



# Annual Report 2015

Fiscal Year 2015 July 1, 2014 to June 30, 2015



RIVERSIDE-CORONA RESOURCE CONSERVATION DISTRICT

# About the Riverside-Corona Resource Conservation District

The Riverside-Corona Resource Conservation District (RCRCD) is a local government agency that works to conserve the natural resources (soil, water, native plants and wildlife) of areas within western Riverside and San Bernardino Counties in southern California.

The District advocates that each acre of land be managed according to its needs and promotes the sustainable use of natural resources for each land-use, including native habitats, urban/suburban areas, and agriculture.

RCRCD provides resource management assistance to private and public land users and conducts land treatment, education, and volunteer programs. The District works to sustain natural resources in a variety of ways:

- providing onsite technical assistance, such as irrigation system evaluations;
- restoring habitat through the removal of invasive species and reestablishment of native species; and
- educating broad audiences about stewardship of resources in natural, urban and agricultural ecosystems.

RCRCD is non-regulatory and self-governing with a five member Board of Directors. The Board retains local administration and direction over programs. The District achieves its conservation goals by coordinating public and private resources and by partnering with “cooperators”, land owners who are interested in conserving natural resources while using or developing property. A cooperator may be an individual land owner, a group, such as an Home Owner Association, agency and/or a business. The District enters into Memorandums of Understanding (MOUs) with cooperating agencies, which spell out working relationships.



*RIVERSIDE-CORONA RESOURCE CONSERVATION DISTRICT*

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Cover photo: Santa Ana Mountains and wildflowers

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Gavilan plateau and Santa Ana mountains

# Annual Report

This report of accomplishments for the period from July 1, 2014 through June 30, 2015 (Fiscal Year 2015) is organized to follow the three main RCRC program areas:

**Assisting Land Users with Resource Management**

**Habitat Land Management and Preservation**

**Urban Sustainability, Education, and Outreach**

# Assisting Land Users with Resource Management

RCRCD provides technical assistance to land users, “cooperators”, who are interested in conserving natural resources while using or developing property.

Services provided to cooperators might include:

- onsite evaluation of a problem, such as an inefficient irrigation system;
- conservation planning based on resource data such as soil type and crop water needs; and
- specifications for the installation of conservation practices, such as erosion control structures.

The RCRCD office provides resource data and planning tools, including soil and water testing, soil survey maps, and other technical information.

Some natural resource management and conservation planning information is provided to RCRCD cooperators from our technical partner the USDA Natural Resources Conservation Service (NRCS).

## Water Conservation

Water is one of our most vital natural resources. RCRCD’s Irrigation Water Management (IWM) Mobile Lab evaluates irrigation systems for efficiency and uniformity. Efficiency is the total amount of water applied to vegetation, based on plants’ evapotranspiration, and uniformity is the amount of water distributed evenly over the total vegetated area. The Mobile Lab auditor travels to cropland, homes, and large turf areas at parks, schools, and golf courses to test irrigation systems. On properties over one half an acre, soil samples are taken and tested for pH, nitrate nitrogen, phosphorus, conductivity, Potassium, Calcium, Ferric Iron, magnesium, manganese, nitrite nitrogen, sulfate, and soil texture. The auditor then develops a report with recommendations for system improvements to help cooperators conserve water, and in doing so, save money. During Fiscal Year 2015, the IWM mobile lab performed a total of 32 evaluations on 406.17 acres, which included 13 agricultural evaluations on 197.2 acres and 19 turf evaluations on 209 acres.



RCRCD staff conducts water sample test.



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## Soil and Water Testing

RCRCD continued providing low-cost soil and water testing for private landowners and home owners. The lab completed twelve soil tests and one irrigation water test during fiscal year 2015. Soil tests evaluate macronutrients and micronutrients, soil texture, conductivity, and pH level. Water tests evaluate nitrate-nitrogen, phosphorus, pH level and conductivity.



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Jose Iniguez, irrigation auditor, tested water pressure to evaluate a sprinkler system for uniform distribution of water

## Technical Advice and Organizational Support

RCRCD staff works on committees and provides information about sustaining natural resources in cooperation with a variety of entities including:

- Santa Ana Sucker Recovery Team
- Native Freshwater Fauna Working Group
- Riverside Green Action Plan (GAP)
- Santa Ana River Task Force
- Inland Urban Forestry Council (IUFC)
- Santa Ana River and Orange County Weed Management Area
- California Invasive Plant Council (Cal-IPC)
- Irvine Ranch Conservancy

# Habitat Land Management and Preservation

## Conserving Critical Habitat

The Riverside-Corona Resource Conservation District (RCRCD) is a non-regulatory local agency that works to permanently protect land that has habitat, scenic, and/or agricultural values. RCRCD works to connect blocks of habitat by preserving and restoring corridors or linkages for wildlife movement and migration.

