CHINO BASIN WATER CONSERVATION DISTRICT

2016/17 ANNUAL REPORT

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ANNUAL REPORT

Fiscal Year 2016/17

LETTER FROM THE ACTING EXECUTIVE DIRECTOR

The 2016/17 fiscal year was one of embracing change, establishing new relationships, strengthening existing partnerships, igniting innovation, and turning ideas into action.

As the fiscal year began, California was in its fifth year of drought and under a drought State of Emergency. In October, over 62% of the state was in "severe", "extreme", or "exceptional" drought conditions. While the State mandated conservation, the District focused on its ongoing mission of supporting behavior change with education, services, research, forums, and programs; providing resources to inspire and empower residents to embrace the region's native landscapes; increasing groundwater recharge opportunities; and instilling water stewardship.

"IDEAS TAKE ACTION HERE"

Massive winter storms in Northern California provided much-needed precipitation. By April 2017, Governor Brown issued Executive Order B-40-17, officially ending the drought State of Emergency. Despite what happens with measures to compel conservation, continued interest in District offerings "post-drought" underscores the need for ongoing programming and messaging to educate the public on the cyclical nature of drought and the impacts of climate change, while ensuring the drought momentum is not lost and the conservation ethic is reinforced.

This year, long-time staff and Board members departed CBWCD after serving the District for many years. Eunice Ulloa retired after 12 years as Executive Director, and Directors Kati Parker and Paul Hofer were elected to the Inland Empire Utilities Agency (IEUA) Board of Directors after serving 16 and 22 years on the CBWCD Board, respectively. Three new Board members were sworn-in and nine employees were hired, all quickly coalescing into a proactive, passionate team committed to the District's water conservation mission.

In August 2016, the Inland Empire Utilities Agency submitted a proposal to the San Bernardino County Local Area Formation Commission (LAFCO) to take over the CBWCD. Despite this challenge, we remained rooted in our core mission and committed to action. It provided us an opportunity to better understand diverse perspectives and bring together complementary partners. The experience highlighted the District's relevance as our community partners, local elected officials and the public voiced their strong support for our programs, services, and continued independence. The IEUA Board rescinded the action in December and our two agencies quickly moved on to strengthen our collaborative efforts in support of water sustainability in the Chino Groundwater Basin.

CBWCD is fortunate to be part of a larger community of water utilities, local governments, educational institutions, and professional associations committed to making conservation a way of life through increased awareness, greater efficiency, and diversified water supply in order for the public and region we serve to thrive. To accomplish this, water conservation must be understood, planned, and implemented in a broader context that incorporates land use, environmental and habitat impacts, quality of life, and economic effects. Our partnerships allow us to provide richer, more informed support to our residents. Not if, but when the next drought comes, the region will be better prepared to use and manage water efficiently because of our joint and individual efforts.

As you look through this annual report, you will see highlights of the innovative programs, services, and resources envisioned and implemented by our energetic staff over the past year. You will also get a glimpse of some of the existing offerings and operations that benefited from staff's dedication to continuous improvement. Governed by an elected Board that continues to display leadership and independence, we remain committed to being a forward-looking, efficient agency that embodies a cooperative, creative spirit as we work to ensure that the current and future water needs of the Chino Basin and its residents are met.

VIVIAN CASTRO
Acting Executive Director

OUR MISSION

Chino Basin Water Conservation District is sustaining a regional water supply through public stewardship by engaging in the following strategies:

DEMONSTRATE

the multiple benefits of water efficient landscapes to conserve water, capture stormwater, and use recycled and greywater while providing beautiful and inspiring places to live, work, and play.

EDUCATE

to inspire the broad adoption of a water conservation ethic and ACTIVATE public steward-ship and a water-efficiency workforce.

PERCOLATE

stormwater and promote distributed onsite capture to replenish local groundwater supplies, ensuring our region's needs are efficiently met while improving regional water quality.

OUR COMMUNITY

We provide programs, services,and resources to serve audiences of all ages and backgrounds to cultivate a community-wide conservation ethic and build regional capacity for water resilience.

K-12 STUDENTS

HIGHER EDUCATION STUDENTS

FAMILIES

HOMEOWNERS

TOWARDS A COMMUNITY-WIDE CONSERVATION ETHIC

COMMERCIAL/ INDUSTRIAL

PROFESSIONALS

PUBLIC SECTOR

NONPROFITS

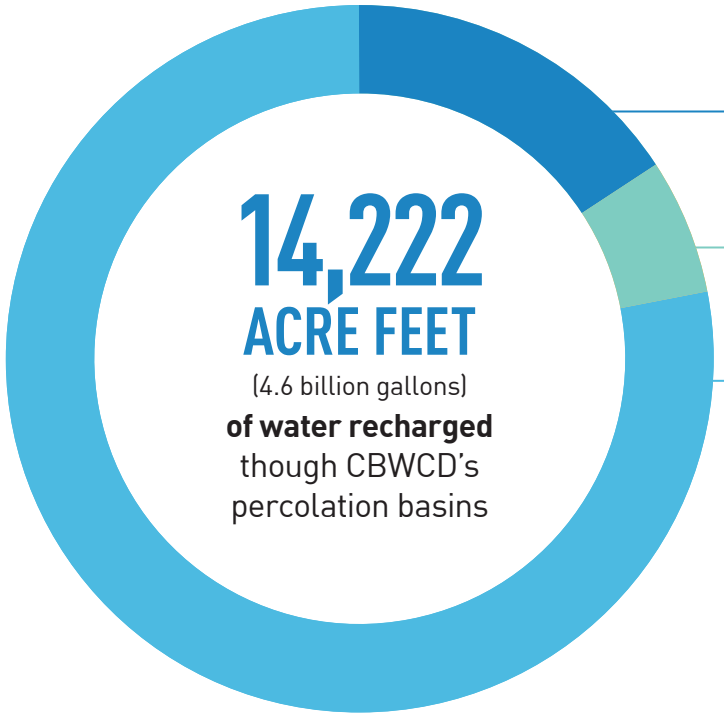
2016/17 BY THE NUMBERS

Numbers tell part of our story, but conservation is about more than numbers. It is a cultural shift that requires an integrated approach to carefully considered and diverse programming. With the ultimate goal of water conservation, our work is to inspire, equip, and support community members, professionals, and partners to make conservation a way of life.

1.2 MILLION **residents served** through CBWCD activities, including groundwater recharge

3,862 GALLONS
of water recharged for each resident of the Chino Basin aquifer

This roughly covers the annual drinking water and toilet water* required for all residents in the Chino Basin



stormwater:
2,249 ACRE FEET

recycled water:
882 ACRE FEET

imported water:
11,091 ACRE FEET

**assuming 1.6 gallons per flush and 1 gallon of drinking water per person per day*

PERCOLATION

134 acres (5.8 million sq. ft.) of land maintained by CBWCD staff for groundwater recharge

K-12 EDUCATION

15,270
K-12 students served by CBWCD Next Generation Science Standards-aligned youth education programs

6,415 **students participated** in Conservation Center field trips

62 **schools in our service area** participated in CBWCD Youth Education Programs

376 **teachers participated** with their classes in CBWCD Youth Education Programs

627 **teachers & educators** trained at the Water Conservation Center through CBWCD and partner programs

4 **school gardens constructed** by CBWCD staff for Inland Empire Utilities Agency program

98% *of teacher participants reported that the majority of their students were fairly or very aware of the importance of water conservation after participating in our field trip program*

RESIDENT EDUCATION

This year, CBWCD Conservation Programs Provided:

FORTY-NINE
landscape efficiency audits with the potential to save
17.5 MILLION GALLONS
(53.7 acre feet) of water per year

123 **home landscape design consultations**
for Chino Basin Residents planning to install water saving gardens

423
residents learned conservation gardening skills in **waterwise landscape workshops**

725
residents received free mulch at **mulch giveaway events**

WORKFORCE EDUCATION

Creating partners in conservation to multiply our impact, build regional capacity, and support career development.

