

CHINO BASIN
Water Conservation District

2023-24
ANNUAL REPORT



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Letter from the General Manager

Fiscal Year 2023–2024 was a landmark year for the CBWCD as we celebrated the 75th Anniversary of our founding. In 1949, the Chino Basin Water Conservation District was created by a vote of the people, recognizing that water is, and has always been, foundational to our community and our economy.

The creation of the District was championed by the Chino Basin Protective Association, a group of engaged citizens, largely farmers, who understood both the value of the Chino Groundwater Basin as a water supply and its vulnerability as the region grew. At the time, groundwater levels were declining by as much as seven feet per year due to pumping. Faced with the real threat of losing this vital resource, the community chose a proactive path: to form a public agency dedicated to recharging the aquifer and safeguarding the region's water supply for generations to come.

To honor this legacy and mark the beginning of our anniversary year, the District buried a time capsule in our Waterwise Demonstration Garden. You can find it in the enclosure of Sam the Tortoise – chosen appropriately as a nod to his long lifespan. The capsule contains materials from our founding era as well as examples of the outreach, education, and stewardship work we do today. Representatives from each city we serve were invited to contribute an item representing their community, reflecting the shared responsibility and regional collaboration that define our work.

The time capsule will be opened in 2099, after another 75 years of service. Hopefully, Sam will also be around to celebrate its opening.

It is our hope that future generations will look back with the same gratitude and foresight that inspired the District's creation and continue the important work of protecting the Chino Groundwater Basin.

Sincerely,

Elizabeth Willis

GENERAL MANAGER
Chino Basin Water Conservation District





About Us

The Chino Basin Water Conservation District (CBWCD) was formed in 1949 to protect and preserve the Chino Groundwater Basin for the San Bernardino County communities that rely on it as a water source. We provide services to increase water supply by recharging the Chino Groundwater Basin through the operation and maintenance of eight large-scale percolation basins. These properties capture stormwater runoff that would otherwise be lost and allow it to be stored underground for later use by area water providers. In collaboration with other local agencies, we also manage these sites to allow for additional groundwater recharge through the percolation of recycled water and imported water.

The Waterwise Community Center, located in Montclair, serves as the public face of the District, offering our community free resources and inspiration for water conservation. The Waterwise Community Center provides a nexus in which staff can focus on reducing water demand through community engagement and conservation programming. We provide free resources, events, and workshops to inspire and empower community members of all ages to be stewards of our local water supply.

The Waterwise Community Center's Demonstration Garden is free and open to the public six days a week. It offers a living example of the wide varieties of waterwise plants that thrive in our warm, sunny, Southern California climate..

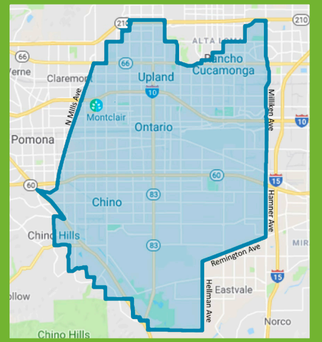


MISSION: PROTECTING AND REPLENISHING OUR REGIONAL GROUNDWATER SUPPLY SINCE 1949.



VISION: Ensuring our community understands the true value of water and uses it wisely in every home, every business and every neighborhood, while expanding our local water supply through basin recharge.

SERVICE AREA: Our formal service area includes all or part of the cities of Chino, Chino Hills, Montclair, Ontario, Fontana, Rancho Cucamonga, and Upland.



CBWCD Water Recharge Metrics

CBWCD staff manages 134 acres or 5.8 million square feet of land for groundwater recharge.