RCRCD conserves open space through habitat restoration, management, and land preservation:

**Restoration:** The Conservation District improves degraded habitat by removing invasive species and trash, replanting native plants, restocking native animals, protecting soil from erosion, protecting water from pollutants, and more.

**Management:** RCRCD continues to maintain and monitor restored habitat for water quality, critical wildlife species, invasion of exotic weeds, trash dumping, Off-Road Vehicle (ORV) intrusion, noise, and other impacts.

**Preservation:** The District protects important areas from future development by accepting donations of land (fee title) and conservation easements.

## Habitat Restoration

Restoration projects may be cooperative efforts between RCRCD, private landowners and other agencies on private and/or public lands, including the District's conservation easements. The amount of restoration is determined by permit requirements (by regulatory agencies) and other field assessments.

RCRCD restores habitat in natural areas by re-establishing local native plant species for a variety of plant communities: riparian, upland, wetland, grassland, oak woodland and more. Restoration efforts provide habitat for sensitive species including the California Gnatcatcher, Stephen's Kangaroo Rat, Horned Lizard, Red-sided Garter Snake, Least Bell's Vireo, Willow Flycatcher and other native birds, mammals, fish, and amphibians.



Horned Lizard

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## Conservation Easements

During Fiscal Year 2015, the District continued to work to obtain land and conservation easements. RCRC D has accepted 17 easements and is in the process of acquiring more. Restoration work on four easements has been completed: two in Temescal Wash, one in the Alessandro Arroyo and one in Highgrove. Agencies, individual landowners, and Home Owners Associations have given conservation easements to RCRC D. Most of the conservation lands have required extensive restoration, including removal of exotic weeds and replanting with native species.

Conservation Easements	Acreage
Anza Creek	12.57
Cajalco Wetlands (in progress)	10.2
City of Corona easements (in progress)	88.24
City of Riverside – Lower Tequesquite	2.71
Department of Water Resources Slope	4.9
Hole creek (in progress)	10.50
Lee Lake Water District	30
McBride (in progress)	19
Mission Ranch	3
Munaretto	1.5
Riverside County Park and OSP - Lower Tequesquite	4.3
Shinkle - Highgrove	0.6
Spring Mountain Ranch (in progress)	±59.52
Sycamore Creek Preserve	72.66
Tagorada	0.3
Temescal Wash	13
Thomas Ranch (in progress)	4.35

RCRC D Owned	Acreage
Altfillisch	±111
Bedford-Temescal Parcel	15
Boulder Basins & Drainages (in progress)	8.7
Chandler	7.8
Deleo	26.49
Dos Lagos Open Space – Temescal	135
Goldenstar	8.21
McLane	0.9
McBride (in progress)	496
Trilogy (in progress)	±225.8

## Wildlife Corridors

RCRCD manages many valuable conservation lands that are important to the region's plants and animals. The habitat lands provide corridors which link larger blocks of habitat for wildlife movement and migration. They also help improve water quality, provide beautiful vistas, and stabilize eroding waterways. Many of these conservation lands have required extensive restoration.



Santa Ana River in fall at RCRCD's Atfillish property

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Most, but not all of the District's conserved and managed lands are located within four main areas: the Temescal Corridor, Cajalco Corridor, Riverside Area Arroyos, and the Santa Ana River main stem.

**Temescal Corridor:** One of the District's long-term goals is to preserve habitat lands that extend from the Cleveland National Forest through Temescal Canyon to the Gavilan Plateau and Lake Mathews. Besides multiple easements, RCRCD owns natural lands (fee title) in the Dos Lagos - Temescal Open Space Conservation Area, (135 acres of upland habitat) and the Deleo Conservation Area, which includes 26 acres of riparian, alluvial, and upland habitat.

**Cajalco Corridor:** The Temescal Corridor connects to the Cajalco Corridor. The Cajalco floodplain and adjacent Gavilan Hills support a variety of important habitats, including: wetlands, waterways, oak woodlands, juniper woodlands, and alkali plant communities.

**Riverside Arroyos and Santa Ana River Main Stem:** Many of RCRCD's conservation easements are along beautiful and important arroyos (waterways) that flow through unincorporated parts of Riverside County and across adjoining portions of the City of Riverside. Besides multiple easements, RCRCD now owns natural lands (fee title) in the Atfillisch Conservation Area which includes 111 acres of riparian wetland habitat to be restored. The District worked to help educate homeowners, land users and local groups about stewardship at the wildland-urban interface. Staff presented for the Lake Mathews Homeowners Association. Residents learned about specific actions that they could take to reduce their impacts on habitat and wildlife, such as by eliminating invasive plant species from landscaping and using integrated pest management techniques in their yards. To add to the education component, several RCRCD publications were distributed to residents:

*Living on the Edge of the Urban-Wildland Interface* [www.rcrcd.org/uploads/files/LivingOnTheEdge.pdf](http://www.rcrcd.org/uploads/files/LivingOnTheEdge.pdf)

*Conserving Critical Habitat* [www.rcrcd.org/uploads/files/ConservingCriticalHabitat.pdf](http://www.rcrcd.org/uploads/files/ConservingCriticalHabitat.pdf)

*Protecting our Native Fish* [www.rcrcd.org/uploads/files/ProtectingOurNativeFish\\_6-10-10.pdf](http://www.rcrcd.org/uploads/files/ProtectingOurNativeFish_6-10-10.pdf)



## Monitoring of Habitat Restoration Projects and Conservation Lands

RCRCD staff conducted periodic monitoring of 18 restoration projects during FY 2015. Staff conducted annual, quantitative monitoring for seven restoration projects. Quantitative monitoring included measurements of survival, vegetation cover, and species richness. For all other planting projects, qualitative monitoring was conducted, including taking photos from fixed photo points and recording notes on general condition of the vegetation.

RCRCD staff monitored its other conservation lands quarterly to annually and conducted various types of surveys. For example, staff conducted bird surveys for the California Gnatcatcher within the Temescal Open Space and conducted rapid assessment and soil surveys for detailed vegetation mapping. The data will be used to update a long-term management and restoration plan for the reserve. Staff also measured vegetation cover and diversity and conducted bird surveys for California Gnatcatcher and other species within the Sycamore Creek conservation easement as part of the focused monitoring to occur every five years under the long term management plan for the site.



California Gnatcatcher

Photo BY US-FWS

As part of ongoing stewardship, RCRCD coordinates the cleanup of trash and debris and conducts water quality testing and wildlife monitoring on easements. RCRCD blocks illegal Off-Road Vehicle (ORV) routes and replants disturbed soil with native vegetation. Occupation of reserve sites by homeless camps has been increasing throughout riparian areas during the drought. Staff worked with neighboring land owners, code compliance officers, and law enforcement to deal with this increasingly difficult issue.

## Mitigation Projects for Loss of Habitat

RCRCD worked with numerous developers and the City of Riverside to actively restore and monitor habitat to compensate for development impacts and land use changes. The California Department of Fish and Wildlife, Army Corps of Engineers and Santa Ana Regional Water Quality Control Board allow RCRCD to work in waterways through Permits 1601, 1603, 404 and 401. Our mitigation restoration projects were installed at two new project sites this year. This included alluvial scrub and riparian habitat along Temescal Wash and riparian habitat restoration at Tequesquite Creek.



In Lieu Fee restoration site in Temescal Wash during annual monitoring.

## **In-Lieu Fee Program**

RCRCD worked with the Army Corps of Engineers to further develop the “In-Lieu Fee” program in response to increasing demand for mitigation opportunities to help offset impacts due to urban development in, and around, the inland region.

In-Lieu-Fee (ILF) is an approach to habitat mitigation in which a “permittee” (i.e.: land developer or public agency project proponent) pays a fee to a third party “in lieu of” conducting project-specific mitigation. ILF mitigation is used to compensate for unavoidable impacts to wetlands or other waters when it is in the best interest of the environment, and when other approaches to compensation are not available or practical.

In FY 2015 in Temescal Wash one site was installed to restore and enhance alluvial scrub and riparian habitat. There is also another approved site in Temescal Wash that is planned for enhancement of riparian habitat. In the Santa Ana River main stem one new site was planned and approved to restore and enhance riparian wetland habitat.

## **Santa Ana Watershed Association (SAWA)**

RCRCD is a member of the Santa Ana Watershed Association. SAWA is a nonprofit organization that works in native habitats within the Santa Ana River watershed by removing invasive plants and animals from riparian areas and monitoring wildlife populations.

## Santa Ana River and Orange County Weed Management Area

RCRCD continued as a partner with the Santa Ana River and Orange County Weed Management Area (SAROCWMA), which works to eradicate non-native weeds on both private and public lands in portions of Riverside, San Bernardino and Orange Counties. The Weed Management Area has been successful in controlling common invasive weeds, especially *Arundo donax* (giant reed), perennial pepperweed, Tamarisk (salt cedar) and castor bean in outlying populations. The group works to control populations of invasive plants but also targets smaller populations of weeds and removes them before they become a problem. Funding was not received for 2014, which reduced accomplishments.

## Fish and Amphibian Programs

RCRCD conducted a variety of restoration and research projects in an effort to increase fish and amphibian populations in their native ranges of the Santa Ana Watershed.

Native fish and amphibian species are impacted by loss or degradation of stream habitat, water pollution, drought, non-native fish and aquatic animals, flood control structures, water diversion, sand and gravel mining, and changes in the watershed that result in erosion, sediment and debris flows.



