundwater supply. This fact, combined with the impact that runoff has on stream condition, calls out for multi-benefit projects that capture runoff and allow it to sink into the ground.

The RCD's 'Slow It, Sink It, Spread It' guide for residential drainage is an excellent resource for anyone wanting to implement stormwater capture practices on their properties. The RCD also hopes to utilize work currently underway with UCSC to identify suitable areas for implementing managed aquifer recharge projects, and likely the Arana watershed will be one such area.

## College Lake Multi-Objective Study Provides Key Technical Information to Proposed Alternatives for Lake Management

*Stacie Ruffoni, Program Specialist*

College Lake is formed in a seasonal drainage each year on the outskirts of the City of Watsonville near the fairgrounds. Traditional management of the lake has included draining it early each spring to allow for farming on the lake bottom during the summer and fall before the winter rains begin. In recent years, the long-term plans for the lake have become an important topic.

Through a grant awarded to the Pajaro River Watershed Integrated Regional Water Management (IRWM) group from the Department of Water Resources to the Resource Conservation District of Santa Cruz County was able to lead a collaborative effort to better understand the hydrologic and stakeholder impact of alternatives for College Lake that maximize the benefits of water supply and flood management, while supporting other environmental and community benefits. The resulting technical report provides scientific data and a thorough documentation of various objectives and concerns regarding the future of College Lake along with additional information on multi-benefit project alternatives.

Development of the College Lake technical report was a two-year process that included input from a Technical Advisory Committee consisting of state and federal regulatory agencies, PV Water, RCD and others. Specific analysis included development of a hydrologic model that led to an alternatives analysis that examined several different operational scenarios. Stakeholder outreach was critical to this process, and included input from interests representing fish, waterfowl and agriculture.

The technical report analyzed a combination of six major physical and operational alternatives, identifying the ability of each alternative to meet the water supply, water quality, flood management and various environmental goals identified in the start of the process. From the analysis of the alternatives, some general conclusions were made that supported the IWRP and study goals for multi-objective management. Two alternatives were identified as technically impracticable, including the status quo and a compartmentalized lake. The most viable multi-objective alternative was a water supply project where either: a longer inundation of the College Lake, but drained early enough to allow for a single farming cycle on the lake bottom or farming no longer occurs on the lake bottom; landowners are fairly compensated for loss of or impacts to farmland.

The technical study identified future considerations that must be addressed as the most viable alternatives are further evaluated and pursued. These considerations include:

- ☐ Maintenance of Salsipuedes Creek.
- ☐ Upland Management.
- ☐ Shallow groundwater profile.
- ☐ Compensation alternatives.
- ☐ Dam/Weir configurations.
- ☐ Recreation.
- ☐ Flood Management Planning.
- ☐ Groundwater Recharge.
- ☐ Inundation Impacts.

A copy of the report is available on the RCD's website:

[www.rcdsantacruz.org/resources-for-resource-professionals](http://www.rcdsantacruz.org/resources-for-resource-professionals).

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### College Lake being farmed in late fall near the weir and pump station.





## RCD Promotes Multi-partner Stormwater Capture and Recharge Projects

*Angie Gruys, Communications Specialist*

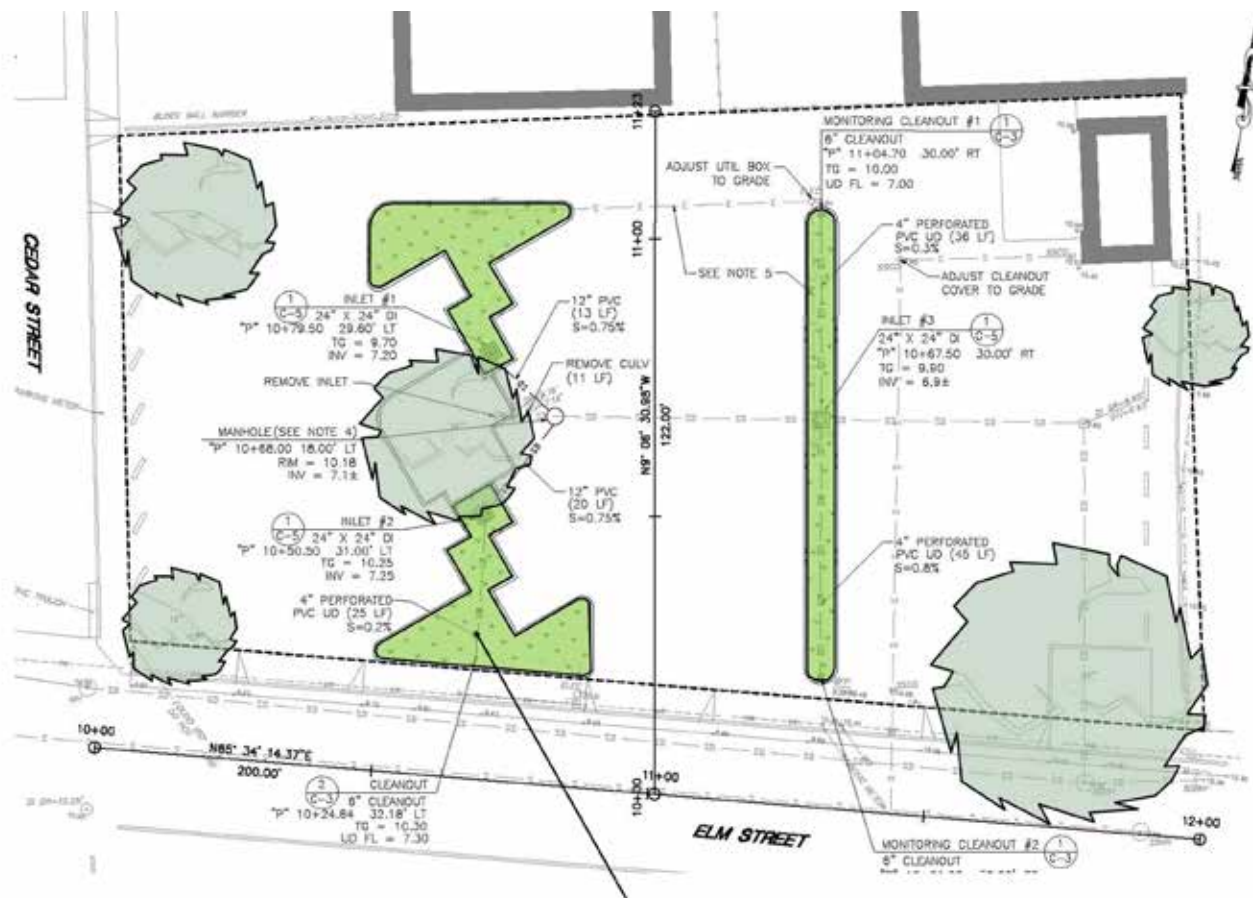
Even before the current drought, California's residents recognized the need to maximize our limited water resources to address pressing watershed and environmental concerns. In particular, stormwater runoff that was once seen only as a nuisance is now recognized as a resource. Several projects in Santa Cruz County are demonstrating how we can capture and utilize stormwater to reduce runoff, improve water quality, and address ongoing water supply shortfalls.

In 2006, California's voters passed Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act. One of the

priorities of the program was to fund projects that change the way we deal with stormwater – turning it from a threat to a resource. Traditional stormwater management involves routing runoff from the urban environment as quickly as possible directly to streets and stormdrains. While that approach has reduced the threat of flooding, it has significantly altered the natural hydrologic cycle that allowed stormwater to infiltrate into the ground, thus reducing groundwater recharge.

The County of Santa Cruz partnered with City of Santa Cruz, Scotts Valley Water District, the Resource Conservation District, and the Regional

**This city of Santa Cruz parking lot retrofit includes a specially designed vegetated (bioretention facility) for infiltration of runoff.**



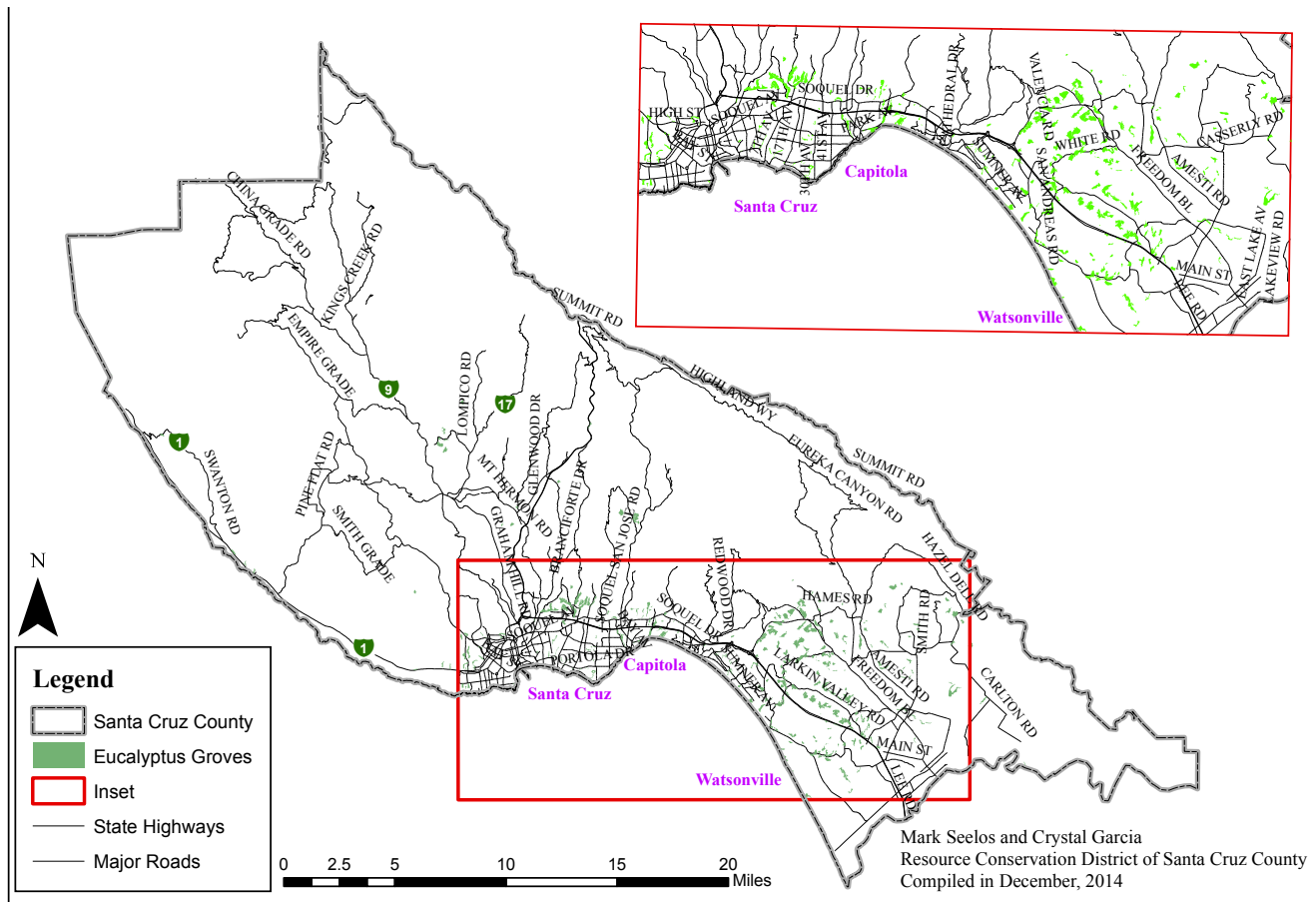


**This project at Soquel Creek Water District headquarters, partially funded by a 2009 grant to the RCD from the EPA and State Water Board, is an example of stormwater retrofits that promote infiltration and water conservation.**