84 **landscape professionals earned certifications or certificates** from our water efficiency professional development programs

60 **Master Gardeners & landscape professionals attended** our Living Landscape continuing education series, launched mid-year

Valley View High School horticulture students earned Qualified Water Efficient Landscaper professional certifications through our collaboration with Chaffey Joint Union HSD **28**

EIGHT **student interns** gained real world experience in conservation programming and education best practices

DEMONSTRATION

2.1 MILLION GALLONS (6.5 acre feet)
of water captured at the CBWCD Conservation Center demonstration garden, park, and parking lot.

16,553 **in-person visitors** to the CBWCD Conservation Center

52
new trees planted in our park and tree-study landscapes

ONLINE OUTREACH

50,712 **website visitors** to cbwcd.org

1,826 **followers** on Facebook, Twitter, and Instagram

MAKING AN IMPACT ON PROFESSIONAL PRACTICE

964 **professionals across all disciplines** served by trainings, workshops, and conferences at the Water Conservation Center

A LIVING DEMONSTRATION THAT *IS MORE THAN JUST BEAUTIFUL*

Chino Basin Water Conservation District calls our 4.5 acre headquarters the Water Conservation Center. Integrating a public park, demonstration garden, and environmentally-friendly buildings with classrooms, meeting spaces, and interpretive displays, the campus functions as a living exploration of contemporary best practices for water efficiency, landscape design, small-scale green infrastructure, distributed stormwater capture, and urban landscape management.

WATERWISE DEMONSTRATION GARDEN

Reopened in 2014 after extensive renovation, CBWCD's Waterwise Demonstration Garden has grown significantly and has blossomed into the multi-audience, vibrant community resource it was envisioned to become. The garden hosts a comprehensive series of regular gardening and irrigation workshops for homeowners, standards-based K-12 field trips and a wide variety of conservation-focused special events for community members, students, and professionals. With far too many programs over the last year to cover, these pages provide a glimpse of highlights.

"Had a great time here at the Chino Basin Water District for one of their free classes... Such a great local resource for learning and creating."

WORKSHOP PARTICIPANT

"I want to thank Dave for his presentation on Saturday. It has already proved to be a valuable resource in my planning. I am truly impressed by CBWCD's leadership in making such a wonderful site and educational opportunities available to the public."

WORKSHOP PARTICIPANT

"These beautiful gardens give garden lovers inspiration and ideas on how to incorporate drought tolerant plants in gardens."

FACEBOOK REVIEW

WE ASKED TEACHERS,

"WHAT WAS THE BUZZ AFTER THE STUDENTS VISITED THE WATER CONSERVATION CENTER?"

"They talked about the different plants that were waterwise. They also talked about the water basin area they viewed. This led to a discussion about how important water conservation is in Southern California."

"Following the field trip the students discussed how to save water and remind each other when somebody is not conserving water."

"They loved meeting and learning about how Sam, the tortoise, adapts to the environment. They loved learning about how much water goes into making a single hamburger. They were also excited to learn how there is water below the surface of land"

"The kids loved it. Can't wait to go back."

FIELD TRIP PARTICIPANTS' FEEDBACK

A LIVING DEMONSTRATION THAT *EDUCATES*

...**students and professionals** alike about low impact development strategies and green urban infrastructure.

...**new and hobby gardeners** about composting and low-water garden design and maintenance through dozens of free workshops each year.

...**homeowners** about sheet mulching and turf removal during free workshops.

...**K-12 students**, **teachers**, **professionals**, **college students**, and **homeowners** through garden investigations and tours.

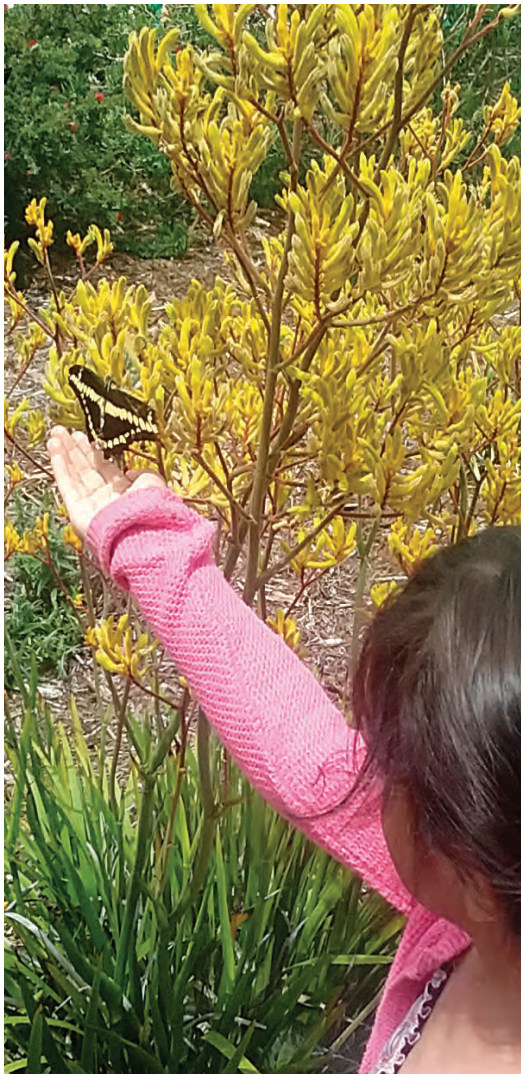
DEMONSTRATE

A LIVING DEMONSTRATION THAT *CELEBRATES*

...water saving landscapes and native habitats

...the 25th Annual Earth Day Festival and 10th Annual Landscape and Water Conservation Festival with over 2,100 students, teachers, community members, and partners

...pollinators and beneficial insects at the summer Pollination Festival



...edible California native plants at workshops with Rancho Santa Ana Botanic Garden

A LIVING DEMONSTRATION THAT *INFILTRATES*

...through a raingarden at the front entrance of the Water Conservation Center

...using a rainscupper and bioretention system

... through a stormwater Low Impact Development demonstration in the parking lot

... through permeable asphalt, concrete, and paver demonstrations

DEMONSTRATE

DEMONSTRATION & RESEARCH

TREES FOR A RESILIENT WATER FUTURE

A healthy tree canopy in our region is integral to both urban livability and the "watershed approach" to urban landscape and stormwater management. Tree leaf canopy slows the fall of rain and the root systems of trees improve the structure and porosity of the soil under the canopy, increasing the soil's capacity to infiltrate water. Mulch and leaf litter under trees, as demonstrated in our park, further increase this capacity. Even over paved surfaces, large evergreen trees reduce stormwater peak flows by slowing the fall of water. The living soil in the root zone of trees further helps purify water by removing pollutants as water infiltrates past the biologically-active root zone. Urban trees additionally provide carbon sequestration, desireable habitat, increased property values and enhanced aesthetics, improved air quality, reduction of the urban heat island effect, reduced soil erosion, and shade that can help reduce home energy use. So many benefits arise from the simple act of planting and caring for the right tree in the right place!