Speckled Dace

## Native Fish Rescues, Reintroductions and Studies

During FY 2015, the RCRCD's stream supported a native fish population of Speckled Dace, Arroyo Chub, and Santa Ana Sucker, a threatened species. The number of fish varies from year to year, depending on natural reproduction. The recirculating, 300-foot long stream was constructed to support and propagate native fish.

Four of RCRCD's 100 foot-long raceways were used for the breeding and study of native fish, in a project conducted with the California Department of Fish and Game (DFG)- Region 6, and the US Fish and Wildlife Service (FWS). The US Geological Survey (USGS) is conducting the analysis for the results.



Building raceways

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## Riverside Waterways

RCRCD continued to work with local water districts, US Fish and Wildlife Service, California Department of Fish and Wildlife, and the City of Riverside on the restoration of the lower Tequesquite Arroyo for the benefit of the Santa Ana sucker. The creek was degraded due to trash, exotic plants and lack of connectivity to the river. The five-year project involves removing exotic species, controlling erosion on channel banks, placing substrate onto the channel bottoms for spawning habitat, and planting of native vegetation.

RCRCD also restored riparian areas adjacent to Anza Drain and Hole Creek in collaboration with the County and City of Riverside. The District received \$125,000 from the Santa Ana River Restoration/Recovery Trust Fund held by San Bernardino Valley Municipal Water District to restore native fish habitat in the lower Tequesquite Arroyo.

## Water Quality Testing

During Fiscal Year 2015 staff monitored water quality quarterly at Lee Lake Conservation Easement pond, other sites in Temescal Canyon, RCRCD's native fish stream and raceways; periodically in Coldwater Canyon; and occasionally at other sites. Most of the testing locations were dry due to lack of water by the end of FY 2015. The testing provides data for RCRCD and the Regional Water Quality Control Board to help track water quality fluctuation and trends.

## Amphibian Restoration

RCRCD and partners work to foster and reintroduce amphibian populations into restored conservation areas. Some species include the Western pond turtle, California salamander, Coast Range newt, California tree frog, and Spade-foot toad.



Pond turtle traps and baskets.

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## Plant Programs and Projects

The Riverside-Corona Resource Conservation District (RCRCD) provides native plants for habitat restoration, landscaping and other types of planting projects. RCRCD propagates plants at its native plant nursery for a variety of re-vegetation projects and uses its own refrigerated seed storage facilities to store locally-collected seed. Staff helps train others in production and use of native plants in ways that are beneficial to the natural biological diversity of southern California.

### Native Plant Nursery

All plants produced in the native plant nursery were started from wild-collected seeds and rhizomes from our local ecoregions. Staff continued to propagate plants from the local watershed for current and future planting projects, but the nursery began to shift its focus to testing stored seeds and to collecting propagules for future large projects. RCRCD provided 1,061 container plants to restoration projects, nearly 300 plants for a bioswale improvement project at a local park, and 100 plants for landscaping projects during the fiscal year. In addition, RCRCD continued to maintain a “cutting” nursery of mule fat and four species of willow.

In addition, nursery staff cared for plants for the local chapter of the California Native Plant Society (CNPS) and hosted a “leftover” plant sale for the local CNPS chapter in November 2014.

From FY 2005-2015, the nursery has supplied more than 24,666 local native plants for restoration,

erosion control, and water quality projects and 4,465 for landscaping. Many of the landscaping plants have been utilized at RCRCD facilities.



RCRCD staff collect and grow native plant materials for its restoration programs

### Seed Collections

RCRCD continued to store special collections of seeds for RCRCD projects in the two walk-in cold rooms that it renovated in 2013. The temperature and relative humidity are controlled in the storage rooms so that seeds remain viable for several to many years. This is especially important during drought when seeds are hard to collect. The stored seeds are used primarily to propagate plants for restoration, water quality, and bank stabilization projects. RCRCD also stored seed for the Irvine Ranch Conservancy in its refrigerated storage rooms. The native plant seeds will be used for the Conservancy’s future restoration projects.

In the spring, staff began surveying sites for potential seed collection and applied for permits to collect seeds on public lands. Staff focused on making collections of seeds in a way that reflects the genetic diversity of natural populations. The extended drought has made finding and collection of viable seeds a difficult task

## Alluvial Scrub Native Plant Materials Project

Plant Restoration Ecologist Dr. Arlee Montalvo continued work on a collaborative project which was funded by the USDA Forest Service Native Plant Materials Program and a Pacific Southwest Research Station internal grant program. Montalvo continued to collect information about native plants that will be used to prepare plant profiles that focus on use of plants for habitat restoration. Additional funding was received to carry this project through to Fall 2016, so that Dr. Montalvo can add recommendations for seed transfer to the native plant profiles.

