

ANNUAL REPORT

2018-2019



Napa County Resource Conservation District
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LUCAS PATZEK
Executive Director



JIM LINCOLN
Board President

MESSAGE FROM THE EXECUTIVE DIRECTOR

With tremendous gratitude and pleasure, I took the helm as the new Executive Director this year. My first order of business has been to immerse myself in the community and listen, explore new partnerships and strengthen existing ones, and work on making an excellent organization even better. I am committed to ensuring that the RCD remains a trusted and effective partner in protecting, conserving, and restoring natural resources in Napa County in the years to come. One thing has remained constant over the years, and it is that the RCD owes all of its success to its people – the terrific staff and directors, steadfast partners, and dedicated volunteers. It is in partnership with these people, our community, that we look forward to stewarding our natural resources and co-creating a positive future for Napa County and beyond.

MESSAGE FROM THE BOARD PRESIDENT

This year has been a year of transition for the RCD with a new Executive Director joining the team. While we all miss Leigh Sharp and are thankful for her many years of service to the district, we are glad to be joined by our new Executive Director Lucas Patzek. A strong and dedicated staff with years of continuity also provide the balance needed to move forward without losing sight of all the partnerships and commitments of the past. The broad range of project areas we cover is amazing, from youth education to fish to roads to sustainable vineyard practices and government monitoring requirements. Add to this list the emerging program area of carbon farming and soil health, through which we can help Napa County achieve its climate action goals. All of this work is a huge benefit to our community and I'm very pleased to be a part of it.

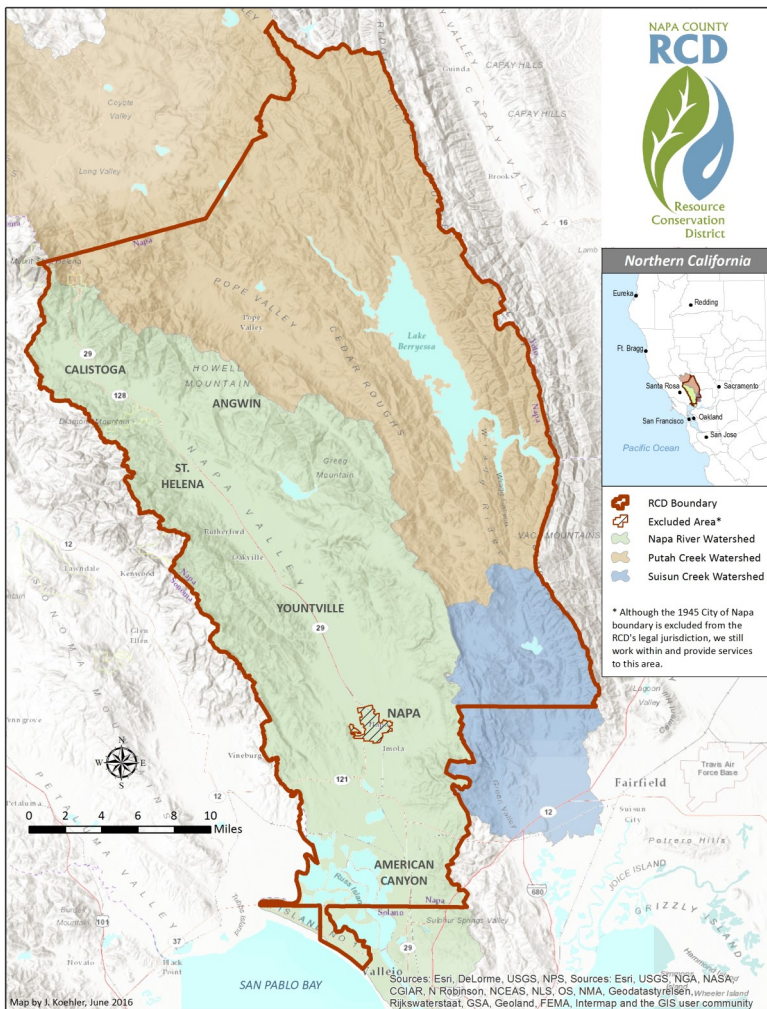


ABOUT US

Napa County Resource Conservation District (RCD) was established in 1945 as a special district of the State of California to help farmers and ranchers in Napa County tackle erosion and other problems on their land. As natural resource issues change, we continue to evolve. Today, we help our community achieve conservation goals by providing technical assistance, educational programs, monitoring programs, and funding sources on issues ranging from fisheries to forest health, soil management, water conservation and quality, and more.