Water Management Foundation to secure over \$2 million to implement several projects that capture, clean, and infiltrate stormwater. Four projects are being implemented under this grant in a diversity of settings to act as demonstration projects for how stormwater can be used as a resource. These projects include:

1. Heart of Soquel Park – this project began construction in late 2014 and includes design elements such as impervious pavement, bioswales and rain gardens designed to slow and clean runoff before it enters adjacent Soquel Creek.
2. City of Santa Cruz – Catalyst Parking Lot – this project is a demonstration of the use of pervious pavement in an already urbanized environment
3. Brommer Street County Park – this project will capture parking lot and other runoff, route it through a bioswale and then to seepage pits where it will percolate into groundwater.
4. Scotts Valley Metro Station – this project will capture roof and parking lot runoff and direct it to a recharge gallery for infiltration.

Complementing the project implementation, the RCD is providing the outreach and education services for the grant that include designing interpretive signs for each of the projects, completing tours the projects to highlight the integrated stormwater features, and facilitating a day long public workshop for stormwater professional. For more information on these projects, visit [www.rcdsantacruz.org/prop-84-projects](http://www.rcdsantacruz.org/prop-84-projects)



## Eucalyptus Mapping Results in More Targeted Removal Efforts in the County

*Crystal Garcia and Mark Seelos, WSP Interns*

Tasmanian Blue Gum Eucalyptus (*Eucalyptus Globalus*) was introduced to the west coast in the late 1850's by Australian prospectors for use as a wind break for farms and residences. The tree subsequently colonized coastal California and is now ubiquitous throughout Santa Cruz and Monterey counties. Eucalyptus out-competes native plants, provides poor habitat for local animal species, and most concerning during the ongoing drought, presents a high fire hazard. A coordinated, ongoing removal program of this invasive species is a priority for the RCD with the goals of reducing the potential for severe wildland fire: lessening post-fire damage, minimizing soil erosion and the impacts to water quality, enhancing wildlife habitat, and limiting the spread of invasive species and diseases.

Finding where all of the stands exist is an important first step so the RCD enlisted Americorps Watershed Stewards Program members hosted by the RCD to locate and map eucalyptus groves throughout the county. The full scale map of the county's Blue Gum stands they produced will be used by the RCD and other local partners to prioritize future eucalyptus removal efforts in the county. That prioritization is being conducted through meetings of local agencies and groups including local fire safe councils, CalFire, the County, fire districts and non-governmental groups working on fire preparedness in the County. Through coordinated efforts, the group hopes to attract additional resources to the County for the removal of eucalyptus and other fuel load reduction efforts.



## Fire Preparedness Critical to Safeguard Community

*Chris Coburn, Executive Director*

After four years of drought, the County's precarious water supply situation is at the forefront of many community members minds. However, an equally important concern heightened by drought, particularly after two of the driest years on record, is the potential for catastrophic wildfires. The intense wildfires that are now occurring with alarming regularity highlight how dry conditions are, how fast wildfires can move, and the importance of preparing for fires before they start.

Due to effective fire suppression over the last 65 years, local topography, high fuel loads and extreme drought conditions, Santa Cruz County has significant potential for catastrophic wildfires. Since 2008, five large wildfires burned over 13,900 acres in Santa Cruz County, destroying over 233 structures and costing the State over \$35 million in suppression expenses.

The ongoing drought has essentially led to a year-round fire season, and now is the time to be aware and implement preventative measures. New sources of funding have become available for fire preparedness efforts, and local stakeholders have begun meeting in an effort to bring more of those resources to the County. Loosely formed as the Santa Cruz Fire Safe Council, this group includes RCD, CAL FIRE, the County, City of Santa Cruz, State Parks, Land Trust of Santa Cruz County, Monterey Bay Air Pollution Control District, California Conservation Corps, Pacific Gas and Electric, San Lorenzo Valley Water District and local fire chiefs. The intent behind forming a Santa Cruz Fire Safe Council is to support the existing fire safe councils while at the same time addressing concerns in areas not covered by an existing fire safe council (FSC). For example, much of the San Lorenzo River watershed, where there are pressing needs for fuels reduction and evacuation planning, is not covered by a FSC.

There are many things a property owner can do to be safe and decrease the likelihood of damage to home and property from wildfire - one of the most critical is to create defensible space. The RCD received funding from the Monterey Bay Air Pollution Control District to assist homeowners in creating defensible space by removing vegetation. Through this chipper program the cleared vegetation is chipped up and can then be used as mulch. This is not only a benefit to fire preparedness efforts but chipping also avoids air quality concerns associated with burning.

As we enter this fire season, you are encouraged to contact CAL FIRE, the Resource Conservation District of Santa Cruz County, USDA Natural Resources Conservation Service (NRCS), your local fire district or one of the four Fire Safe Councils in Santa Cruz County for advice and helpful publications on making your property and our community fire safe.

Bonny Doon: [www.bdfsc.org](http://www.bdfsc.org)

South Skyline: [www.southskylinefiresafe.org](http://www.southskylinefiresafe.org)

Soquel: [www.soquelfiresafe.org](http://www.soquelfiresafe.org)

Santa Clara: [www.sccfiresafe.org](http://www.sccfiresafe.org)

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**This dangerous void underneath a private road in the Santa Cruz Mountains was the result of a plastic culvert that melted due to the extreme heat of the Summit Fire in 2008. It has since been replaced with cost-share assistance from the RCD.**





## RCD and Partners are Stand Outs at CARCD Conference

*Resource Conservation District Staff*

The RCD had much to celebrate at the 69th Annual Conference of the California Association of Resource Conservation Districts (CARCD). The conference held in Ventura, CA, from November 12-15, 2014 drew nearly 200 participants, including RCD directors, RCD and NRCS employees, and representatives from many partnering organizations from all over California. Multiple RCD and NRCS employees, including Susan Pearce, Stacie Ruffoni, Sacha Lozano and Rich Casale were speakers in break-out sessions, while Lisa Lurie co-spoke with Emily Paddock, Board Member of RCD of Monterey County, during the opening session about the successes and lessons learned from the Community Water Dialogue.

For the 75th RCD Birthday luncheon, Rich Casale presented "Dust to Diamonds: 75 years of Conservation and the Role of California's RCDs." The presentation showcased the RCDs' 75 year history in California, highlighting accomplishments from the late 1930s to date including NRCS/RCD cooperative and educational projects and the RCD of Santa Cruz County's very successful Permit Coordination Program. Rich was also recognized in a surprise presentation made by Chris Coburn, Executive Director of RCD Santa Cruz County, with a Proclamation from the Santa Cruz County Board of Supervisors honoring Rich for his 40 years of service with NRCS to the County of Santa Cruz.



**Stacie Ruffoni accepting the CARCD Employee of the Year Award.**

In the spirit of recognition, Stacie Ruffoni was presented with the 2014 CARCD Employee-of-the-Year Award during a special awards presentation for her outstanding work as the Pajaro River Watershed Coordinator serving the RCDs in Santa Cruz, San Benito, Santa Clara and Monterey Counties. Stacie's job responsibilities involves bringing agencies, partners and diverse landowners together to address pressing issues in the 1,300 square mile watershed. Some of the achievements in just the two years she has been in the position of Watershed Coordinator include: development of a website for the San Benito County RCD; co-leading the Pajaro Valley Community Water Dialogue; facilitating meetings for the College Lake study; implementing a permit coordination program for the upper watershed; developing outreach materials; and assisting with the organization of various meetings and events including the 2014 Drought Conference that attracted more than 120 stakeholders.

The RCD had many outstanding staff representing the various efforts in Santa Cruz at the CARCD conference and congratulates Stacie in the CARCD recognition as the 2014 Employee of the year.

**Rich Casale accepting an award from the Santa Cruz County Board of Supervisors for 40 years of service.**



## 2014 Fiscal Year Funding Sources

**American Rivers**

**Bureau of Land Management**

**California Department of Conservation**

**California Department of Fish and Wildlife**

**California Department of Food and Agriculture**

**California Department of Water Resources**

**California Natural Resources Agency**

**California State Coastal Conservancy**

**California State Parks**

**California Wildlife Conservation Board**

**Community Foundation of Santa Cruz**

**County of Santa Cruz**

**Ecology Action**

**Gordon and Betty Moore Foundation**

**James Irvine Foundation**

**Land Trust of Santa Cruz County**

**Moore Family Foundation**

**Monterey Bay Unified Air Pollution  
Control District**

**Reiter Family Foundation**

**Santa Cruz Port District**

**Santa Clara Valley Habitat Agency**

**Sempervirens Fund**

**San Jose State University**

**State Water Resources Control Board**

**Sustainable Conservation**

**US Fish and Wildlife Service,  
Coastal Program**

**US Department of Agriculture**

### RCD Fiscal Year 2014 Budget

July 1, 2013–June 30, 2014

Income Sources		Expenses	
Interest	\$1,638.00	Professional Services & Project Implementation	\$ 1,816,964.00
Local & Private Sources	\$24,239.00	Salaries	\$854,474.00
Augmentation Funds	\$28,900.00	Operating Expenses	\$171,920.00
Other Revenue Grants	\$2,741,130.00		
Donations	\$16,014.00		
<b>Total</b>	<b>*\$2,811,920.00</b>	<b>Total</b>	<b>*\$2,843,359.00</b>

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

## CFSCC Support Leverages Outreach and Cost-Share Efforts

The Resource Conservation District of Santa Cruz County received a generous grant from the Community Foundation of Santa Cruz County (CFSCC) to provide technical assistance to, and cost share implementation of conservation practices with, private property owners in the County. This funding enabled the RCD to leverage other state and federal grants to reach a broader audience and do what we do best – work with property owners to evaluate resource concerns and implement practices to address them.