In addition, RCRCO hired a postdoctoral intern, Dr. Erin Riordan to work with Dr. Montalvo on modeling the distribution of species under contemporary climates compared to where they may be able to live under various scenarios of climate change. In April, Dr. Montalvo presented a joint paper with Dr. Riordan on their research at the National Native Seed Conference in Santa Fe, New Mexico. The paper was entitled “Evaluating seed transfer of southern California shrubs in the face of climate change”. An annual FY report on the project was provided to the Forest Service in July, 2015.



Dr. Erin Riordan

## Adaptation to Climate Change: Eco-Adapt

Dr. Montalvo and Dr. Riordan attended workshops with the US Forest Service other agencies, universities, and non-government organizations to help develop forest management priorities that will help to deal with some of the problems associated with climate change. The publication that comes out of the workshop is expected to provide information and guidance useful for managing conserved lands within and outside federal lands.



*Ceanothus perplexans*

# Urban Sustainability, Education, and Outreach

During Fiscal Year 2015, RCRCDD worked to support a more sustainable use of urban areas, largely by partnering with a variety of relatively new local movements. Through these synergistic partnerships we are able to create more sustainable communities and practices.

Staff helped build capacity for groups and public-private partnerships including: Riverside Food Systems Alliance, Riverside Community Garden Council and local gardens, Inland Urban Forest Council, and the newly-formed Environmental Education Coalition.

## Sponsorships

- RCRCDD sponsored the following efforts:
- the Future of Cities Conference, plus provided a booth.
- the second Grow Riverside Conference which included a third day of free programs and activities for the community. The Farm Fest was held in conjunction with the Downtown Farmers' Market. Staff developed and coordinated a variety of activities and displays, including one focused on the International Year of Soils.
- development of a landscape training program for the use of native plants by the California Native Plant Society: the Certified Native Landscape Specialist Program.



Outreach booth at the Farm Fest event.

RCRCDD partners with numerous organizations to provide education and outreach programs and reach broader audiences. Some educational partners during 2015 include the Inland Urban Forest Council, California Native Plant Society, California Urban Forest Council, California ReLeaf, UC Riverside, US Forest Service Fire Lab, Preserve the Plateau, Friends of the Entomology Museum at UCR (FERM), and the Riverside Municipal Museum.

## Urban Forestry

Community forests are fundamental components of urban ecosystems, and their management is essential for creating sustainable communities. RCRC works to increase canopy cover and promotes best practices and urban forest management planning. The District partnered with the Inland Urban Forest Council (IUFC) to bring professional education programs to local tree-care professionals. RCRC hosted the workshop “What’s Bugging You?” and assisted with “The Secret Life of Wood” that was held at Sim’s Tree Learning Center. Staff helped build IUFC’s capacity by assisting with a newsletter, display, and online presence, including Facebook and website.

RCRCD partnered on development of a Waterwise Tree Care campaign which includes a publication and large tree “Price Tags” that are hung in trees to raise awareness about the value of trees and watering trees during drought. The Tree Tag was requested by Cal Fire’s state urban forester for use in California. A template was developed for the California Urban Forest Council and California Releaf for uploading to a website, so that others could add their logo, print, and use anywhere in the state.

The *Waterwise Tree Care* publication is on each partners’ website, and the Tree Tags are being hung in trees and circulated through social media on Facebook, Nextdoor, etc. with the message: “Prioritize watering trees during a water shortage. Trees take many years to grow and provide numerous benefits. Learn about simple ways to water deeply and reduce tree stress that invites disease, pests and death.” The tree tags have a QR code with links back to the publication on one side, and links to “Invest from the Ground Up”, a site that highlights the value of trees on the other side.



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Both the publications and tree tags have been in high demand. The *Waterwise Tree Care* publication was reprinted with additional funding from Western Municipal Water District, Metropolitan Water District, and Riverside Public Utilities. RCRCDD scheduled coverage of the issue of dying trees from drought with Riverside Public Utilities' Green Power Report, a Monday night radio show and webcast. As a result of the campaign, Western Municipal Water District developed a bill insert based on the tree tag that went to their customers.

Public Affairs Manager Diana Ruiz began work with a coalition of tree care professionals and Audubon volunteers to develop best practices and public messaging about tree trimming during nesting season.

## Riverside Food Systems

Another essential component of a sustainable community is a food system that provides for access to locally produced foods; preserved prime farmlands; and urban agriculture. Staff participated in a strategic planning process which culminated in the formation of the Riverside Food Systems Alliance (RFSA). RFSA is working to build the local farm to fork community and to raise awareness about the benefits of eating local. Diana Ruiz is serving on the advisory committee and as co-chair for the "Educate, Inspire, and Sustain Demand" committee. Staff worked with community gardens and assisted the Riverside Community Garden Council with capacity building, including Facebook and promotion. RCRCDD received a pass-through grant from the Natural Resources Conservation Service (NRCS) for Arlanza Community Garden to help with irrigation and handicapped accessibility. The District provided information and mini-grants for school gardens, two of which adjoin community gardens.