We are governed by a locally-appointed Board of Directors. Our leaders are also your neighbors — they live in the district and understand what the local resource needs and concerns are, which helps steer the RCD in the right direction. Our teams consist of conservation scientists and outreach and administrative professionals who are skilled at developing, implementing, and monitoring many types of projects. Our RCD works at many scales – from the individual landowner to entire watersheds.

**We help our community care for
land, water, soil, and wildlife.**



Our Guiding Principles:

- We help individuals make good **science-based decisions** that lead to more vibrant communities and stronger farm enterprises while improving and sustaining the quality of our natural resources.
- **We work on the natural resource issues that matter to our community today**, and promote an ethic of stewarding natural resources for this and future generations.
- We are a **trusted resource for our neighbors**. We are non-regulatory, working with landowners on a voluntary basis, and we are accountable to our local community for what we do and how we use resources.
- We are an **efficient, effective partner**. We are a bridge that links landowners, agencies, and others to achieve shared goals. As a special district, we are very versatile. We can receive grants and donations, be contracted directly, or develop intergovernmental agreements.

Napa RCD by the Numbers

2,169	K-12 students reached through education programs
1,415	community members engaged in technical workshops, garden tours, and wildlife lectures
1,394	fish native to the Napa River counted by the Rotary Screw Trap
1,195	volunteers engaged through cleanup days, oak planting, and fish monitoring
600	sheep grazed at Huichica Creek Vineyard
387	native oaks planted
200	hillside vineyards monitored for winterization BMPs
160	stormwater outfalls monitored and assessed as “clean” for dry-season water quality
90	vineyard properties participating in LandSmart® Planning
14	streamflow monitoring stations upgraded to latest technology
11	species of fish native to the Napa River monitored in the Rotary Screw Trap
6.5	miles of unpaved roads storm-proofed to prevent sediment delivery to waterways
3	Carbon Farm Plans developed for vineyards
2	Soil Health Assessments completed

FINANCIAL HIGHLIGHTS

For every \$1 in tax revenue, the RCD acquired an additional \$4 in funding to work on the natural resource issues that matter to our community

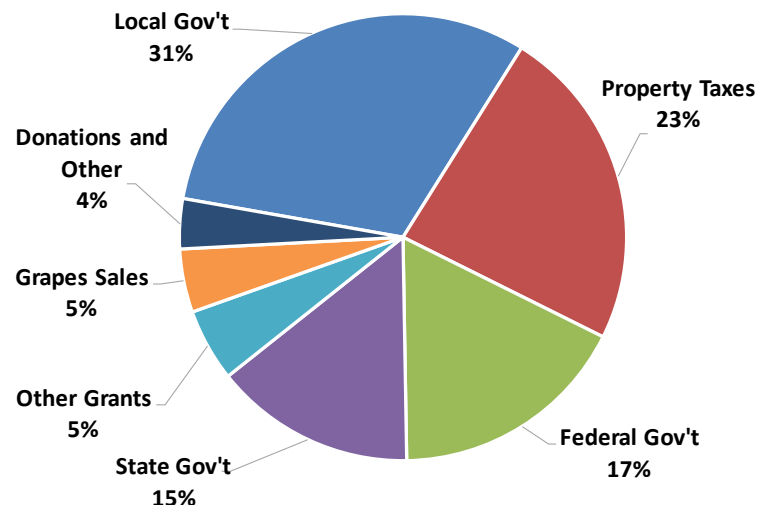
Napa County Resource Conservation District is a special district of the State of California. As a government entity, it is an exempt organization under the provisions of IRC § 115 and contributions to the district are deductible under the provisions of IRC § 170(c)(1). We conduct annual financial audits by an independent auditing firm. Our most recent audit is available to view in full on our website. The audit shows the RCD to be solvent and stable.