Far exceeding what we had hoped to accomplish under this grant, the RCD provided technical assistance to 37 private property owners and several implementation cost share projects on issues ranging from manure and paddock management for livestock, erosion and drainage, water conservation, rural roads, fire protection, permit assistance and stormwater management. We were also able to reach broader audiences by offering a wider range of topics at outreach events fire protection, well water conservation and monitoring, and livestock management.

CFSCC grants have helped the RCD to secure more diverse funding, generate additional revenue through fee-for-service contracts and create new partnerships and programs resulting in expanded services to the community to improve our precious natural resources.

**RCD of Santa Cruz County**  
820 Bay Avenue, Suite 136  
Capitola, CA 95010



[www.rcdsantacruz.org](http://www.rcdsantacruz.org)

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## **Put Your Money to Work for Local Resource Conservation**

The Resource Conservation District of Santa Cruz County is primarily funded by grants and contracts with public and non-public entities. Private donations help to further the mission of the District and can be targeted toward your area of interest.



The RCD can receive tax deductible donations under Internal Revenue Service Code Section 170 (b) and 170 (c) (1). This section says that contributions to a governmental entity are deductible (up to 50% of the taxpayer's adjusted gross income). The RCD may accept all forms of contributions including, but not limited to, gifts, property, cash, stocks and securities. Feel free to contact us with any questions at [831.464.2950](tel:831.464.2950).

### **Programs include:**

- ☐ Species Recovery and Riparian Health
- ☐ Livestock and Equine Assistance
- ☐ Rural Roads
- ☐ Residential and Commercial Stormwater
- ☐ Agricultural Programs
- ☐ Fire Prevention
- ☐ Special Programs
- ☐ Other

Your contribution can be mailed to **820 Bay Ave, Suite 136, Capitola, CA 95010**



**RESOURCE**  
CONSERVATION DISTRICT  
OF SANTA CRUZ COUNTY



# Resource Conservation District of Santa Cruz County 2015-2016 Annual Report



## Executive Director's Report

*Chris Coburn, Executive Director*

The Resource Conservation District of Santa Cruz County (RCD) serves as hub for conservation, connecting people with the technical, financial and educational assistance they need to conserve and manage natural resources. A defining characteristic of RCDs is that we provide non-regulatory, confidential assistance. There are nearly 100 RCDs across the state, and the amount of baseline funding each district receives varies greatly. In Santa Cruz County, the RCD is fortunate to receive a small amount of funds each year through local property tax and augmentation funds provided by the County. Those funds are critical in supporting the day to day function of the district. But in order to deliver our mission we rely heavily on grants, and through necessity have become effective grant writers. As the table below shows, the RCD brings in nearly \$40 in state and federal funds for every dollar we receive in local funding. This funding is applied directly to local projects that protect our water, soil, air, agriculture and wildlife.

Moreover, as we protect our natural resources, we also support our local economy. A recent analysis of local benefits of stewardship actions implemented in Santa Cruz County between 2005 and 2012 found that these investments resulted in 140 jobs and a total economic output of \$38 to \$43 million for the County. But better yet, investment in stewardship yields a suite of ecosystem service benefits – such as clean water, carbon sequestration, recreational opportunities and local food production that have tremendous intrinsic and economic value.

In 2017 the RCD will celebrate its 75th anniversary. Our success is achieved through strong, long-term partnerships with dedicated landowners, organizations and partner agencies. As we mark this milestone, we cannot help but think of our friend and colleague, Karen Christensen, who was a driving force in building these partnerships. Her vision of inclusive collaboration continues on not only at the RCD but also in programs statewide. During the year we hope to broaden the conversation with our community and partners around of the value of natural resources, the importance of stewardship, and the role of the RCD. As we look forward to celebrating this anniversary milestone with our community, the Board of Directors and staff at the RCD are optimistic about our future and are committed to our mission of working voluntarily with people to protect, steward and restore natural resources.



### RCD Fiscal Year Budgets

Income Sources	2014-2015	2015-2016	Expenses	2014-2015	2015-2016
Interest	\$1,170	\$1,917	Professional Services & Project Implementation	\$ 1,705,755	\$1,946,539
Local Property Taxes	\$26,796	\$29,406	Salaries	\$768,049	\$786,750
Augmentation Funds	\$37,160	\$41,289	Operating Expenses	\$163,308	\$154,484
State or Federal Grants	\$2,439,279	\$2,924,017			
Donations	\$125	\$23,008			
<b>Total</b>	<b>*\$2,504,530</b>	<b>\$3,019,638</b>	<b>Total</b>	<b>*\$2,637,112</b>	<b>\$2,887,773</b>

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



## Improving Stream Conditions and Demonstrating Partnerships on Soquel Creek

Since childhood, Robert Tomlin has been hiking, camping and fly fishing giving him a great appreciation for the outdoors. In 2013, during treks near his home on the east branch of Soquel Creek, Robert began to wonder what effect the large boulders that were placed along ~1,500 feet of the creek were having on its natural function. The boulders were originally placed as flood protection in the early 1980's by a previous landowner. Robert contacted the RCD and we pulled together a team that included the National Oceanic and Atmospheric Administration Southwest Fisheries Science Center (NOAA) and the California Department of Fish and Wildlife (CDFW) and determined that the rock negatively impacted stream condition and function. It was also limiting steelhead and coho salmon movement to much needed high quality rearing habitat upstream.

Wanting to improve the stream, Robert, the RCD and the Natural Resources Conservation Service (NRCS) designed a solution that would return the stream to its natural function. Designs included large redwood logs with root wads, rock barbs, a secondary flow channel

to reactivate the adjacent floodplain, a bench below the adjacent landslide to collect fine sediment and planting of trees, shrubs and herbaceous plants to improve the riparian corridor. Restoration was completed in 2015 with funding from the State Coastal Conservancy and Wildlife Conservation Board through the Integrated Watershed Restoration Program with significant contributions from Robert himself. Permitting and design assistance was provided by NRCS, National Marine Fisheries, CDFW, the County of Santa Cruz and the United States Fish and Wildlife Service.

NOAA placed a monitoring antenna on the property that will allow tracking of fish passage through this stretch of Soquel Creek. The data will be extremely valuable in estimating annual population numbers that will help the RCD evaluate the long-term effectiveness of the project.

The RCD was thrilled to work on such a large and important restoration project with an enthusiastic landowner, and hope it will inspire others interested in completing restoration projects on their properties.

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*"Our whole riparian corridor already looked more natural on the day construction was completed, just with its straw covered slopes. Constructed elements all were already showing promise of a much better habitat. I plan to invite all my neighbors downstream to come see the project and ask if they would be interested in getting advice and help improving the riparian habitat in their sections of the stream". – Bob Tomlin, property owner*

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**BEFORE: white rip-rap, failing bank**

**AFTER: Installation of large woody debris, bench below the landslide and a secondary flow channel.**

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## Bryant-Habert Seasonal Wetlands Enhancement Project

Watsonville Slough Farm (WSF), owned by the Land Trust of Santa Cruz County, is a model for a balanced approach that supports both working lands and natural resources. The Bryant-Habert /Wait Ecological Restoration project, located on a part of the WSF, will improve approximately 8.5 acres of seasonal wetland, riparian and grassland habitat. To recover wetland hydrology at the historic junction of the Watsonville Sloughs and Pajaro River, topographic variability will be restored by grading and replanting the site with native grassland and wetland vegetation. This project was made possible through planning and design support from the Technical Advisory Committee and highlights a successful partnership between the RCD, the Land Trust of Santa Cruz County, Watsonville Wetlands Watch, Natural Resources Conservation Service, United States Fish and Wildlife Service, and the State Coastal Conservancy. Project construction was funded by the California Wildlife Conservation Board (WCB) through an award of \$337,000 to the RCD.

## Boosting Technical Assistance Capacity for Conservation in Agricultural Program

The RCD's Agriculture and Conservation Technical Assistance Program has been active for the past decade, but thanks to new funding and partnerships, we have a significant boost to our internal capacity to work with growers and implement various conservation programs on agricultural lands. Gerry Spinelli, a recent PhD graduate from UC Davis, joined the RCD team in 2015 as an agronomist tasked with development of an internal Irrigation and Nutrient Management Technical Assistance program to work directly growers.

Achieving the program goals requires continuous collaboration with interested growers and a great deal of technical assistance ability. With Gerry's expertise, the RCD and our partners are equipped to offer a mobile irrigation lab that provides comprehensive irrigation evaluations and recommendations, monitoring and reporting of water and nitrogen use efficiency, irrigation system design planning for beginning farmers, and development of a monitoring system for salt management. This builds upon our strong partnership with the Natural Resources Conservation Service (NRCS), and is a natural complement to the conservation planning and funding incentives they provide to growers.

Gerry has a life-long agricultural background, having grown up on an olive and vegetable farm on the hills overlooking Florence, Italy. Prior to coming to the US, he worked on agricultural development projects through the Italian International Cooperation Agency in Lebanon and Honduras. He studied agronomy and tropical agriculture at the University of Florence, and more recently completed a PhD in horticulture and agronomy at UC Davis, focusing on plant physiology and water stress in almond orchards. Through his contagious creativity, enthusiasm and resourcefulness he has multiplied the number of growers we assist, expanded the services and equipment we can offer, and improved our ability to collect, process and report data back to growers to assist with their management decisions. He has been a tremendous addition to our team.



**Gerry using the mobile irrigation lab to provide technical assistance to a grower in the Pajaro Valley.**

## Groundwater Recharge Net Metering

This past March, the Board of Directors of the Pajaro Valley Water Management Agency (PV Water) approved a program titled Recharge Net Metering (ReNeM), the first of its kind in California, as part of a comprehensive effort to improve groundwater conditions in the Pajaro Valley. The five-year pilot program begins in October 2016, and will operate as a partnership between PV Water, staff from the University of California Santa Cruz (UCSC) and the RCD. The ReNeM program will create financial incentives for willing landowners to infiltrate stormwater from surrounding hillslopes, roads, and fields during large rainstorms, helping to replenish underlying aquifers.