UNDERSTANDING TREES

As a part of University of California Cooperative Extension's Climate Ready Tree Study, CBWCD installed a research planting of 28 trees along the perimeter of Montclair Basin #4, directly north of our main Water Conservation Center property. Selected species will be evaluated for suitability of use in the Inland Empire's urban forest and are being studied to quantify the effects of wood-chip mulch on plant growth. The study consists of four low water use species, planted in mulched and un-mulched conditions, with the complete planting replicated three times. While beautifying the property perimeter, this planting will contribute to the body of knowledge needed to meet the challenges of managing our region's green infrastructure. We are also working with researchers at the University of California Riverside and Earthwatch Institute to monitor the impact of green infrastructure and urban landscapes on air quality and air temperature.

DEMONSTRATING CLIMATE-APPROPRIATE TREES

The Chino Basin Water Conservation District co-maintains a public park on our headquarters property in partnership with the City of Montclair. The park features a small arboretum of 50 locally-adapted tree species and cultivars, planted as a demonstration of appropriate tree selections for residential and commercial landscapes in the Inland Empire. 23 of those species and cultivars were introduced to the collection in the Spring of 2017. Many of the trees are low water use, low maintenance, and feature beautiful flowers, foliage, or bark color. The collection includes small and medium sized trees ideal for residential situations but not often seen in public plantings. This valuable resource allows us to physically show a tree when we provide recommendations for the best tree choices for local landscapes. It also provides a convenient way for the public to see many options in a single location to better understand the trees' scale and aesthetic impact. The ultimate function of the planting is to inspire area residents to select and plant the best locally-adapted trees that will contribute to a valuable and thriving urban tree canopy.

RESEARCH & DEMONSTRATION PROJECTS ARE KEY TO ENSURING OUR REGION IS ON THE PATHWAY TO SUSTAINABILITY & RESILIENCY.

"We've planted many great low-water trees in the demonstration landscapes adjacent to our percolation basins, but in a climate with cyclical drought and record high temperatures, we have been asking if there are trees better suited for our changing climate. This project will help provide answers to that question so that we can continue to demonstrate best practices for our region."

FRANKIE SOTOMAYOR
Facilities & Landscape Manager
Chino Basin Water Conservation District

"We strive to provide meaningful and relevant learning experiences about water conservation and stewardship to students. Collaborative partnerships and field trips build a unique connection to the place where we live, inspiring our youngest generation to be watershed stewards."

VIVIAN CASTRO
Acting Executive Director
Chino Basin Water Conservation District

PLACE-BASED APPROACH TO CONSERVATION

One of the most important questions for Southern California is how we can holistically manage our water quality and water supply during a period of extended drought in a changing climate. Students from the urban settings of our service area are rarely afforded opportunities to explore local streams and rivers. As water resource management becomes an increasingly complex, an environmentally literate citizenry is critical. We strive to provide local students from under-served communities opportunities to explore and investigate the watershed. Through increased understanding of water systems, a stronger sense of place, and experiential learning, we work to inspire the next generation of watershed stewards and conservationists.

In addition to our traditional Water Conservation Center field trips that provide bussing and facilitate science and engineering investigations related to water conservation concepts for over 5,000 K-12 students, we partnered with exceptional education and conservation professionals in the region to pilot watershed field expedition trips.

"...An amazing resource for educators and the community as a whole."

FIELD TRIP PARTICIPANT TEACHER

WATERSHED EXPEDITIONS

GIRLS WHO SOLVE

In partnership with San Bernardino Community College District and Curiosity Quest Problem Solvers, we piloted a watershed expedition day camp for middle school girls called Girls Who Solve. Seventeen middle school girls explored the Santa Ana Watershed over the course of four days - from mountains, to rivers, to coast. They spoke with resource management experts, identified issues in the watershed, and developed and presented solutions for water resource issues.

"THANK YOU FOR PROVIDING SUCH AN AWESOME & EMPOWERING OPPORTUNITY FOR MY GIRLS!"

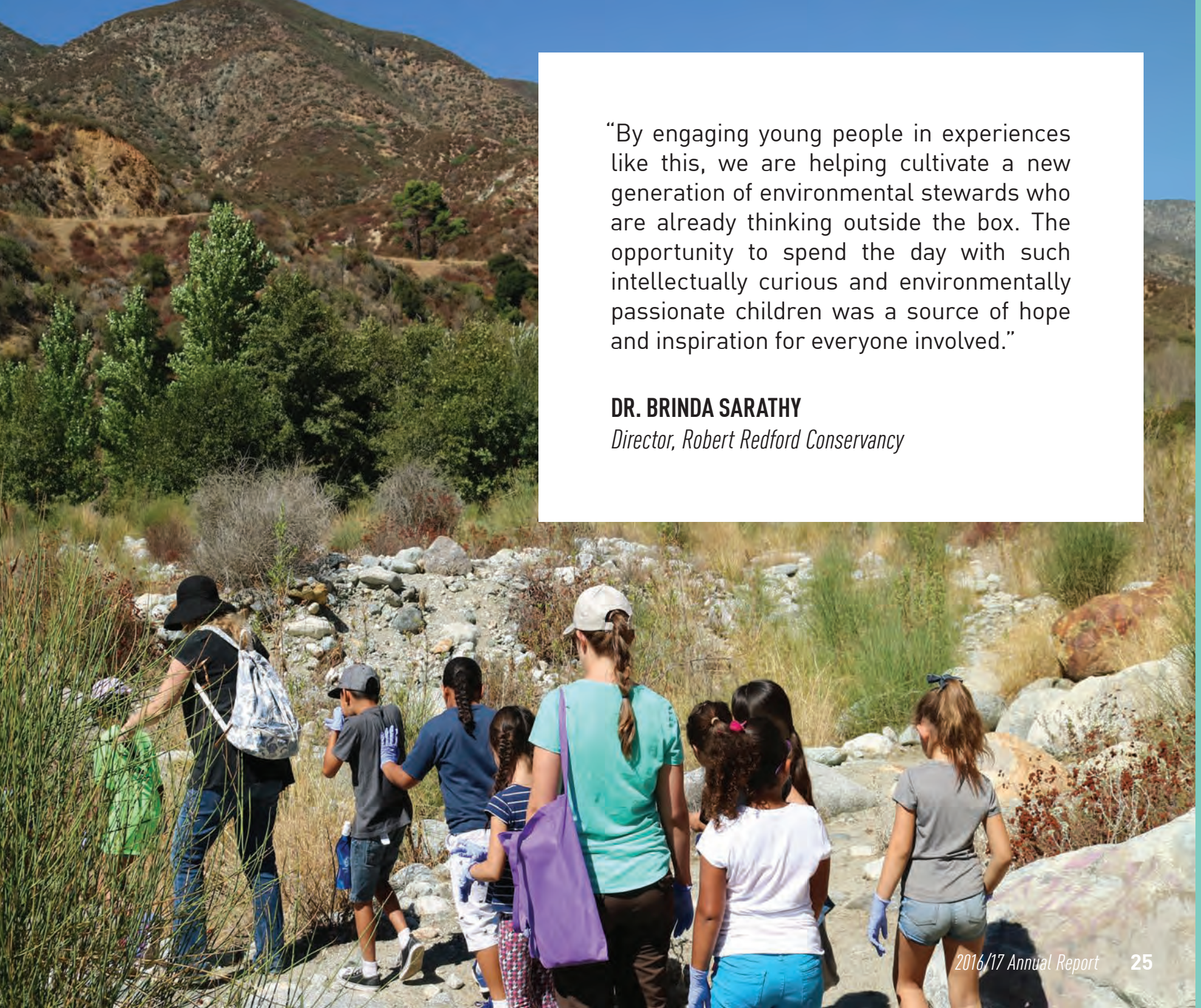
"My girls had a wonderful experience. They and I learned about water conservation and will be back!"