District programs, projects, and services are primarily funded by local, state, and federal grants and contracts, property taxes, and donations. In addition, we receive income from grape sales from our Huichica Creek Vineyard.

Summary of Income & Expenses

	Operating Budget
Tax Income	\$365,276
Public Funding Income	\$931,582
Other Income	\$209,725
Total Expenses	(\$1,478,249)
Increase in Net Position	\$28,333

Income by Source



Acorns to Oaks Helps with Wildfire Recovery



Skyline Park staff will make sure the young trees are kept weed-free so that they have the best chance possible of surviving to become acorn-producing trees.

“Our friends at RCD were there to help us restore the Skyline Park canopy with their Acorns to Oaks program. Partnerships like these encourage people to get out and enjoy nature, promote stewardship, and contribute to a sense of community. Everybody can feel great about that.”

- Tom Bunter, Skyline Park

One of the many inspiring responses to the devastating fires that occurred in Napa County in 2017 has been the community mobilizing to support oak woodland restoration. The RCD’s Acorns to Oaks program, which has worked with school groups and community volunteers to re-oak our County since 2012, provides a great avenue for locals to help collect acorns, plant oaks, and take care of new oak seedlings in their own communities. To date, we have worked with over 3,000 students and 700 volunteers to plant 5,000+ locations with native oaks.

North Napa Rotary Club members became so excited about Acorns to Oaks after the fires that they donated \$7,500 to help us work with even more kids and volunteers to plant oaks. But that was not enough! North Napa Rotary then applied for and received a grant for \$2,574 to sponsor an oak planting on a property recovering from fire damage. To meet this noble goal, we coordinated a planting in Skyline Park, which had several small areas close to Skyline Trail which had burned hot, and as a result, oaks were not coming up on their own. Skyline Park staff collected acorns from their property, we coordinated logistics and outreach to our volunteers, and North Napa Rotary brought a team of volunteers to the planting day. In total, 35 volunteers planted 33 sites with acorns. At a recent check-in, over 80% of the planted sites had one or more seedlings!

Why is the RCD Focused on Re-Oaking?

Oaks are part of our fundamental ecological infrastructure. These long-lived, fire-resilient trees provide reliable shade and require minimal water. Our oaks support a remarkable diversity of wildlife, are the basis of multiple food webs, benefit pollinators, provide habitat for birds and mammals, access deep soil moisture, and thus sustain whole ecological communities. Able to thrive in both rural and urban setting, oaks provide significant carbon sequestration and ecosystem services and can be an essential part of preparing our communities and ecosystems to successfully mitigate climate change.



Growing the Next Generation of Environmental Leaders

In winter 2015, RCD and the Environmental Education Coalition of Napa County (EECNC) held the first ever Youth for Environmental Sustainability Summit at Browns Valley Elementary School. Participating teens strongly agreed that there was a lack of opportunities for them to participate in local environmental activities. Students recalled positive experiences in nature throughout elementary school. However, at the critical point in youth development where students are aligning their core values with future study and career options, students were finding a drop off in field trips, volunteer projects, and environmental stewardship activities.

In response, RCD and FONR developed the Napa Youth Stewardship Council (NYSC), now in its 5th year. This free, inclusive leadership club is open to students from all Napa County high schools, and exposes them to environmental science, service, careers, and issues that are relevant to our local and global community.

"If it weren't for this club I would not have the goals I have right now. This club gave me an idea of what I want to do with my life."