Over the past two year, with funding from the State Coastal Conservancy, the RCD had been working with UCSC to create detailed maps to pinpoint potential project sites in locations where the conditions for infiltration and groundwater recharge are especially favorable.

Under the ReNeM pilot program, the construction of up to ten projects is planned initially, with one or two added for each of the next five years. A formula will be applied to calculate the rebate. To start, the formula will be 50% of the unit water cost that is currently charged by PV Water customers as an augmentation fee for water pumped from wells. The program is structured to incentivize long-term recharge projects by offering rebates every year the project is operational. Infiltration benefits from recharge basins will be validated by a third party certification carried out by UCSC and the RCD.

The ReNeM program supports the implementation of Best Management Practices and builds upon the coordinated efforts of the Community Water Dialogue (CWD) Recharge Working Group, who together with UCSC, the RCD and local landowners, have been constructing, testing and monitoring various recharge basins in the valley for the past five years. Long term, as the state begins to monitor ground water, ReNeM could serve as an effective model for the rest of California.

## Put Your Money to Work for Local Resource Conservation

The Resource Conservation District of Santa Cruz County is primarily funded by grants and contracts with public and non-public entities. Private donations help to further the mission of the District and can be targeted toward your area of interest. The RCD can receive tax deductible donations under Internal Revenue Service Code Section 170 (b) and 170 (c) (1). Feel free to contact us with any questions at **831.464.2950** or online at **[www.rcdsantacruz.org](http://www.rcdsantacruz.org)**.





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## Roads Program Helps Reduce Sediment in the San Lorenzo River

As urban development advanced throughout the San Lorenzo River Watershed, poorly constructed and maintained roads, historically used as logging roads, became significant contributors of sediment to the San Lorenzo River. Its tributaries deposit fine sediment into the waterways increasing the volume and timing of runoff. In response, the RCD developed the Rural Roads Erosion Control Assistance Program (RRECAP) through a grant from the Central Coast Regional Water Quality Control Board with funding from the EPA's 319 water quality program. The goal of the program is to work voluntarily with landowners and road associations to reduce the amount of sediment delivered to the river and its tributaries through road repairs and maintenance. The improvements are often multi-beneficial and can increase the longevity of the road and even improve driving conditions.

Over the past three years, the program educated over 250 people through workshops and technical trainings resulting in 21 different property owners who voluntarily made at least one sediment reduction improvement at their own home or property. Through cost-share incentives, the RCD was able to work with landowners to install sediment reduction projects that prevented an estimated 2,000 tons of sediment from entering the San Lorenzo River and its tributaries. A new addition to the program was Rural Road Rapid Assessment Methodology (RAM), developed in partnership with consulting firm 2NDNATURE to track and evaluate the effectiveness of our work. Collaborating with a Technical Advisory Committee of area professionals, we established a simple, rapid, standardized and repeatable method that determines and tracks rural road condition. Using past data collection and road assessments, we were able to show progress from as far back as 2006, with notable improvements made by the City of Santa Cruz Water Department over the past 10 years on properties they own in the San Lorenzo Valley and on private properties that received previous technical assistance from the RCD.

This grant period closed in 2016, but the RCD is working on several different approaches to re-institute funding for educational, technical and cost-share support for this important program that benefits both County residents and the environment. The outreach materials and technical guides are available through the RCD website at [www.rcdsantacruz.org](http://www.rcdsantacruz.org).



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**The RCD facilitated a half-day technical training and tour titled Erosion and Drainage Controls for Rural Roads attended by contractors, local agency staff, and landowners responsible for maintaining private roads.**

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## Countywide Fire Safe Council

Although the rain this winter was enough to spring up new vegetation, our watersheds still remain critically dry and primed for wildfire, as evidenced by the recent Loma fire. A wildfire in Santa Cruz County could have disastrous impacts, including jeopardizing the water supply of over 90,000 residents and severely impacting habitat for threatened and endangered species.

The County Board of Supervisors asked the RCD to assist with the formation of a county-wide fire safe council (FSC). The RCD will work with representatives from the existing regional FSCs (Bonny Doon, South Skyline, Santa Clara and Soquel), local fire districts, CalFire, local jurisdictions and private entities to establish the Countywide FSC. This is an opportunity for improved coordination, administration and an opportunity to bring more resources and funding to Santa Cruz County, as well as services to large portions of the County that are not currently included in one of the existing FSCs.

Fire Safe Councils (FSCs) are grass roots community-based organizations that help residents create fire breaks in and around their communities, improve emergency access roads and help low-income residents clear defensible space from around their properties to protect them from fire.

# 2017 Annual Report

Resource Conservation District of Santa Cruz County



July 1, 2016 - June 30, 2017



## Director's Message

What a year – in a few short months we went from exceptional drought to over 100 inches of rain in several parts of the County. This shift, from drought to deluge, highlights the need to prepare for the extremes, and here at the RCD, working with our partners and landowners, we have been busy doing just that.

During the drought, our efforts focused on helping residents and the agricultural industry through programs and projects that help manage in times of water scarcity. We hired an agronomist, who working in partnership with PV Water and in support of the goals of the Community Water Dialogue, provided irrigation system performance audits in the Pajaro Valley. Armed with recommendations from those assessments, landowners and growers were primed to take advantage of funding from the Natural Resources Conservation Services (NRCS) to implement projects and irrigation system improvements helping reduce overall water use in the valley. Understanding the role that healthy soils can plan in mitigating and adapting to climate change, our staff has been working on an innovative plan to improve soil health by incentivizing rotational cover cropping. Building soil health will achieve multiple benefits including increasing carbon sequestration, water storage capacity and soil fertility while reducing overall water demand. The drought also had significant impact on streamflow, which impacted resident's water supply and also took a toll on habitat for steelhead. We worked with Trout Unlimited to secured funding from the Wildlife Conservation Board (WCB) to find win-win solutions for residents of the Soquel Creek Watershed by finding opportunities for off-stream storage that will improve streamflow while providing a more secure water supply for residents. The WCB and Coastal Conservancy are also funding out work with CalTrans, Cal Poly and a number of other partners on an ambitious plan to restore the Scotts Creek lagoon and marsh ecosystem while providing for a resilient transportation corridor.

And then the rains came...this past winter's storms wreaked havoc throughout the county, we saw landslides, road failures, slip outs, flooding and downed trees across the County. Many of these impacts were not-so-subtle reminders of the need for proper maintenance of culverts, roads and drainage in advanced of winter storms. The RCD, together with the NRCS, has been busy with requests for service from landowners impacted by the storms. As we assist residents with last year's impacts, we are in the midst of another construction season, building projects that will capture and infiltrate stormwater for recharge, repair erosion and other storm-related impacts, and that will restore sections of several creeks with the placement of large wood structures.

None of this work would be possible without the support of our numerous partners and this community that prides itself on environmental stewardship, and we are grateful for all of the support we receive.

~Chris Coburn, Executive Director



## Scotts Creek: Collaborative Restoration

Over the past three years, the RCD secured critical funding from CalTrans, the State Coastal Conservancy and the Wildlife Conservation Board (WCB) to support the development of restoration and infrastructure designs for the estuary and creek surrounding the Highway 1 Scotts Creek Bridge.

Many Santa Cruz County residents know the mouth of Scotts Creek as a great surf spot, wildlife viewing area or the perfect place to take in the beauty of our coastline. But a lesser known fact is that Scotts Creek is absolutely critical to the recovery of coho salmon and steelhead and provides important habitat for a number of other threatened and endangered species including California red-legged frogs, tidewater goby and snowy plover. According to the 2012 National Marine Fisheries Service's (NMFS) Coho Recovery Plan, Scotts Creek is regarded as the most important stream in the region for supporting a sustained run of Coho and for contributing to regional recovery of the species. Unfortunately, over the last 100+ years, Scotts Creek, its marshplain and lagoon have been significantly impacted and by historic activities, most notably construction of Highway 1. Three of the major limiting factors identified for the Scotts Creek estuary are all linked to the infrastructure associated with the Highway 1 crossing and result in a significant loss in the effective area and quality of habitat available for threatened and endangered



species. Because the bridge is nearing the end of its useful life and currently presents safety concerns due to its narrow approach, it presented a unique opportunity for the RCD to lead an effort with other stakeholders to work with CalTrans on a design that benefits both people and wildlife. In 2012, CalTrans committed to support development of a restoration concept while exploring approaches to replacing the Highway 1 Bridge. The goal will be to maximize ecological value and to re-establish a dynamic and complex lagoon while providing a safe transportation corridor. The collaboration through the Integrated Watershed Restoration Program (IWRP) was the link that established the partnership among the RCD, Conservancy, CalTrans, County and the Regional Transportation Commission (RTC) to work together with resource management agencies to find creative solutions to this challenge.

## Soquel Creek Streamflow Stewardship Project

Soquel Creek is historically one of the most important steelhead spawning and rearing streams in Santa Cruz County. In 1959, the abundance of steelhead in the creek was estimated at 17,500 fish, but the stock declined significantly during the 1970's, coincident with increased diversions and drought that reduced stream flow. While progress has been made in the watershed to address other impairments, streamflow still suffers. The Soquel Creek Watershed Enhancement Plan, Soquel Creek Salmonid Assessment and Enhancement Plan, and the Coho Recovery Plan all point to low summer and early fall streamflow as a key limiting factor in the effectiveness of recovery efforts. All of the plans call for working with local water users on ways to leave more water in the stream or change the timing of their diversions away from the critical low-flow time period.

The RCD, Trout Unlimited, landowners and water users in the watershed mutually formed the Soquel Creek Streamflow Stewardship Project (SCSSP). Together, we are working to develop voluntary, high-priority and technically- and socially-feasible projects that yield benefits for fisheries and human populations. At its core, the SCSSP seeks to shift water diversion from the dry season to the rainy season to benefit salmonid recovery in Soquel Creek while meeting human water needs. The types of solutions being looked at are installing tanks, ponds and alternatives to streamside wells that could be accompanied by improvements in water use efficiency and rotations of diversions. Funding from the Wildlife Conservation Board, is enabling us to conduct outreach and work with local landowners to collect data. Stay tuned for more exciting news about this project.