"GIRLS WHO SOLVE" PARTICIPANT FEEDBACK

ALL AROUND THE WATERSHED

Water travels many miles before it gets to our kitchen taps, and last October, over 60 third graders from Arroyo Elementary in Ontario took that same journey to discover the source of their drinking water. The students' trip to Lower San Antonio Canyon in the San Gabriel Mountains was the result of a unique new partnership between CBWCD and the Robert Redford Conservancy for Southern California Sustainability, children's author Joel Harper, and United States Forest Service Station 25 to encourage water and land stewardship.

Beginning in the Inland Valley at CBWCD's Water Conservation Campus, students learned what a watershed is through a modeling and mapping activity. Afterward, they watched "All the Way to the Ocean," a short film by Joel Harper that shows two friends' journey to clean up pollution in their watershed. Next, the students took a ride into the mountains to the San Antonio Canyon, where they helped the USFS clean up the creek that runs down into the urban valley. Finally, students hiked up to a lookout point where they could view their entire watershed - the city below and the mountains above. Each student received a signed copy of Joel Harper's book "All the Way to the Ocean." The event was partially funded by a memorial fund established by the late Pitzer College Professor, John "Jack" Sullivan.



"By engaging young people in experiences like this, we are helping cultivate a new generation of environmental stewards who are already thinking outside the box. The opportunity to spend the day with such intellectually curious and environmentally passionate children was a source of hope and inspiration for everyone involved."

DR. BRINDA SARATHY
Director, Robert Redford Conservancy

COMMUNITY-SOURCED CONSERVATION RESEARCH

Community Science, also know as Citizen Science, is the public involvement in inquiry and discovery of new scientific knowledge. Achieving our mission of protecting groundwater for our community depends on the participation of our community. The District partners with community members to understand, monitor, and protect our groundwater and our watershed.

SANTA ANA WATERSHED COMMUNITY SCIENCE NETWORK

In partnership with regional Resource Conservation Districts and non-profits, we are mobilizing a Santa Ana Watershed Community Science Network with conservation practitioners and educators across the region. The Network fosters communication, coordination, and collaboration to encourage wider participation in citizen science and fill data gaps necessary to protect and restore the health of the Santa Ana River watershed. This Network is a collaborative, multi-jurisdictional, and community-based effort to organize, train, and inspire community scientists of all ages to participate in the protection of the Santa Ana Watershed and its ecosystems through scientific inquiry and civic engagement. Engaging communities and citizens may lead to a greater ethic of stewardship and conservation among the communities in which we live, work, and play in the basin.

MONITORING URBAN RESILIENCY

Using established citizen science programs through the Earthwatch Institute and UC Riverside's Urban Resiliency Program, and community-based organizations, our objectives are to engage students and families in monitoring the impacts of sustainable landscapes throughout the watershed. This year, we piloted a NASA-funded citizen science program to monitor the impacts of urban landscapes on regional air temperature and quality. The trees, shrubs and pavement in our front and back yards may make a measurable difference on the the water we use and the air quality and temperature we experience. Through the program, over 50 residents in our sphere of influence are now participating by mapping their yards, hosting air temperature sensors, and/or hosting ozone sensors. Results from the study may help inform just how much the landscapes we build impact the air around us and vice versa.

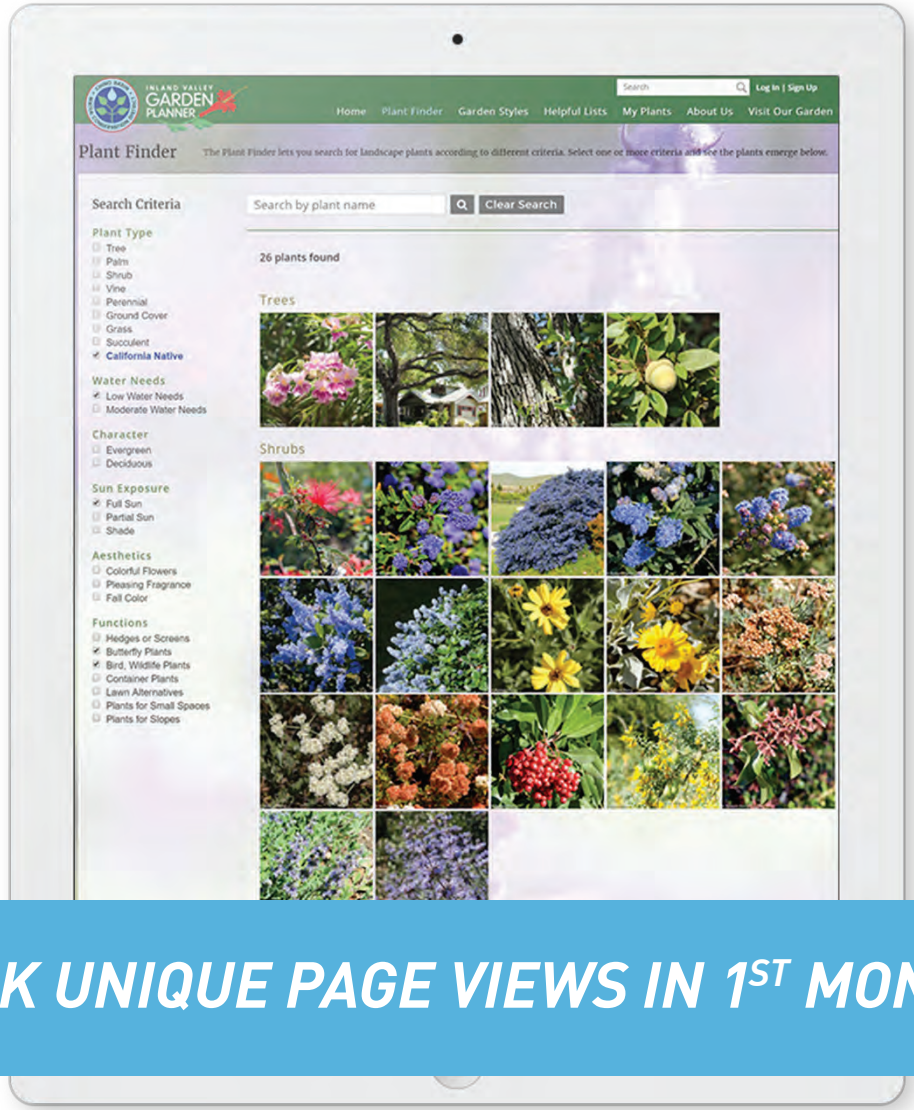
EDUCATE

A VISIONING TOOL FOR BEAUTIFUL LANDSCAPES

On May 11, CBWCD launched a new web resource, the Inland Valley Garden Planner. The new garden planning website helps Inland Empire gardeners select and learn about the best plants for the region to create a "have-it-all" garden that uses less water and looks more beautiful than ever!

Through stunning photos and an easy-to-navigate site, the Inland Valley Garden Planner offers free and detailed, regionally-specific information for gardeners in the Inland Empire area. Users can create their own profiles, save project lists, and easily save and print information on their selected or custom plant palettes, choosing from a curated list of over 350 low and moderate water use plants that thrive in the Inland Empire. The site also provides cohesive pre-designed plant palettes and helpful lists for common conditions including slopes and small spaces.