## California Native Plants

RCRCDD works to conserve natural resources, including the restoration of native plants and the creation of urban areas/landscapes that support local native habitats. RCRCDD continued to support and collaborate with the California Native Plant Society's (CNPS) Riverside-San Bernardino chapter. Staff assisted with program planning, tours, outreach and the annual plant sale. During fall of 2014, the District provided plants for the CNPS plant sale; held a second sale at the RCRCDD's native plant nursery; and provided the publication *Wild about Natives*; an introduction to the use native plants in landscaping: <http://www.rcrcdd.org/uploads/files/WildAboutNatives.pdf>



Erin Snyder did outreach at the UC Riverside Botanic Garden Plant Sale.

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## Green Accountability and Performance

Ruiz served on Riverside's Green Accountability and Performance Committee, an outgrowth of the Green Action Plan. The committee meets quarterly to review the City's progress toward sustainability. Riverside has won many awards and was designated as California's first Emerald City for its efforts. During Fiscal Year 2015, Ruiz provided input to the City's Restorative Growth and Climate Action Plans.

## Environmental Education Coalition

As a result of two years of planning, an Environmental Education Coalition for Riverside and San Bernardino Counties formed. RCRCDD provided support for a strategic planning session and hosted the second coalition meeting. Ruiz worked with the Media Communications and Community Outreach workgroup.

## Education Projects

The Riverside-Corona Resource Conservation District (RCRCDD) provides a variety of educational and public relations programs and services concerning natural resources and their stewardship. This section details some accomplishments for Fiscal Year 2015 with information about education programs, citizen science, materials, and outreach efforts.

### Corona Water Education Program

RCRCDD conducts water education programs for schools and youth groups on behalf of the City of Corona's Department of Water and Power. The presentations include information about Corona's water supply and hands-on activities about keeping storm water clean. Resource Educator Erin Snyder conducted 97 presentations for 2,767 elementary school students from July, 2014 through June, 2015. The presentations were supplemented with educational materials including the booklet "Where Does your Watershed?" and "Santa Ana River Steward" bookmarks. Teachers were provided the Educators' Guide and posters of the Santa Ana River Watershed. In all, water education materials were delivered to 102 teachers for more than 7,500 students as part of the Corona Water Education program.

### California School for the Deaf Service Learning

Throughout the academic year, California School for the Deaf (CSDR) students completed a variety of projects. The students helped in the LandUse Learning Center creating compost, working the garden plots, and spreading mulch. They monitored bluebird nest boxes at their school and at Olivewood Memorial Park and collected data for Operation Tree Canopy, another citizen science project.

RCRCDD continued to conduct Project Tree Canopy citizen science data collections with volunteers for the Earthwatch Institute and researchers at UCR. The Envirothon Team helped collect tree data and leaf samples at a local park.



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## Riverside Citizen Science

As a result of the coordinated efforts in developing a strategic plan for Riverside Citizen Science with Riverside Metropolitan Museum; the University of California, Riverside; the City of Riverside's Department of Parks, Recreation and Community Services; the US Forest Service-Fire Lab, and Smithsonian Institute's National Museum of Natural History; a Memorandum of Understanding was signed at the new Ameal Moore Nature Center at Sycamore Canyon Wilderness Park.

Riverside Citizen Science launched the Riverside Nature Spotter app that helps people share their observations of insects, plants, animals, or other living things.

Spotters can send a photo with questions about what they've seen and a naturalist will reply with feedback. Observations are collected and used to create an online database located at [iNaturalist.org](http://iNaturalist.org) to document the Riverside area's resources. For those who don't have the iPhone or Android app, photos can be taken with any camera and uploaded through a computer. See uploads at: [www.inaturalist.org/projects/riverside-citizen-science](http://www.inaturalist.org/projects/riverside-citizen-science)



Dignitaries at the Memorandum of Understanding for Riverside Citizen Science. Foreground, from left are Mayor Rusty Bailey, Smokey the Bear, volunteer, UCR Chancellor Kim Wilcox, US Forest Service's Station Director Alex Friend, and RCRC's Vice President Roy Takeno.

## Bluebird Nestbox Monitoring

During the 2015 nesting season, February through July, 238 baby bluebirds fledged. Twenty volunteer citizen-scientists hung and monitored 30 nest boxes for native birds including Western Bluebirds, Tree Swallows, Bewick's Wrens and Ash-throated Flycatchers. There were 53 nesting attempts, 273 eggs, 256 hatchlings and 238 fledglings at three sites. The results were submitted to Cornell University Birdhouse Network, the California Bluebird Recovery Program, the North American Bluebird Society, and Southern California Bluebird Club. RCRC volunteers manage the longest running, most prolific Bluebird Trail in Riverside County.