### RCD 2016-17 Fiscal Year Budget

Income Sources	2016-2017	Expenses	2016-2017
Interest	\$4,077	Prof Svs & Pjt Implementation	\$ 1,418,688
Local Property Taxes	\$31,748	Salaries	\$845,564
Augmentation Funds	\$41,289	Operating Expenses	\$141,551
State or Federal Grants	\$2,462,440		
Donations	\$23,050		
<b>Total</b>	<b>*\$2,562,604</b>	<b>Total</b>	<b>*\$2,405,803</b>

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



## Farm Water Conservation

Reducing overall groundwater pumping for agriculture is necessary in order to reduce aquifer overdraft in the Pajaro Valley Basin. While this is not an easy proposition to make, data collected by the Pajaro Valley Water Management Agency (PV Water) is showing a promising trend. How much of it can be attributed to on-farm conservation efforts? It's hard to say. But the fact that we are moving in the right direction is certainly encouraging and a good testimony to all the partnerships and the cumulative efforts involving numerous stakeholders throughout the valley toward: a) raising awareness about aquifer overdraft and seawater intrusion issues, and b) taking concrete actions to tackle the problem.

This past year, the RCD of Santa Cruz County continued to provide and expand its technical assistance and mobile irrigation lab programs supporting growers to improve water conservation on farms. Funding through grants from the State and Regional Water Quality Control Board and PV Water, these programs are offered free of charge to the growers and include: irrigation system evaluations (and associated recommendations); irrigation water use monitoring and technical assistance for weather-based irrigation scheduling; nitrogen use monitoring and fertilizer recommendations; and soil moisture monitoring and associated recommendations for irrigation scheduling.

In addition to offering these technical assistance services, the RCD has been facilitating the development of a pilot Rotational Covered Fallow plan for increasing the acreage that gets temporarily fallowed (and planted with a cover crop) each year, as one more strategy for reducing groundwater pumping from the basin. RCD staff has also been partnering with RCD Monterey to develop a practical hands-on training series for irrigators, in Spanish.



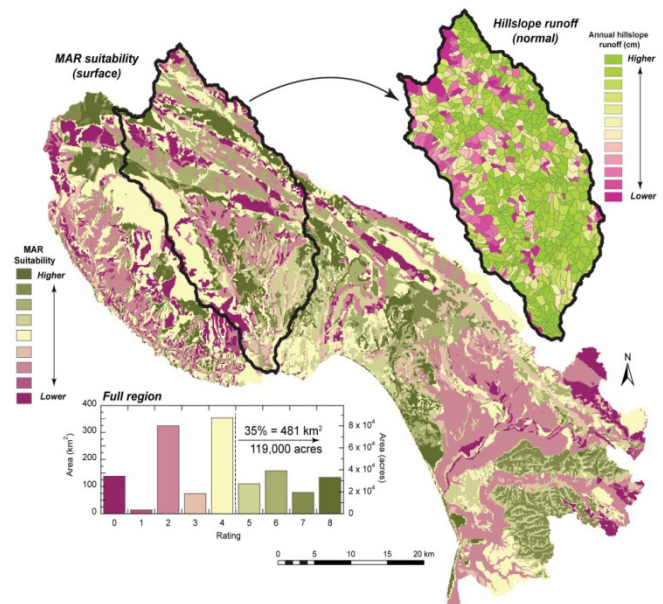
**RCD staff evaluating a sprinkler irrigation system at a Pajaro Valley organic farm.**

## Groundwater Recharge for Basin Sustainability

Pump less and recharge more. These seemingly simple guiding principles for reducing aquifer overdraft in coastal groundwater basins require thoughtful considerations and collaborative work in order to materialize. In late 2016, the RCD, with technical leadership from UCSC's Hydrogeology Group and financial support from the State Coastal Conservancy completed a key project to help increase aquifer recharge in our region. This project generated a number of maps and spatial datasets to assess and prioritize suitability for Distributed Stormwater Collection and Managed Aquifer Recharge (DSC-MAR) throughout four basins within Santa Cruz and northern Monterey Counties.

DSC-MAR is a landscape management strategy that can help to maintain long-term water supply reliability by recapturing and infiltrating storm runoff when and where it is most available. DSC-MAR targets relatively small drainage areas (generally 100-1000 acres) from which stormwater runoff can be collected to infiltrate 100-300 acre-feet of water per year. Options for infiltration are surface basins, typically having an area of 1-5 acres, flooding of agricultural fields or flood plains, use of drywells, or other strategies. Smaller projects might provide additional benefit, but unit costs are likely to be somewhat greater. Larger projects can require more infrastructure and maintenance costs.

This project produced a Regional Managed Aquifer Recharge (MAR) and Runoff Analysis for Santa Cruz and Northern Monterey Counties, and developed information and decision support tools to identify areas with high potential for both suitable hydrologic conditions and enough stormwater runoff to justify implementation of MAR projects. The RCD identified multiple properties in the region for which favorable analyses were completed. We then developed working relationships with the landowners and are currently facilitating permitting and construction of three voluntary DSC-MAR projects. There is great potential for DSC-MAR in our region and the tools developed as part of this project can serve as a template for other areas of the state.





## Woodchips Help Clean Water

For two decades, the RCD has been collaborating with landowners, farmers, agencies, and other non-profits in the Watsonville Sloughs to support a wide range of conservation efforts, including partnering with the Land Trust of Santa Cruz County (LTSCC) and Watsonville Wetlands Watch (WWW) on the acquisition and restoration of a 46-acre parcel in the slough system. While the parcel was farmed commercially, it was frequently inundated by floodwaters from the slough, which challenged viable operations. In 2012, during the management plan development for this parcel, approximately four acres was set aside with the intent to install a water treatment facility that could also serve as a demonstration site.

With project funding from the State Water Resources Control Board, the RCD worked closely with LTSCC, neighboring landowners and farmers to lead the installation of a woodchip bioreactor that collectively treats and removes nitrates from tile drain runoff water from multiple nearby farms. Woodchip bioreactors, also known as denitrification bioreactors, create low oxygen conditions for bacteria to remove nitrate from water using woodchips as the food source for the bacteria. The system collects runoff from approximately 60 acres of farmland where it's held in a 1500 gallon tank before being routed through a 150-foot long by 55-foot wide bioreactor filled with 440 cubic yards of woodchips. After treatment, water leaves the bioreactor and passes through a broad, shallow, vegetated swale prior to being released into Watsonville Slough. A flow meter was installed at the inlet of the bioreactor to measure the volume of water treated by the project and water quality samples were collected at the bioreactor inlet, outlet, and at the end of the vegetated swale so that we can learn more about the effectiveness of the nitrate removal. So far, project monitoring has shown a reduction of Nitrate as N of 70-90%.

This project presents a unique opportunity to demonstrate the benefits of collective treatment projects, both to the downstream natural resources, and to the upstream landowners and growers. The RCD is excited to be partnering with the LTSCC on implementing and evaluating this project, and sharing the results with others in the region.

**Woodchip bioreactor removed Nitrogen from farm tile drain runoff near Watsonville Slough.**



## Have You Seen the Signs?

The RCD designed and installed interpretive signs for five sustainable stormwater management projects around the county. Outreach and education funding was awarded through a State Water Board Proposition 84 grant in collaboration with the City and County of Santa Cruz, Scotts Valley Water District and the Regional Water Management Foundation.

## Put Your Money to Work for Local Resource Conservation

The Resource Conservation District of Santa Cruz County is primarily funded by grants and contracts with public and non-public entities. Private donations help to further the mission of the District and can be targeted toward your area of interest. The RCD can receive tax deductible donations under Internal Revenue Service Code Section 170 (b) and 170 (c) (1). Feel free to contact us with any questions at **831.464.2950** or online at **[www.rcdsantacruz.org](http://www.rcdsantacruz.org)**.



# 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](http://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			
<b>Total</b>		<b>*\$2,172,309</b>	<b>Total</b>		<b>*\$2,393,479</b>

*\*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](http://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](http://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	---	---
n	10 min	10 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,

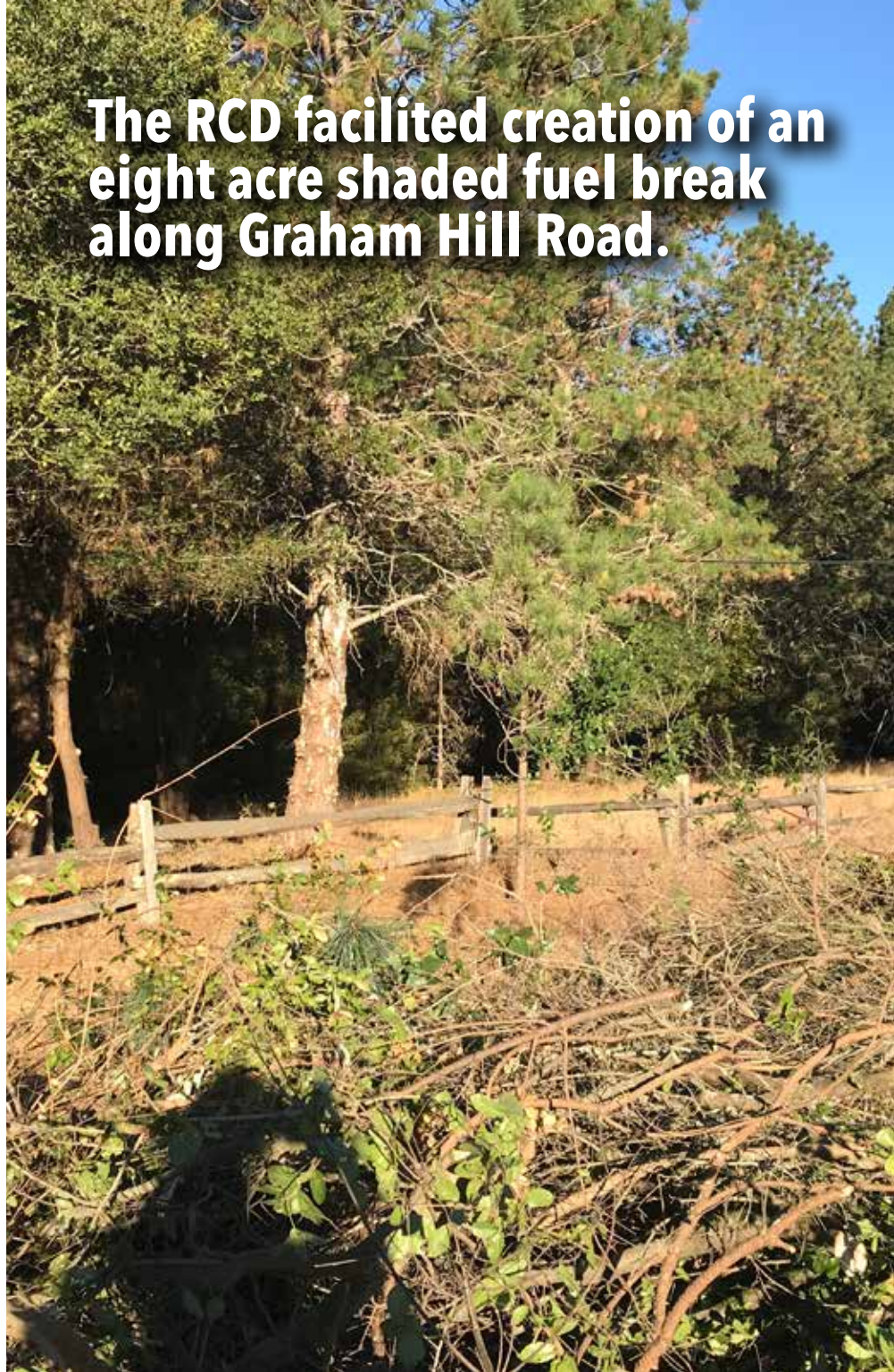
and environment from wildfire. With continued funding from the OES, the RCD maintains an active role in supporting and furthering the capacity of the FSSCC. This past year we launched the FSSCC website ([www.firesafesantacruz.org](http://www.firesafesantacruz.org)) and Facebook pages, applied for a number 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.