INLAND VALLEY GARDEN PLANNER



1.7K UNIQUE USERS & 9.4K UNIQUE PAGE VIEWS IN 1ST MONTH

"The Inland Empire's Mediterranean climate gives us so many incredible options for our gardens. We truly can have it all in our outdoor spaces, with color, comfort, wonderful scents, and habitat for birds and pollinators, year-round, and without the need to water much, if we choose the right plants and put them in the right places."

SCOTT KLEINROCK
Conservation Programs Manager
Chino Basin Water Conservation District

ROBERT PERRY

BUILDING REGIONAL CONSERVATION CAPACITY THROUGH WORKFORCE DEVELOPMENT

We are committed to providing educational opportunities for regional landscape professionals and those interested in entering the profession. Through curriculum covering best practices in water management, irrigation systems, and the watershed approach to landscaping, we maximize impact by training those who steward large numbers of properties and oversee many irrigation systems in the Chino Basin.

QUALIFIED WATER EFFICIENT LANDSCAPER CERTIFICATION PROGRAM

The Qualified Water Efficient Landscaper professional certification provides participants with 20 hours of education on irrigation and water management best practices including irrigation systems, soils, plant water demands, water budgets, irrigation system auditing, and more. Participants obtain certification after completing the class and passing a test. QWEL is a nationally recognized EPA WaterSense certification. In FY 2016/17, CBWCD trained 42 new QWEL certified landscapers, with 102 total certificates earned with CBWCD since we began teaching the curriculum in 2015.

CBWCD and Valley View High School formed a partnership to offer QWEL training and testing to students in the school's horticulture program. In the 2016/17 school year, 28 students received QWEL certification, allowing them to list a professional certification on their resumes and giving a distinct advantage to those interested in pursuing a career or further education in the landscape industry. Valley View High School is part of the Chaffey Joint Union High School District and serves the eight comprehensive high schools in the district.

"The QWEL Certification offers CJUHSD students the opportunity to earn a national, industry-recognized certification that will likely connect students to advantages when they seek employment. It also expands their awareness of environmental issues and sustainability."

DR. VIRGINIA KELSEN
Executive Director, Career Readiness,
Chaffey Joint Union High School District

QWEL
Qualified Water Efficient Landscaper

"I am sending this letter to thank CBWCD for the QWEL program. It has been invaluable to my career in the horticulture/ green industry... Not only did your program provide pertinent waterwise plant, hardscape, and irrigation information, but it also provided a certificate that was a useful addition to my resume."

CAROL HAMRE
QWEL Graduate

WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

"The course had a great overall arc of understanding not just irrigation but soil health and plant health, which are the foundations we need to begin with before we can truly consider bringing irrigation into the picture."

PARTICIPANT
Watershed Wise Landscape Professional Graduate

"This class helps in understanding how to prepare water budgets, irrigation programming, and the importance of training employees working in the field. Also, it helped me to communicate with my clients and show them how improving their landscape can save them money and possible lawsuits. I started using the information Toni presented, and I can say it really works."

RICARDO VARGAS
Mission Landscape Maintenance, Irrigation Training Program Graduate

WATERSHED WISE LANDSCAPE PROFESSIONAL PROGRAM

In December, CBWCD worked with the Green Gardens Group to hold a Watershed Wise Landscape Professional certification training course. This two-day curriculum hosted 54 participants who were trained in advanced water efficiency topics, including the multiple benefits of building healthy living soil, managing rainwater to reduce irrigation, turf removal, rain garden design, and the watershed approach to landscaping.

IRRIGATION TRAINING PROGRAM

Providing a more in-depth, comprehensive training opportunity on irrigation systems troubleshooting and water management, CBWCD offered the "Irrigation Training Program" to local landscape professionals this spring. Irrigation consultant and educator Toni Monzon taught the nine-session curriculum to a diverse class of employees from local municipalities, large and small contracting companies, and horticulture students headed into the field. 16 participants received certificates of completion for attending all sessions, and one participant, Danny Akers, ended up becoming CBWCD's newest employee!

WATER CONSERVATION STARTS AT HOME

Residents from the District's service area are eligible for no-cost landscape and irrigation efficiency evaluations and recommendations from the landscape experts at CBWCD. CBWCD staff visits a property, meets with the resident or property manager to discuss landscape and water issues, checks irrigation controller settings, runs the system, calculates precipitation rates, and documents any issues preventing the system from performing optimally. After taking all gathered data back to the office for analysis, a report is issued documenting a clear path to optimal water use for both landscape performance and conservation goals. Reports also provide information about other resources available through CBWCD and any rebates available through local water providers to help fund further irrigation efficiency improvements.

"Understanding the ins and outs of an outdoor landscape can seem overwhelming. Empowering property owners with the knowledge needed to confidently take charge of their landscape is what our Landscape Evaluation and Audit Program is designed for."

BRANDON BURGESS
Conservation Technician II
Chino Basin Water Conservation District

ONE FAMILY'S LEAP INTO WATER SAVINGS

Pricey water bills come with the territory when you've got a house full with four adults and three teens ranging from ages 14 to 19. But Cyndi Watson and her wife Jane Kennelly look forward to lower water bills soon, thanks to CBWCD's Landscape Evaluation and Audit Program (LEAP). The sprawling east Chino house the women share with Jane's daughter Kate, son-in-law Sy, and three grandchildren has a small grass lawn in the front, a fruit tree orchard, basketball court, and swimming pool in the back.

The family knew that they'd already done everything they could to lower indoor water use. Now, they wanted to reduce outdoor water use. The problem? "We didn't know where to start," Jane said.

Then Cyndi heard about CBWCD's program offering a free evaluation of outdoor water use. She called immediately. Within days, Jane and Cyndi had scheduled an appointment with CBWCD Conservation Technician Brandon Burgess to come out to evaluate the property. The appointment included an inspection and measurement of how well the sprinklers worked together, as well as an examination of the soil and existing plants.

A few days later, Cyndi and Jane received an email with the report. "We were really surprised how in-depth the report was," Cyndi said. Photos documented problem areas such as broken or buried sprinkler heads, and indoor and outdoor water use annually was calculated using historical data, weather factors, and on-site evaluations.

Even more surprising was the potential for water savings that Brandon had uncovered. "CBWCD estimated that we could save some 105,000 gallons a year if we fixed the problems with our irrigation system and removed the turf in the front lawn," Jane said. "That comes to about $366 a year."

Cyndi and Jane plan on tearing out their turf and replacing the irrigation system this fall when the weather cools. Not only did the landscape audit shed light on their water use, the report and recommendations also created a clear path to change. It also showed them how improvements could be paid for over time through savings on their water bill.

"It's so important to contribute to the environment. It was nice to see that some of our neighbors have changed out to drought-tolerant landscapes. Maybe we will inspire some others to do the same."