- Nicole, NYSC Years 1 & 2

During monthly meetings, students work directly with professionals to learn about restoration ecology, receive leadership skills training, and design, develop, and lead service projects for community members. In 2018-2019, Napa RCD partnered with Land Trust of



Napa County to engage NYSC members in stewardship on their lands. RCD and LTNC helped students develop service projects for the community, such as pollinator plantings at Huichica Creek, river cleanups, and a guided bilingual nature hike for residents of Napa Valley Community Housing.

To date, 73 students have completed NYSC, and over 3,500 community members have participated in NYSC guided stewardship projects. Perhaps the biggest impact though is that students understand a pathway to conservation careers. Upon exit surveys, NYSC members and alumni identified their experience with RCD as one of the most influential programs in their schooling because it provides exposure to and direct links to college environmental programs.

"I feel that I learned enough about environmental issues in our community so that I may have an intelligent conversation with somebody about the environment."

- NYSC Member, Year 3



Staying on the Cutting Edge: Upgrading Napa County's ALERT System

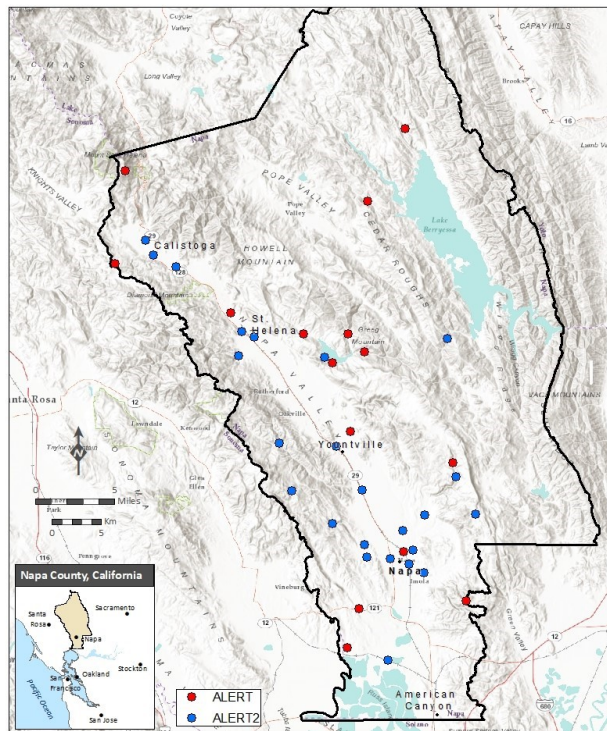
The Napa County Rainfall and Stream Monitoring System, known as the ALERT System, was installed in the 1990s to provide emergency managers with much-needed real-time rainfall and stream level information during flood events. The system records rainfall at 21 gauges and monitors 20 streams (and two reservoirs) at 32 water level monitoring sites. Though built for flood warning, the existing sensor network, radio communications system, data collection and processing software, and public internet interface make it appealing to also use for environmental monitoring. This use, however, often requires more accurate, higher-resolution data than flood warning.

ALERT Systems used the ALERT (Automated Level Evaluation in Real Time) radio protocol, a standard developed in the 1970s. By today's standards, transmission speeds were slow, transmission size was limited, and the stations were not coordinated and transmitted data randomly. This worked reasonably well for flood warning when the number of stations per receiver was small and sensors were not collecting large amounts of data. Even so, data collisions (simultaneous transmissions) occurred and caused data anomalies and data loss. In a dense system like Napa County's, data collection was limited and data quality was often poor.

To solve this issue a new radio protocol, ALERT2, was developed by the National Hydrologic Warning Council and the ALERT Users Group. ALERT2 is much faster and allows the use of more sites and sensors, collection and transmission of high-resolution data, and uses GPS technology and a process called time division multiple access (TDMA) to eliminate data quality issues resulting



from heavy radio traffic. However, upgrading to ALERT2 is expensive because it requires new transmitters and equipment at all receivers and stations.



In 2017 and 2018, the Napa County Flood Control and Water Conservation District, with a grant from the California Department of Water Resources (DWR), purchased enough new equipment to upgrade the receiving sites and 21 of 39 remote stations to ALERT2. RCD performed 14 of the upgrades, which included replacement of the transmitters, installation of GPS antennas, associated calibration and testing, and website configuration.