### RCD Staff

Kelli Camara  
Tangi Chapman  
Sharon Corkrean  
Lizzy Eichorn  
Karl Fieberling  
Angie Gruys  
Sacha Lozano  
Lisa Lurie  
Ari Rettinger  
Gerry Spinelli



### RCD Directors

Gordon Claassen  
Howard Liebenberg  
Mike Manfre  
Jim McKenna  
Robert Ketley  
John Ricker  
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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(831) 464-2950

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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](http://www.rcdsantacruz.org)**.

**Want to stay connected? Follow us on Facebook and Instagram.**

# 2019 ANNUAL REPORT

Resource Conservation District of Santa Cruz County



July 1, 2018 - June 30, 2019



**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



I hope this message finds you and your families in good health and spirits. This period of sheltering in place has me reflecting on how important our connections to one another and to nature are for our collective wellbeing. In troubled

times we look to nature (be it in our backyard or our local park) for enjoyment, exercise, and peace. We rely on farmers, farm workers, and resilient local food systems to supply our basic needs. And we demonstrate our love for each other by fostering social connection while maintaining our physical distance.

We are thinking a lot these days about what work is “essential” for the health and safety of our community, and how to best deliver that work while protecting our staff and partners. So much of what we do at the RCD is essential – from wildfire protection to storm preparedness, from assisting farmers to restoring endangered species. This work that we do together with you, our partners, in stewarding our county’s land, water, and wildlife helps strengthen our community now and into the future.

This time also gives us a moment to stop and reflect on our accomplishments from the last year. 2019 was an exciting year of innovation for the RCD. In partnership with the Land Trust of Santa Cruz County and Granite Canyon Labs, we installed the first biochar system in Santa Cruz County to treat agricultural tile drain water. This system will pull nutrients and pesticides out of water, benefiting downstream water quality while

preserving upstream farm operations. Working with Cal Poly Swanton Pacific Ranch, we completed the first Farm Carbon Plan in our county, which identifies management practices to reduce greenhouse gas emissions and maximize carbon sequestration on the farm. This new approach to on-farm conservation planning helps unlock the vast potential of agricultural lands to be a key climate solution. In partnership with the US Fish and Wildlife Service, we developed a new In-Lieu Fee Mitigation program that, once operational, will direct mitigation efforts to the most beneficial conservation actions across Santa Cruz and Monterey Counties. This was also a year of deepening and expanding partnerships for our RCD. We strengthened partnerships with Cal FIRE and members of the Fire Safe Council of Santa Cruz County as we grew our forest health and fire resiliency program in response to community need. Our collaborations with Cal Trans and the Regional Transportation Commission led to successful grant proposals to advance restoration-minded transportation project planning.

As we weather this crisis together, though apart, we are so grateful to be a part of this community and look forward to the continued partnership and work that lies ahead.

Be well,  
*Lisa Lurie, Executive Director*

## RCD 2018-19 Fiscal Year Budget

Income Sources	2018-2019	Expenses	2018-2019
Interest	\$9,003	Professional Services & Construction	\$1,108,568
Local Property Taxes	\$36,946	Salaries, Taxes, & Benefits	\$751,171
Augmentation Funds	\$41,289	Operating Expenses	\$89,002
State & Federal Grants	\$1,084,911		
Other revenue	\$1,017,635		
Donations	\$454		
<b>Total</b>	<b>*2,190,238</b>	<b>Total</b>	<b>*\$1,948,741</b>

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



## Hopes for Yellowbank Pond to Become a Haven for Red-legged Frogs

California red-legged frogs, the largest native frog in the western United States, were historically widespread and occurred throughout much of California. Unfortunately, the loss of natural habitats led to the frog being listed as Federally threatened in 1996. Much of its range and forest lands in north-western Santa Cruz County has remained intact. But, the construction of HWY 1 and the associated rail-line severed many naturally flowing streams and drainages that historically hosted the species. This eliminated many breeding sites and severed historical interbreeding of CRLF populations, which limits important genetic variability.

Located at the Cotoni-Coast Dairies National Monument, Yellow Bank Creek was recognized as a high priority restoration area by both the United States Fish and Wildlife Service (Service) and Bureau of Land Management (BLM). When PG&E approached the Service looking to to mitigate for CRLF impacts from their vegetation management program, this project was immediately recognized as a potential candidate. The RCD joined this coalition and the

PHOTO: MIKE WESTPHAL



vision of the Yellow Bank Pond restoration project became a reality.

Constructed in 2018, the Yellowbank project was intended to directly address historical degradation of aquatic habitat by creating new CRLF breeding ponds. Based on the size of the project, it's anticipated that there will be a consistent and very large number of animals every year. Although it was built to aid the recovery of the threatened red legged frog, this project will also benefit many endemic species, including a wide variety of birds, amphibians, and mammals, like bobcats, mountain lion, and deer.

The project created 1.75 acres of seasonal freshwater habitat to support CRLF breeding. Mere months after the project was complete, BLM biologist, Mike Westphal, observed six adult CRLF's in the pond! "Of course, the ultimate marker of success is when the ponds start generating baby frogs, which we hope to see next spring," said Westphal. Next spring is right around the corner, and so are many, many baby frogs!



PHOTO: MIKE WESTPHAL



# Refining Nitrogen Management on Farms, One Irrigator at a Time

Millions of dollars related to costs and/or revenue of agricultural production, water quality regulatory compliance, environmental lawsuits, freshwater and marine aquatic ecosystems health protection, and State funded technical assistance programs are tied to one molecule: nitrate. A vital compound that is repelled by negatively charged clay particles in soil, and therefore highly mobile and easily carried by water. Nitrate in soil and water is a subject of contention, regulation, and management guidelines.

High value specialty crop production in our area depends on continued nitrate inputs to support plant growth and vigor. Nitrate sources include mineralization of soil organic matter and decomposing plant residues, nitrate in irrigation water, certain types of organic soil amendments, and of course nitrogen fertilizers (both conventional and organic). Understanding and adequately managing nitrate sources in farming operations is critical for both optimizing production and minimizing nitrate

movement into groundwater and surface waters. A basic step is being able to measure how much nitrate is already available in the soil for crop consumption before adding new nitrogen inputs.

The soil nitrate quick test (SNQT) is a simple tool that allows growers and irrigators to rapidly measure soil nitrate levels on-site and make decisions based on those

results. Although the test is relatively easy to learn and use, broader adoption among growers and irrigators has been constrained by language barriers and limitations in math skills.

With funding from the California Department of Food and Agriculture's Fertilizer Research and Education Program (CDFA-FREP) the RCD developed practical guidelines and educational materials accompanied by on-the-ground individualized trainings to support broader adoption of the SNQT. A well-illustrated step-by-step field guide to conduct the SNQT on farms was produced by RCD staff with ready to use interpretation guidelines that internalize all the required calculations to simply provide recommendations in the form of how many pounds of nitrogen to apply based on test results. Along with this guide, the RCD provided supplies and one-on-one trainings to 14 growers and irrigators, consisting of a series of repeated visits and supervised implementation of the tool, so that they can continue to use it on their own to inform their fertilizer management decisions. The program has been very effective at helping growers reduce nitrogen overuse that could end up in runoff water and save money on fertilizer costs. The SNQT guide is available in Spanish and English on the RCD web site at:

[www.rcdsantacruz.org/publications](http://www.rcdsantacruz.org/publications)



## GUÍA PARA TOMAR MUESTRAS DE NITRÓGENO DEL SUELO

Esta guía práctica da instrucciones paso-a-paso para tomar una muestra de suelo y medir el nitrógeno mediante la prueba rápida de nitratos. La guía es una referencia rápida para usar directamente en el campo, que NO pretende reemplazar herramientas más precisas como pruebas de laboratorio, o CropManager, etc.

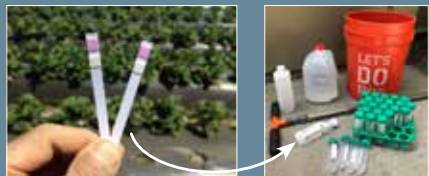
**Cuando y Donde Tomar La Muestra:** Se recomienda cada dos semanas o cada mes, entre Febrero y Septiembre, cuando el cultivo necesita más nitrógeno. Se debe tomar tierra de muchos puntos en el campo. Se recomienda tomar una muestra a un pie de profundidad, porque las raíces de fresa alcanzan hasta el primer pie de suelo, y la muestra nos dice si hay suficiente nitrógeno para las plantas. También se puede tomar una muestra más profunda a dos pies que nos dice si perdimos nitrógeno por drenaje.