JANE KENNELLY
LEAP Program Participant

THE DISTRICT'S PERCOLATION BASINS

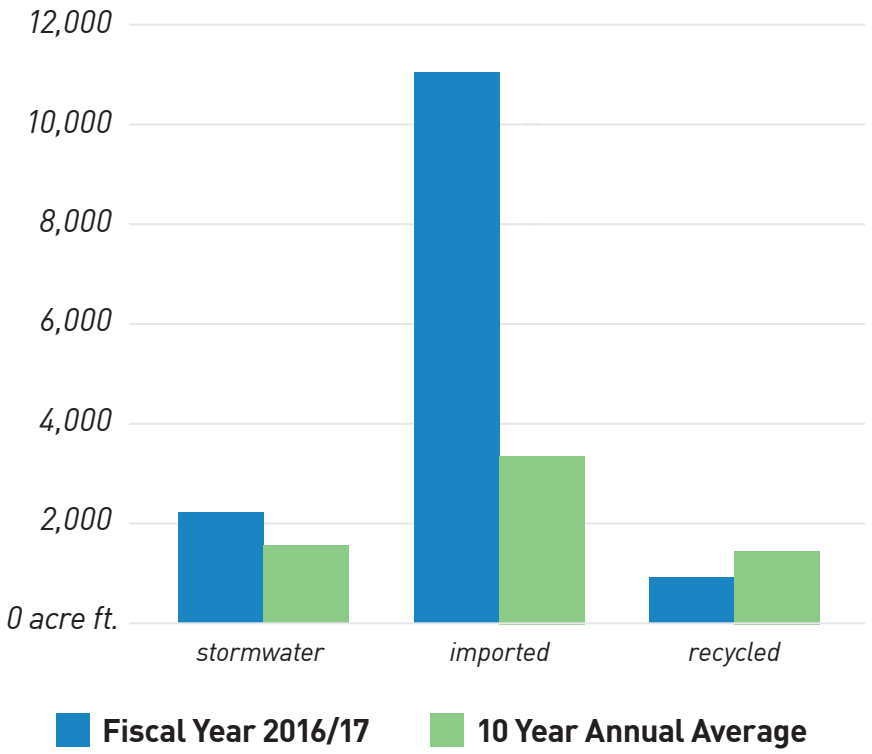
RECHARGING THE CHINO GROUNDWATER BASIN

In times of both drought and flood, stormwater capture is a critical component of our region's water future. The District's percolation basins help maximize stormwater capture and percolation to sustain a resilient water supply for our service area.

CBWCD owns, operates and maintains eight water conservation recharge basins that capture storm water, nuisance water, recycled water, and imported water. Five of the basins are in Montclair, two are in Upland, and one is in Ontario. Throughout this wet winter, CBWCD's basins recharged over 2,249 acre-feet of stormwater. In lieu of traveling through storm drains to the ocean, the captured stormwater is enough to provide water to over 4,200 local households for a year of typical water use.

On an annual basis, CBWCD's basins infiltrate and recharge an average of 6,882 acre-feet of water – making them an extremely valuable asset that CBWCD holds in the public trust.

WATER CAPTURE & RECHARGE FOR CBWCD'S 8 BASINS



PERCOLATION BASINS FOR CAPTURE AND RECHARGE

Montclair Basin #1
Storage capacity: 134 acre feet
Infiltration rate: 1.4'/day

Montclair Basin #2
Storage capacity: 243 acre feet
Infiltration rate: 1.2'/day

Montclair Basin #3
Storage capacity: 49 acre feet
Infiltration rate: 1.35'/day

Montclair Basin #4
Storage capacity: 97 acre feet
Infiltration rate: 0.74'/day

BASIN ACCEPTS...

STORMWATER IMPORTED WATER RECYCLED WATER

College Heights West Basin
Storage capacity: 126 acre feet
Infiltration rate: 3.17'/day

College Heights East Basin
Storage capacity: 145 acre feet
Infiltration rate: 6.03'/day

Ely Basin #3
Storage capacity: 136 acre feet
Infiltration rate: 0.33'/day

Brooks Basin
Storage capacity: 503 acre feet
Infiltration rate: 1.04'/day

PARTNERSHIPS

Water conservation requires a community of committed collaborators. The District is fortunate to work closely with water agencies, environmental educators, landscape professionals, school districts, and sustainability-driven local organizations to build bridges across sectors. The past year of partnership projects has resulted in regionally-specific landscaping resources, events that bring together non-traditional audiences, workforce development initiatives, and new community programs.

RESOURCES

CBWCD supported the creation of a collaborative landscape transformation guide for the Santa Ana River watershed area. Created as a collaboration by members of the Santa Ana Watershed Protection Authority and local landscape experts, and partially funded by CBWCD, it features a chapter on Sustainable Landscapes co-written by former Conservation Programs Manager Drew Ready. Current Conservation Programs Manager Scott Kleinrock contributed to review and editing of the manual. The District distributes the guide to interested community members and students at no cost.

ENVIRONMENTAL EDUCATION INITIATIVES

In partnership with California Regional Environmental Education Community (CREEC), the San Bernardino County Superintendent of Schools, Incredible Edible Community Gardens, and other active educational agencies in the region, we led a Schoolyard Forest Workshop for TK-12 Educators. The workshop supported educators in integrating climate-appropriate trees, shade, water conservation, and standards-aligned curriculum at their school sites.

WORLD WATER DAY SYMPOSIUM

Green building and water efficient landscapes should go hand in hand. The District works closely with the US Green Building Council-LA Chapter Inland Empire Branch and serves on the steering committee, to facilitate the critical dialogue between architects, municipalities, landscape architects, and developers regarding sustainable development. Through the USGBC-LA, the District hosted a World Water Day symposium to discuss the newest water conservation technologies and designs on the market, highlight the use of net-zero water design in the region, and discuss opportunities to expand net-zero water features in new development in the Inland Empire.

DWR WATER EDUCATION COMMITTEE WORKSHOPS

CBWCD hosted over 40 water education coordinators from across the state at the Water Conservation Center and at the NASA Jet Propulsion Laboratory for the Department of Water Resources Water Education Committee annual meeting and workshops. Attendees explored Next Generation Science Standards teaching materials and the Water Conservation Center, learned more about NASA's groundwater and soil moisture mapping satellites, and shared information on education best practices.

MASTER GARDENERS

In partnership with the University of California Cooperative Extension, the District hosts the San Bernardino County Master Gardeners for training programs that integrate stormwater capture, rainwater harvesting, and water conservation practices demonstrated at the Water Conservation Center.

Over 40 students were trained this year. Each trained Master Gardener commits to over 50 hours of public education service in our community in the next year. This train-the-trainer model allows the conservation information to echo through community gardens, libraries, schools, and farmers markets across the region as the Master Gardeners fulfill their hours each year. Over the past year, three exciting new projects and programs have emerged from the Master Gardener partnership.

LIVING LANDSCAPE TRAINING SERIES

Living Landscape Training Series is a new series of quarterly advanced training and CEU courses for the San Bernardino County Master Gardeners and landscape professionals. The classes cover cutting-edge curriculum and are developed and presented by CBWCD and University of California Cooperative Extension staff with special guests. All Master Gardeners are involved with projects in the community, so they are perfectly poised to be effective messengers of the conservation vision.

SEED LIBRARY

The Master Gardeners have also developed a collaborative seed library project. Housed in the Landscape Design Room and coordinated by the Master Gardeners, the seed library is a free community resource that provides access to seeds and information to local gardeners. Local residents can 'check out' seeds to plant in personal gardens. The library offers seeds from a wide array of plants, including flowers, trees, and vegetables. All seeds are locally adapted and well-suited for growth in the Inland Valley region. Participants are also encouraged to 'check in' seeds by harvesting extra seeds and returning them to the library. Through this cycle, the library hopes to establish a permanent community resource which encourages biodiversity, promotes regional seeds, and helps residents save money.