Upgrades will continue when more funding is available, but many stations now have the capacity to collect the high-resolution, error-free data

required for low-flow stage and streamflow monitoring. RCD intends to utilize this new capability to continue increasing low stage and flow data collection and improve the value of the system for monitoring related to natural resources conservation.

Improving Water Quality One Road at a Time

Keeping sediment out of streams is a win for fish and the landowners who get to keep sediment on their properties. Since before the Napa River was listed by the Regional Water Quality Control Board as impaired for having too much sand and finer sediment in the streambed, RCD has partnered with landowners to evaluate the risk of sediment delivery from their vineyard, roads, creek banks, and other sources.



Unpaved roads have been found to be a big contributor of sediment to the waterways, and as such, the Water Board's Waste Discharge Regulations for vineyard properties requires strict performance standards that growers are now having to meet. In response, RCD has focused a lot of attention on assessing unpaved road networks, both public and private, and acquiring grant dollars to bring roads up to best management practices for storm-proofing.

Perhaps most importantly, RCD has devoted a lot of time towards training land managers to recognize where their roads are delivering sediment and what to do about it. To increase the pace and scale of road improvements, it is critical that we spread this knowledge far and wide. Since 2012, we have put on 10 workshops on the topic of storm-proofing roads, and road education was a major part of the 8 LandSmart Vineyard Planning workshops we hosted.

Enterprise Vineyards was eager to get more training in managing and improving unpaved roads. Being strongly committed to sustainable vineyard management, they wanted to bring that same level of attention to the unpaved road network on the hundreds of hillside acres

they manage in Napa and Sonoma Valleys. They quickly understood that improving road drainage leads to lower maintenance costs and fewer road-induced headaches. Several of their staff attended our road workshop, and followed up by attending our LandSmart Vineyard Planning workshops. They worked with RCD to develop two LandSmart Plans (verified last year), and through that process, identified several miles of roads that needed drainage upgrades. Over the past year, RCD worked with their heavy equipment operators to show them how to put in drainage features that would disconnect the road drainage from the streams. Since those training days, they have successfully installed a few drainage features throughout their properties and have plans to do more.

Through awareness building, training, or on-the-ground projects, RCD is here to help landowners take action to improve local water quality.

"Working with the RCD has redefined how we maintain and manage our road systems. Having Bill come out into the field really showed us that storm-proofing roads is simple and just makes good sense."

- Max & Phil Coturri, Enterprise Vineyards



Steelhead Return to the Napa River



allows us to collect length and weight measurements and tissue samples for genetic analysis, and tag fish for long-term tracking.

To figure out whether the steelhead and salmon we have been catching in our trap during the past decade are indeed returning, we have been using a technology called Passive Integrated Transponders, also known as PIT tags. These tiny tags, about the size of a grain of rice, are implanted into the young fish and provide a unique identification code for life, as they live most of their 4-7-year lifespan growing at sea. When these tagged fish return from the ocean to spawn, a special antenna that RCD constructed to span the Napa River detects them and records their individual code, much like the FasTrak toll system on our local bridges.

For more than a decade, the RCD and our many partners have been conducting broad-scale monitoring and specialized research of local fish populations. The Napa River Steelhead and Salmon Monitoring Program, as it's known, has many objectives, but top amongst them is to answer the seemingly simple question, "Does the Napa River support self-sustaining runs of steelhead and salmon?" So, for the past 11 years, the RCD and a dedicated group of citizen volunteers have been collecting the scientific data necessary to solve this mystery.

The centerpiece of our monitoring effort is a large stationary fish trap installed in the Napa River each spring. The trap allows us to catch and study hundreds (sometimes thousands) of young steelhead and salmon, which are then harmlessly released. Capturing fish

In 2018 and again in 2019, for the first times ever, we documented tagged steelhead returning to the Napa River to spawn. These were fish that were originally captured and marked as out-migrating juveniles (aka smolts), that had returned years later as adults. Although we never actually physically re-captured these adult steelhead, our PIT tag antenna detected them swimming upstream to their spawning grounds.