### Materiales Requeridos:

\*materiales en la foto

1. Varilla para muestrear suelo 7/8" x 33" - [www.ams-samplers.com/7-8-x-33-ss-soil-probe-w-handle.html](http://www.ams-samplers.com/7-8-x-33-ss-soil-probe-w-handle.html)
2. Un balde (3-5 galones)
3. Seis tubitos de centrifuga de 50 ml con gradilla para los tubitos [www.amazon.com/SPL-Conical-Centrifuge-Placks-Sterile/dp/B01M04HGFU](http://www.amazon.com/SPL-Conical-Centrifuge-Placks-Sterile/dp/B01M04HGFU)
4. Botella de chorro - [www.amazon.com/Plastic-Squirt-Bottle-Lid-16/dp/B004BNC80C](http://www.amazon.com/Plastic-Squirt-Bottle-Lid-16/dp/B004BNC80C)
5. Cronometro o reloj con cronometro
6. Solución de cloruro de calcio - **"gratis con el RCD"**
7. Tiras de papel con reactivo ("tiras reactivas") para la prueba rápida de nitratos - **"gratis con el RCD"**

831-464-2950 or  
[info@rcdsantacruz.org](mailto:info@rcdsantacruz.org)



# Community Engagement and On-The-Ground Conservation Highlights



Participated in the **Water Harvest Festival** with over **250 attendees** to bring awareness to **local water quality issues**.



Leveraged county funds to secure over **2.7 million dollars** in grants and cooperative agreements from state, federal and private sources for local natural resources work.



Conducted **4 agricultural trainings and demos** that **educated 107 growers** on topics covering irrigation & nutrient management, cover crops, and hedgerows.

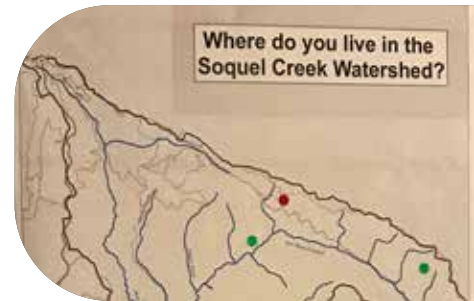


Published **seven articles** in the local Farm Bureau newsletter to educate growers on various **Best Practices for crops**.

Held **2 workshops** that **educated 165 rural property owners** about fire safety, stream care, wells and septic systems, private roads and erosion management.



Provided **assistance and information on stream health & water security** to **43 creekside landowners** in the Soquel Creek Watershed.



Assisted **67 private landowners with one-on-one technical assistance** related to a variety of soil, water, & other natural resource related topics.



Created **low cost data-loggers** & installed them at two farms to **analyze water use**.







Secured permits through the RCD Partners in Restoration Program for **three voluntary projects** on private properties that **reduced sediment and improved fish passage** in the San Lorenzo Valley.



Completed an additional **2.5 acres of fuel load reduction on private lands** to decrease fire risk along Graham Hill Road.



Worked with Gilroy Future Farmers of America and UCCE to **build an aerated compost bin system** at the High School Farm.



Installed **flow meters and/or soil sensors at 19 farms** with follow up assistance for **irrigation efficiency management**

Made recommendations to **21 livestock facilities** in the Pajaro River Watershed on Best Practices for **managing mud and manure to protect water quality.**



Constructed a **biochar water quality treatment project** in cooperation with a private grower and the Land Trust of Santa Cruz County to **treat 60 acres of runoff.**



Received approval for the RCD **in-lieu fee program** that will **improve species recovery** efforts by keeping mitigation dollars local.



Helped **17 growers prepare applications** for Ag Water & Energy Efficiency & Healthy Soils Incentives grants. **Ten were awarded funding.**







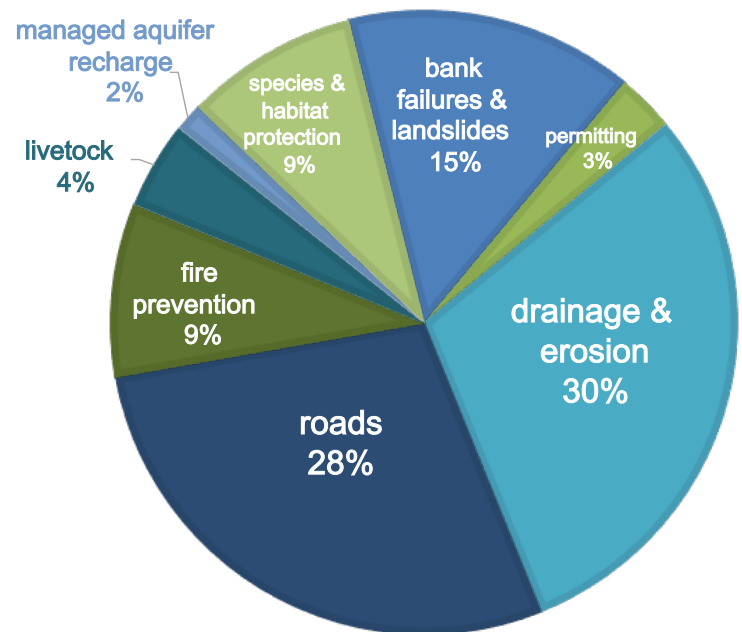
## Education & Technical Assistance Lead to On-the-Ground Conservation

Since 1942, the RCD has been serving Santa Cruz County residents. From our small beginning, we have grown to be one of the largest RCD's in the state. While the majority of our operating budget comes from federal, state and private foundation grants that target specific programs, local funding from the County of Santa Cruz allows us to provide critical educational and technical services to the community.

These augmentation monies fund two annual Living on Rural Properties workshops, along with participation at various outreach events where important natural resources materials are distributed to community members. In addition, we are able to provide one-on-one assistance to landowners who have concerns ranging from drainage and erosion problems, repairing and managing private roads, protecting habit and water quality, maintaining wells and septic systems and preparing for wildfires.

Some of these concerns can be address over the phone or by providing links or hard copies of technical publications. But for landowners with more complicated issues we have the unique opportunity to do house calls and provide more detailed recommendations related to the specific conditions on a property. Depending on the nature of the request, we may bring a consulting engineer to provide additional suggestions. Our organizational mission combined with an expansive staff and partner skillset allows us to provide guidance that incorporates environmental preservation and enhancement alongside infrastructure protection and safety. This gives residents tools to make informed decisions about managing their properties in ways that benefit not only themselves but the greater community landscapes and waterways that are precious to all of us.

TYPES OF ASSISTANCE REQUESTED



During the 2018-2019 fiscal year, we surveyed people who attended an RCD workshop or received direct assistance. The results were used to assess the relevance of the one-on-one assistance and workshop topics we offer and their effectiveness in achieving on-the-ground voluntary conservation actions. Survey participants answered the question “Have you implemented any of the actions or recommendations for fire, roads, erosion and drainage, water conservation, or septic and well maintenance from the publications, workshops or an on-site consultation?” The responses are summarized in the table below.

Representative list of number and type of conservation actions reported by survey respondents.

Number of landowners	Type of conservation action taken
11	Enhanced septic and well management practices
10	Cleared flammable vegetation around home
8	Managed stormwater and reduced erosion
6	Conserved water through rain catchment, grey water or drought tolerant landscaping
6	Improved drainage on private roads
4	Pumped septic system
3	Formed road associations

If you are in need of assistance or have suggestions on topics that would be of interested to you or your neighborhood, don't hesitate to reach out to us at [831-464-2950](tel:831-464-2950) or [info@rcdsantacruz.org](mailto:info@rcdsantacruz.org).



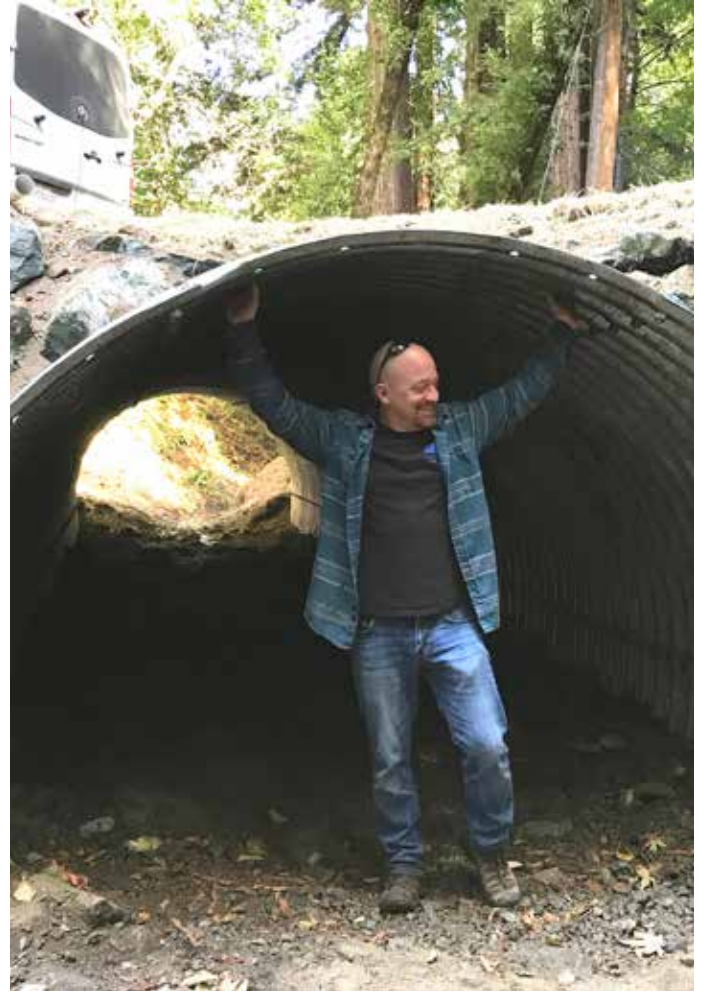
*“These events and resources are very valuable for everyone in the community, and they help improve safety, quality of life & the quality of the environment.”* 2019 Workshop Attendee



## Improving the Permit Process for the Good of the Stream

It's been 14 years since the RCD permitted its very first project through the Santa Cruz Countywide Partners in Restoration Permit Coordination Program (PIR). Looking back at the program today, it is astonishing what we have accomplished since then. The over 100 voluntary conservation projects implemented through this program have restored 150 acres of wetland, riparian and upland habitat, prevented 35,000 tons of sediment from entering our local streams and wildlife habitat, and regained and improved 30 miles of rearing and spawning habitat for our endemic salmon. The innovative program was developed by the Resource Conservation District of Santa Cruz County and the Natural Resources Conservation Service (NRCS), in partnership with Sustainable Conservation, a nonprofit environmental organization. It was designed to improve water quality, enhance wildlife, and conserve agricultural resources through the implementation of small, environmentally beneficial projects, such as stream bank protection, wetland restoration, culvert repair/replacement, erosion control structures, exotic vegetation removal, and fish stream habitat improvement projects, primarily on private parcels (mostly farm and ranch lands). The program provides "one-stop regulatory shopping" for landowners interested in implementing voluntary conservation projects on their lands, thereby removing the time, cost, and complexity of individual project review.