FUN WITH FLORA WORKSHOPS

With the Master Gardeners, we have hosted a series of Fun with Flora Workshops this fall to engage families and the community in waterwise lifestyles. The objective of the series is to introduce attendees to regionally appropriate plants and to design floral arrangements such as terrariums, fall centerpieces, and holiday wreaths using succulents and low water living materials. The workshops act as a point of entry to the LEAP audits, landscape design consultations, and homeowner landscaping workshops offered by CBWCD.

THE FACES BEHIND CONSERVATION

The District is truly defined by its dedicated, knowledgeable, and creative staff. 2016/17 has been a year of capacity building, with over half of CBWCD's team newly hired this year, bringing a set of diverse experiences and skills.

Eunice Ulloa
Executive Director (Retired)

Vivian Castro
Acting Executive Director

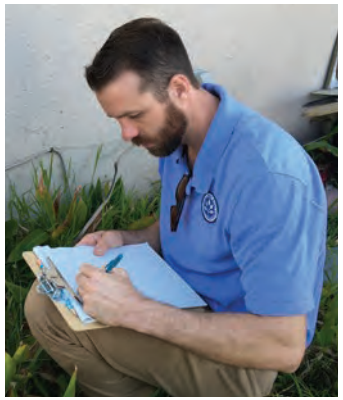
Scott Kleinrock
Conservation Programs Manager

Frankie Sotomayor
Landscape & Facilities Manager

Becky Rittenburg
Community Programs Manager

David Schroeder
Conservation Specialist II

Danny Akers
Conservation Technician I

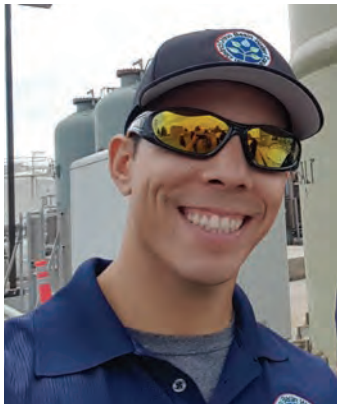


Brandon Burgess
Conservation Technician II

Omone' Abu
Community Programs Coordinator

Lindsey McConnell
Community Programs Specialist

Jenna Hoover
Community Programs Assistant



James Salcido
Landscape/Maintenance Worker I

Juan Vazquez
Landscape/Maintenance Worker I

Robert Sotomayor
Landscape/Maintenance Worker III

Victoria Kramer
Landscape/Maintenance Worker

Judy Taylor
Office Assistant

Natalie Gonzaga
Administrative Assistant

Mary Gandara
Part-time Bookkeeper

Sam
The Tortoise

THE EMERGING PROFESSIONALS

Student interns from nearby colleges and universities work with staff on water conservation resources and education programs, building real-world work experience in the field of water conservation. The students have brought fresh perspectives, diverse skill sets, and have greatly enriched our programs and resources. We look forward to watching these students grow as leaders in the conservation field!

STUDENT INTERNS

Rachel De Loza
California State University San Bernardino
USDA Internship Program

Gabby Cantu
Brown University
Link Scholar & Education Grant Recipient

Natalie Slater
Pomona College
Pomona College Internship Program

Kenlyn Mirbach
Claremont McKenna College
Energize Colleges Internship Program

William Masters
Harvey Mudd College
Energize Colleges Internship Program

Ellen Zhang
Harvey Mudd College
Energize Colleges Internship Program

Stephanie Nava-Angeles
University of California, Riverside
Conservation Education Internship Program

Ana Boyd
Scripps College
Conservation Education Internship Program

EDUCATION GRANT RECIPIENTS

Andrew Chambers
Mount San Antonio College
Education Grant Recipient

Ruben Valdez
California State University San Bernardino
Education Grant Recipient

Jocelyn Vennant
Cal Poly Pomona
Education Grant Recipient

Eileen Williams
University of California Berkeley
Education Grant Recipient

VOLUNTEERS

Volunteers are critical to building successful conservation programs and events. More than 115 individual volunteers have contributed over 400 hours to support community programs and events.

Maggie O'Neill
Volunteer of the Year

Maggie led a team of Master Gardeners to develop the San Bernardino Regional Seed Library, housed in the Landscape Design Room. With her team, she offers monthly workshops and weekly Master Gardener "office hours" at the Seed Library for members of the public.

Milton-Sebastian Vazquez
Volunteer of the Year

Sebastian designed and led six programs entitled "Fun with Flora" to increase access to horticulture for families and community members in our service area. Through his popular workshops, he has worked with over 100 participants. We have enjoyed seeing his workshop participants subsequently sign up for LEAP, landscape design consultations, and other CBWCD programs.

GOVERNANCE

Chino Basin Water Conservation District, incorporated on December 6, 1949, is an independent special district that operates under the authority of Division 21 of the California Water Code. Located in the western region of San Bernardino County, California, the District encompasses the entire cities of Montclair and Chino, and portions of the cities of Chino Hills, Upland, Ontario, Rancho Cucamonga, and some of the unincorporated areas of western San Bernardino County. The District is governed by an elected seven-member Board. Each Director must reside within the geographical area established for their respective Divisions.