Resource Educator Erin Snyder conducted a Project NestWatch training at the new Riverside Nature Center. As a result, some volunteers are now directly submitting their data online.

## Educational Material Distribution

Free educational materials are offered annually to all elementary, middle and high school teachers, who work or reside within the RCRC's boundaries, via a "Materials Order Form". Staff distributed more than 35,000 educational materials during the 2014-2015 school year. Materials were provided to 133 teachers at 54 schools in the six school districts (Riverside, Alvord, Corona, Colton, Grand Terrace and Lake Elsinore). Educational materials provided included: *Forests for People*, *Dig It! The Secrets of Soil*, and the *Soil Saver Club*.

An additional 1,318 educational handouts were provided to local partners such as Riverside Metropolitan Museum, Riverside County Flood Control, California Native Plant Society, Grand Terrace Environmental Club, California Naturalist, Santa Ana Watershed Association and the Colton Wildlands Conservancy.

Erin Snyder assisted the National Association of Conservation Districts by reviewing draft stewardship booklets: *Local Heroes-Your Hard Working Pollinators*.

## Outreach Efforts

### Events

RCRCD helped promote and participated in community sustainability events. Cumulatively, thousands of people attended the events and were provided more than 6300 pieces of educational materials. Nearly 1,000 children participated in hands-on learning activities at the events.

2014-2015 events included:

- Riverside Boy Scout Roundtable
- Santa Ana River Trust Fall Fest
- One Water One Watershed Conference
- Earth Night in the Garden
- Duck Daze
- Corona Garden Festival
- Corona-Norco Day of the Child
- Master Gardeners' "Ask the Experts"
- Highgrove Day
- Temescal Valley Fair
- Grow Riverside Conference and Family Farm Fest
- Bioswale Planting Project at Ryan Bonamino Park (collaboration with CNPS and City Parks)

Additionally, 15 organizations were provided another 2,500 conservation educational handouts.

## Publications

### Educational Publications

RCRCD creates localized educational publications about stewardship and resource management and distributes them at outreach events, workshops, and at partners' programs.

### Regional Books

Staff continues to promote and sell the enhanced, second edition of *Backyard Birds of the Inland Empire* by Sheila Kee, which was developed by the Riverside-Corona Resource Conservation District and published by Heyday Books in collaboration with Inlandia Institute. The book provides descriptions and tips for identifying over 50 of the most common birds that visit yards in Southern California's inland region. Each bird is identified by color, then described by its behavioural traits, calls, food preferences, and nesting patterns. The guide sells for \$14.95 at bookstores, local museums, and at the District's office. The first edition, published in 2004, won the National Association of Conservation Districts' Outreach Award.

RCRCD also sells *Flora of the Santa Ana River and Environs* by Oscar Clarke, Greg Ballmer, Danielle Svela and Dr. Arlee Montalvo (our plant restoration ecologist). RCRCD helped sponsor the first edition, and sells copies for \$25.00. The book is used as a reference for training workshops, such as for the California Rapid Assessment Method (CRAM).

### Website and Social Media

RCRCD updated its web site, which is now: [www.RCRCD.org](http://www.RCRCD.org), to raise awareness and promote sustainable practices. Staff maintains a Facebook page at [www.facebook.com/RCRCD](http://www.facebook.com/RCRCD) to help publicize upcoming events.



Hands-on soil activities were conducted at RCRCD's booth at outreach events during the 2015 International Year of Soils.

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# Resource Conservation Center

RCRCD manages the Resource Conservation Center, a 9-acre facility that includes the Land-Use Learning Center demonstration garden and native plant nursery. The Center is a re-purposed facility (the former USDA Salinity Laboratory) that now serves as a location for information exchange and partnerships to achieve sustainable natural resource use. The campus is used to foster community conservation efforts and to empower southern Californians to practice natural resource stewardship at home, at work, and in the community. Conservation agencies and grassroots organizations use the Land-Use Learning Center demonstration garden and conference room for programs, training, and meetings.



First demonstrations of “re-use” included renovating buildings and then parking areas with outdoor solar lighting, drought tolerant landscaping, and permeable surfacing materials. A native plant nursery was developed in abandoned plant propagation areas. Today, the nursery and seed bank are used for propagation of local habitat species.

The facility and buildings at 4500 Glenwood Dr., Riverside, CA 92501, house the Riverside-Corona Resource Conservation District (RCRCD) - lead agency; the USDA Natural Resources Conservation Service’s (NRCS) Area Office, the California Department of Fish and Wildlife’s monitoring unit for the Riverside County Multi-Species Habitat Conservation Plan (MSHCP), and the California Department of Food and Agriculture’s (CDFA’s) facility for research and control of the Glassy-winged Sharpshooter and Asian Citrus Psyllid.