"There is nothing like being out on the fish trap in the early morning, scooping smolts and other fish from the trap - it's wonderful to see river life up close, but the work gives me hope that there could one day be change for the Napa River with salmon and steelhead once again living in healthy numbers."

- Pam Smithers



On average, we only tag approximately 100-150 steelhead per year, so the odds of re-detecting any given fish is relatively low. Still, these promising results encourage us to continue tagging and tracking so that we can understand trends and patterns in coming years.

Carbon Farm Planning for the Vineyard

In 2016, we partnered with our sister RCDs in Sonoma and Mendocino Counties and the USDA-NRCS to establish the North Coast Soil Health Hub, a network of farmers, industry representatives, scientists, and agricultural professionals working together to improve soil health in vineyards. The goal is to increase adoption of regionally appropriate practices to help sustain the North Coast as a world-class viticulture region. There is no better way to achieve this goal than through improving soil health, which will help farmers increase farm resiliency, stay ahead of the regulatory curve, save money, and enhance marketability.



The Soil Health Hub got a big boost in 2018 with the award of a USDA Conservation Innovation Grant to the Napa RCD, which brings \$389,432 to the North Coast. With this new injection of funds, RCD partners will continue working with grape growers to expand understanding of soil health fundamentals, practices that impact soil health, and how improving soil health

“We’re always learning. The RCD had funding for Carbon Farm Planning and we decided to take advantage of it. The process has been valuable and streamlined. Learning about complex concepts like carbon sequestration can be overwhelming - you need folks like the RCD and NRCS to help you. Our whole team is excited to be able to tell this restoration story.”

- Brad Smith, Winemaker, Silenus Winery



can lead to enhanced grape production as well as other benefits, including improved water-use efficiency, water quality, and on-farm habitat. RCD partners will also continue to develop SoilHub.org as the best online resource for growers in the region that are hungry for information on soil health and vineyards.

One of the benefits of improved soil health is a reduction in vineyard carbon footprints and greenhouse gas emissions. The RCD has pioneered the development of vineyard specific carbon farm plans as a means of increasing the adoption of climate beneficial practices. In 2018, we helped Silenus Winery develop a plan for their 7-acre vineyard which included replanting a riparian area, reducing tillage, compost application, hedgerow planting, and the application of woody mulch under the vine for weed management.

Once implemented these practices will control invasive plants, provide erosion protection, increase wildlife habitat, and generally improve soil health. Also, 44.3

MT of CO₂ will be sequestered every year, the equivalent of removing 9 typical passenger vehicles off the road. Silenus Winery was committed to improving their sustainability and the RCD was able to assess their current operation and develop a practical strategy for achieving this goal.

OUR PEOPLE & PARTNERS

Board of Directors

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Ashley Anderson, Vice President
Rainer Hoenicke, PhD
Jon Kanagy
Beth Painter
Bill Pramuk
Gretchen Stranzl McCann

Associate Directors

Mariam Aboudamous
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Paul Blank, Senior Hydrologist
Guadalupe Garcia, Program Assistant
Miguel Garcia, PhD, Sustainable Agriculture Program Manager
Frances Knapczyk, PhD, Program Director
Jonathan Koehler, Senior Biologist
Ashley Kvitek, Volunteer & Outreach Coordinator
Anna Mattinson, Office Manager
Eric McKee, Education Program Coordinator

USDA-NRCS Staff

Wendy Rash, District Conservationist
Chip Bouril, Soil Conservationist
Liz Colby, PE, Agricultural Engineer
Kristan Flynn, Rangeland Conservation Planner
Kelly Gin, Soil Conservationist

Staff that departed the RCD this year were Charles Schembre and Anna Yip. Thank you for your service!

There are many organizations that partner with the RCD to make our programs possible. These are some of our key partners:





Helping you care for our
land, water, soil and wildlife

Since 1945