Terence M. King
Division 1- Board President

Margaret Hamilton
Division 3- Board Vice President

Geoffrey Vanden Heuvel
Division 7- Treasurer

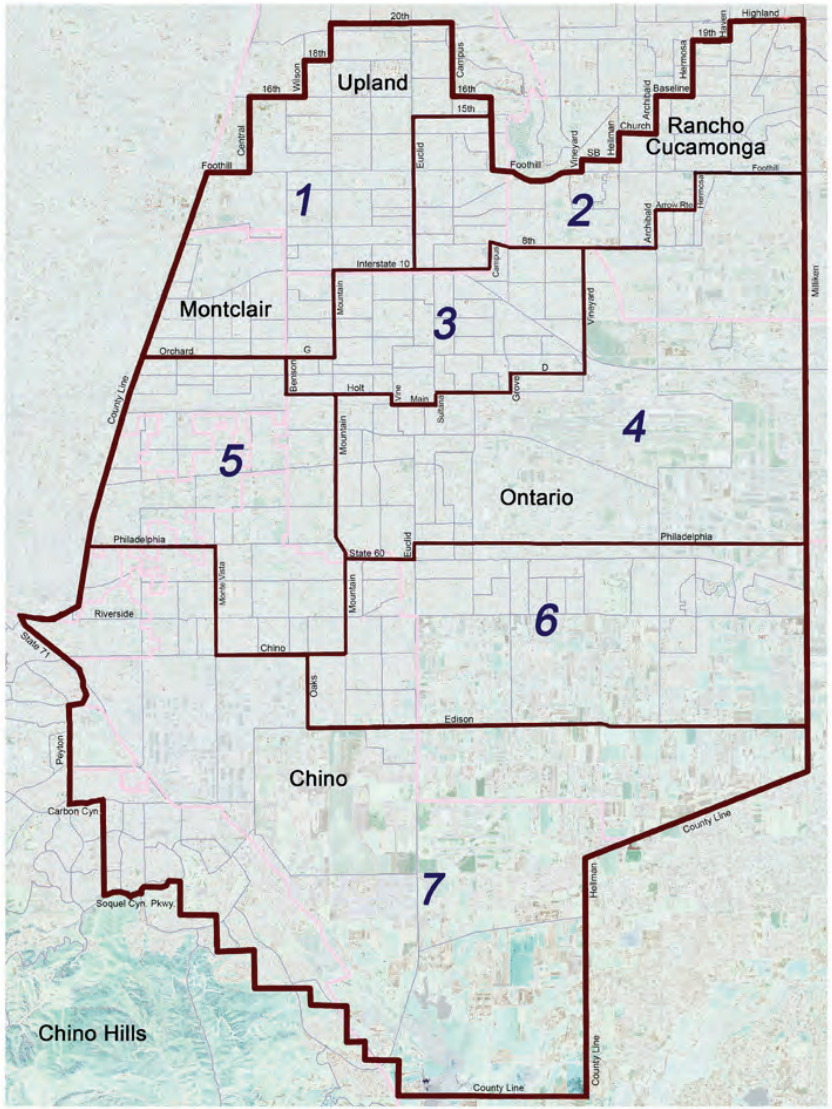
Marc Grupposo
Division 2

Mark Ligtenberg
Division 4

Gil Aldaco
Division 5

Dr. Hanif Gulmahamad
Division 6

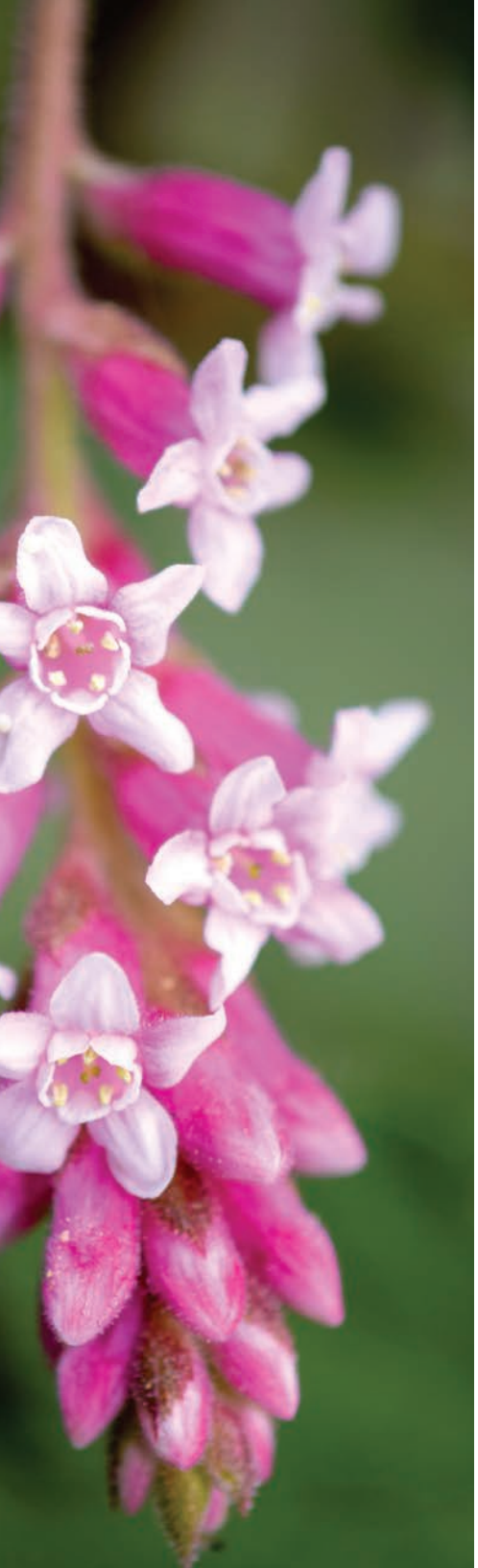
BOARD OF DIRECTOR DIVISIONS



JOIN US!

With many exciting projects and programs planned for FY 2017/18, we invite you to participate as one of our valued community partners. Join us as a participant in a workshop, symposium, or program; a user of our conservation resources; or a collaborative partner in community-based conservation. Here are just a few projects we are looking forward to next year:

- California Native Plants for Institutional, Municipal, and Commercial Landscapes Demonstration Garden and Project, showing proper plant selection, design, and maintenance techniques for large-scale plantings
- Inland Valley Garden Planner Plant Maintenance Guide, providing a detailed online resource for how to successfully care for the Inland Empire's new and emerging plant palettes
- Educator professional development opportunities to promote water conservation, environmental literacy, and outdoor learning through the Next Generation Science Standards framework
- Santa Ana Watershed Field Study programs to build water literacy among high school students and to link the importance of conservation in the Chino Basin to the larger watershed system
- Projects that connect the water conservation potential of urban landscapes with the additional benefit of stormwater infiltration and pollution reduction through green infrastructure
- Workforce development programs to further build capacity in the landscape conservation and education professions in our region



APPENDIX

2016 STRATEGIC PLAN

Envisioning and creating a future in which water conservation is a way of life is at the core of the new Strategic Plan adopted by the Board in July 2016.

> *We envision a future where all of our water needs are met and where all in our region are water stewards who:*
>
> **COMPREHEND** *the value of water;*
>
> **CONSERVE** *water and use it wisely; and*
>
> **CAPTURE, INFILTRATE**, *and* **REUSE** *rainwater, stormwater and/or greywater.*

We are working to make that VISION a REALITY through the many services, events, programs, projects, and partnerships highlighted in this annual report, which reflects the progress made in 2016/17 towards the following Strategic Plan goals set by CBWCD's Board of Directors:

INCREASING OUR REACH through enhanced public relations and communications and leveraged resources;

EXTENDING OUR PROGRAMS by developing new and expanded strategic partnerships with other agencies and non-traditional partners;

MAXIMIZING THE UTILITY OF OUR BASINS by increasing percolation and expanding the role and use of basins for education and research purposes; and

SCALING FOR GROWTH by continuing to professionalize the District's operations and staff capacity and leveraging resources through collaboration to provide efficiencies.

KEY DOCUMENTS

Visit **cbwcd.org** to view the documents referenced below.

CHINO BASIN WATER CONSERVATION DISTRICT KEY DOCUMENTS

1949 – County Hearing on Chino Basin Water Conservation Petition

California Water Code, Division 21. Water Conservation Districts (Section 74000 et seq.)

CHINO GROUNDWATER BASIN KEY DOCUMENTS

1989 – Chino Groundwater Basin Judgement

1999 – Optimum Basin Management Program, Phase I

2000 – Peace Agreement

2004 – First Amendment to Peace Agreement

2007 – Peace II Agreement

2001 – Recharge Master Plan, Phase II

2010 – Recharge Master Plan Update

2013 – Amendment to the 2010 Recharge Master Plan Update

2003 – Four Party Agreement

2013 – Chino Basin Groundwater Model Update and Recalculation of Safe Yield Pursuant to the Peace Agreement

SANTA ANA WATERSHED KEY DOCUMENTS

2014 – SAWPA OWOW 2.0 Plan

PLANT IMAGES

Cover – California Poppy, *Escholzia californica*

Page 2 – Spanish Lavender, *Lavandula stoechas*

Page 9 – Narrow Leaf Milkweed, *Asclepias fascicularis*

Page 10 – Sunrise Yellow Bells, Tecomaria, *Tecomaria stans 'Sunrise'*

Page 14 (Purple) – Showy Penstemon, *Penstemon spectabilis*

Page 14 (Yellow) – Harmony Kangaroo Paw, *Anigozanthos 'Harmony'*

Page 45 – Lilac Verbena, *Verbena lilacina*

Page 49 – David Verity Aloe, *Aloe 'David Verity'*

Page 53 – Allen Chickering Sage, *Salvia 'Allen Chickering'*

Page 54 – Pink Chaparral Currant, *Ribes malvaceum*

Chino Basin Water Conservation District, 4594 San Bernardino St., Montclair, CA 91763 www.cbwcd.org