Some of the projects also involve critical infrastructure protection for landowners where we work together to ensure improvements to the property or operation are



also conserving and enhancing habitat. In 2018, one of the permitted projects replaced two failed undersized culverts that provided the only access across a small stream to three homes. The new culvert crossings were designed to accommodate higher stream flows and pass through of larger debris to reduce likelihood of another failure. The size and placement of the culvert improved fish passage in a stream that is considered critical habitat for local steelhead. Building complementary projects is a



win-win as expressed by Maureen Raytis-Vargas, one of the homeowners for this project.

“Our driveway culvert was destroyed in the massive rains of December 2016. We struggled to do the environmental permits with another small agency for over 1.5 years! Once the RCD and their pre-approved permitting process became involved everything started to fall in place. Angie was especially helpful because we still had a tight deadline to meet before the rains. She was very proactive and kept everything moving on an appropriate timeline which was the only reason we were able to get the culvert replaced before a second winter passed. We would not have been able to do it without RCD. Thank you!!” Raytis-Vargas has even shared

her experience with other County residents in hopes that they will get help sooner in the process.

As we move into our 15th year we are seeking to expand the the program to help more landowners and looking forward to our next 100 projects.



### RCD Staff

Kelli Camara  
Tangi Chapman  
Sharon Corkrean  
Lizzy Eichorn  
Karl Fieberling  
Angie Gruys  
Sacha Lozano  
Lisa Lurie  
Erin McCarthy  
Ari Rettinger  
Gerry Spinelli



### RCD Directors

Steve Auten  
Kelley Bell  
Howard Liebenberg  
Mike Manfre  
Jim McKenna  
Robert Ketley  
John Ricker

### Board Farewells

Gordon Claassen  
Robert Smith

We bid a very fond farewell to two dedicated Directors who retired from the RCD Board this past year – **Roberta Smith and Gordon Claassen**. They served **32** and **8** years on our board, respectively. We are immensely grateful for and humbled by their years of service. We welcomed **Kelley Bell and Steve Auten** to our Board, who bring enthusiasm and expertise around agriculture, forestry, and collaborative problem-solving.



**RESOURCE**  
CONSERVATION DISTRICT  
OF SANTA CRUZ COUNTY

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820 BAY AVE, STE 136  
CAPITOLA, CA 95010  
(831) 464-2950

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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](http://www.rcdsantacruz.org)**.

**Want to stay connected? Follow us on Facebook and Instagram.**

**APPENDIX C:**

**RCD**

**Strategic Partnerships**

**(List)**



State and Federal Agencies			
AmeriCorps	CA Department of Parks & Recreation	State Coastal Commission	US Department of Agriculture
CAL FIRE	CA Department of Conservation	State Coastal Conservancy	US Forest Service
CA Conservation Corps	CA Department of Water Resources	State Water Resources Control Board	USFWS Coastal Program
CA Department of Fish & Wildlife	Natural Resources Conservation Service	US Bureau of Land Management	-
CA Department of Food & Agriculture	National Oceanic and Atmospheric Administration (NOAA)	US Army Corps of Engineers	-
Local and Regional Agencies			
City of Capitola	Loma Prieta Resource Conservation District	San Benito County Water District	Santa Clara Valley Water District
City of Santa Cruz	Pajaro Valley Water Management Agency	San Lorenzo Valley and Soquel Creek Water Districts	Santa Cruz County Fish & Game Commission
City of Watsonville	Regional Water Quality Control Board (Central Coast Region)	San Mateo County Resource Conservation District	Santa Cruz County Regional Transportation Commission
Santa Cruz County	San Benito County Resource Conservation District	Santa Clara Open Space Authority	Sonoma County Agricultural Preservation and Open Space District
Schools and Educational Institutions			
Cal Poly San Luis Obispo, Swanton Pacific Ranch	Live Oak Elementary and Soquel Union School Districts	Pacific Elementary School	Santa Cruz City Schools
Cal State University, Monterey Bay	Monterey Institute of International Studies	San Lorenzo Valley Unified School District	UC Cooperative Extension and UCSC
Non-Profit Organizations, Local Businesses, and Community Groups			
American Conservation Experience (ACE)	David and Lucile Packard Foundation	Friends of State Parks	Santa Cruz County Farm Bureau
Bonny Doon Fire Safe Council	Ecology Action	Gordon and Betty Moore Foundation	Santa Cruz County Horsemen's Association
CA Association of Resource Conservation Districts (CARCD)	Eco Farm	James Irvine Foundation	Save Our Shores
CA Native Plant Society	El Mercado Popular	Land Trust of Santa Cruz County	Sempervirens Fund
Coastal Watershed Council	Farm Link	Moore Family Foundation	South Skyline Fire Safe Council
Community Foundation of Santa Cruz County	Friends of Soquel Creek	San Lorenzo Valley Women's Club	Watsonville Wetlands Watch

# **APPENDIX D:**

**RCD**

**Coastal Region RCDs  
(Map)**



# Central Coast Region

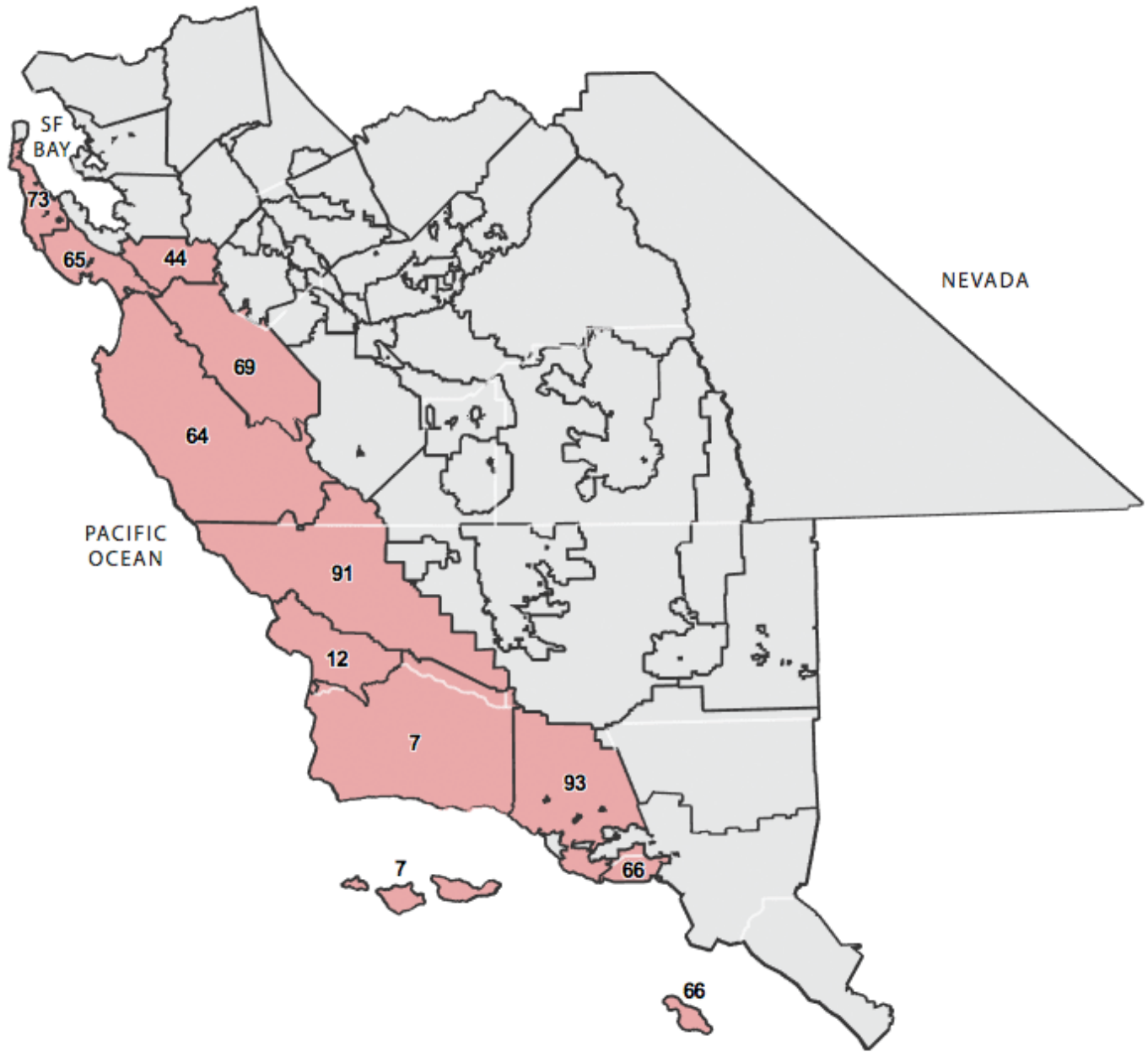
## RCDs in the Central Coast Region

7 CACHUMA RCD (805) 868-4013	65 RCD OF SANTA CRUZ COUNTY (831) 464-2950	73 SAN MATEO COUNTY RCD (415) 317-7399
12 COASTAL SAN LUIS RCD (805) 704-9119	66 RCD OF THE SANTA MONICA MOUNTAINS (323) 309-0842	91 UPPER SALINAS-LAS TABLAS RCD (805) 536-3196
44 LOMA PRIETA RCD (831) 801-8776	69 SAN BENITO RCD (805) 772-4398	93 VENTURA COUNTY RCD (805) 386-4489
64 RCD OF MONTEREY COUNTY (831) 236-1740		

## Map of Central Coast Region RCDs







RESOURCE CONSERVATION DISTRICTS

- What are RCDs?
- Find Your Local RCD
- Impact Stories
- Conservation Resources

MEMBER DASHBOARD ↗

We have COVID-19 resources for RCDs. [See Resources](#)