## Land-Use Learning Center

The LandUse Learning Center (LLC) is a 3-acre garden that demonstrates sustainable practices for the three main land uses of southern California: native habitats, urban areas, and agriculture. Each land use has been developed with trails, plantings, interpretive signs, and appropriate plant lists. During 2015, the garden opened for visitors, group tours and college class programs.



The Native Habitat area depicts four dwindling, local plant communities of inland western Riverside and San Bernardino Counties: riparian, coastal-sage-scrub, chaparral, and oak woodland. The riparian plant community includes a recycling stream for the study of native fish, including the threatened Santa Ana Sucker. Learn more about native fish in our publication: “Protecting our Native Fish” at [http://www.rcrcd.org/uploads/files/ProtectingOurNativeFish\\_6-10-10.pdf](http://www.rcrcd.org/uploads/files/ProtectingOurNativeFish_6-10-10.pdf) . Learn about waterways and their protection in *Conserving Waterways: Preventing Impacts from Human Activity* at <http://www.rcrcd.org/uploads/files/ConservingWaterways.pdf> For more information about habitat, see the publication *Conserving Critical Habitat* at <http://www.rcrcd.org/uploads/files/ConservingCriticalHabitat.pdf> .

Visitors to the LLC learn about specific actions that they can take to reduce their impacts on habitat and wildlife, such as by eliminating invasive plant species from landscaping and creating habitat for urban-adapted wildlife in yards. You can learn more in *Living on the Edge of the Urban-Wildlands Interface* at <http://www.rcrcd.org/uploads/files/LivingOnTheEdge.pdf> and *Wild about Natives* is an introduction to the use native plants in landscaping: <http://www.rcrcd.org/uploads/files/WildAboutNatives.pdf> .

The Urban Area demonstrates ways to steward resources in urban or suburban eco-systems with four styles of water-wise yards, lawn alternatives, and an Arbor Trail with tree species that are suitable for urban areas of inland southern California. Signs about urban forestry explain the value of trees and how trees mitigate for air pollution, the urban heat island effect, and climate change. Visitors learn about proper tree care and planting; placement of trees to reduce energy use; and more. Our current tree publications include: *Tree Care* at <http://www.rcrcd.org/uploads/files/TreeCare.pdf> and *Waterwise Tree Care* at <http://www.rcrcd.org/uploads/files/WaterwiseTreeCare--web.pdf> .

The Agricultural Area demonstrates crops that thrive in our local climate. Interpretive signs depict sustainable agricultural practices, including irrigation water management, integrated pest management using a variety of biological controls, and other methods that farmers use, such as to build topsoil and to prevent erosion and sediment in water. Our signs encourage consumers to support sustainable agriculture and thus benefit from a high quality, safe, local food supply, while reducing transportation impacts and costs. (RCRCD provides irrigation system evaluations for farms and large turf areas.)



## Sycamore Creek Preserve and Field Office/Nature Center



During Fiscal Year 2015 staff began work on a plan to convert the field office into a nature center. This center will serve as a focal point for environmental education and resources for the residents of Temescal Valley and the surrounding communities, as the nearest nature center is currently 25 miles away. The mission of the Sycamore Creek nature center will be to provide a hands on learning center where the community can appreciate, inquire and study about the local ecology and to promote and facilitate natural resource conservation and stewardship and sustainability throughout the Temescal Valley and beyond. The strategic plan for the nature center is expected to be completed in the next year and comments from the local community will be incorporated into the document. Staff continued to monitor the conservation easement at Sycamore Creek following the long term maintenance plan. This year staff measured vegetation cover and diversity and conducted bird surveys for California Gnatcatcher and other species within the preserve as part of the focused monitoring required to occur every five years under the plan for the site. Monitoring for rare plants was postponed due to drought conditions and will occur in the next non-drought year.



## Administration

During FY 2015, staff continued to seek funding sources, create partnerships, and sub-lease portions of the Resource Conservation Center at 4500 Glenwood Dr., Riverside.



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Spring blooms at the LandUse Learning Center

The Riverside-Corona Resource Conservation District (RCRCD) is an independent, special district, enabled under Division 9 of the California Public Resources Code. As defined in Division 9, Resource Conservation Districts are given broad abilities to help sustain natural resources and to protect resources from preventable damage and waste. The scope of work at RCRCD reflects local issues and focuses on sustainable ecosystem management. RCRCD programs specifically address water conservation, soil erosion, storm water quality, habitat restoration, conservation education, and more. RCRCD was created by a vote of the people in 1953.



[WWW.RCRCD.ORG](http://WWW.RCRCD.ORG)

For more information about RCRCD, please contact Public Affairs Manager Diana Ruiz at (909) 238-8338.