INFILTRATION TOTAL RECHARGED

FY24: 29,700 AF
FY23: 9,687 AF
FY22: 2,433 AF
FY21: 2,807 AF
FY20: 11,980 AF
FY19: 8,621 AF
FY18: 21,678 AF

IMPORTED WATER

FY24: 25,952 AF
FY23: 4,418 AF
FY22: 98 AF
FY21: 1,564 AF
FY20: 8,089 AF
FY19: 3,962 AF
FY18: 19,272 AF

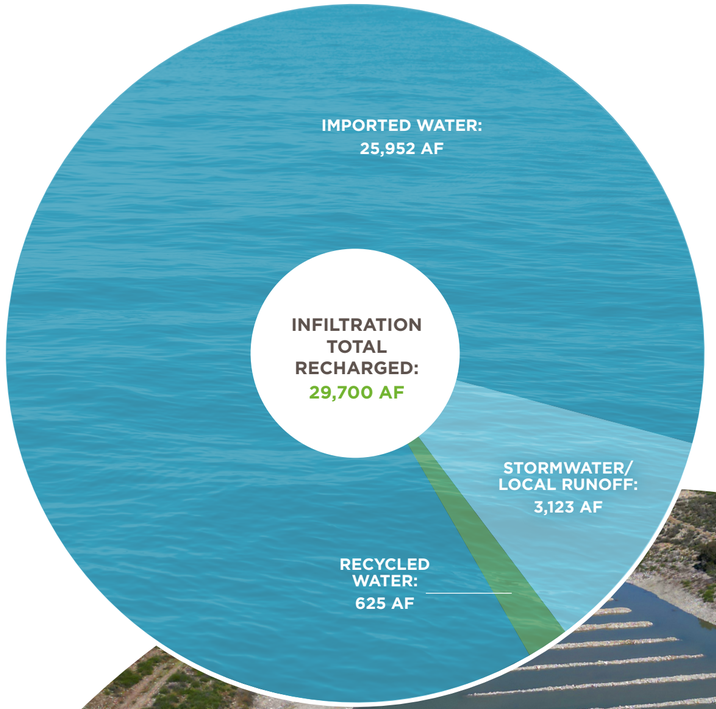
RECYCLED WATER

FY24: 625 AF
FY23: 934 AF
FY22: 623 AF
FY21: 396 AF
FY20: 1,585 AF
FY19: 1,842 AF
FY18: 1,771 AF

STORMWATER/LOCAL RUNOFF

FY24: 3,123 AF
FY23: 4,335 AF
FY22: 1,712 AF
FY21: 847 AF
FY20: 2,306 AF
FY19: 2,816 AF
FY18: 635 AF

An acre-foot (AF) is about 325,851 gallons of water, enough water to cover an acre of land, about the size of a football field, one foot deep..



ANNUAL PRECIPITATION:

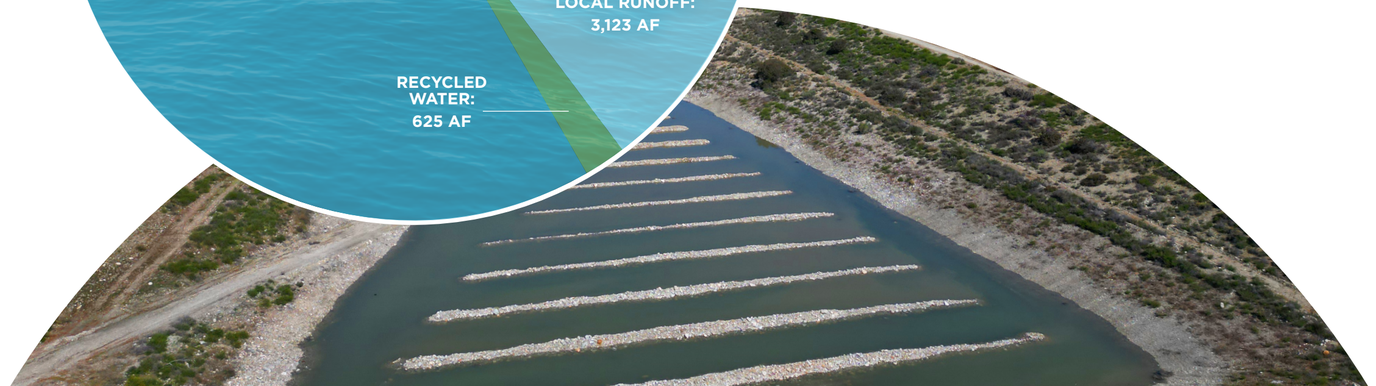
(Precipitation data from Ontario Airport – Ontario, CA. National Weather Service, January – December 2023)

2023: 21.90 inches
2022: 5.73 inches
2021: 12.03 inches
2020: 9.83 inches
2019: 18.34 inches
2018: 8.11 inches

WATER CAPTURED AT CBWCD DEMONSTRATION GARDEN, PARK, AND PARKING LOT:

(January – December 2023)

3,151,794 gallons



Storing Sierra Nevada Snowmelt in the Chino Basin Aquifer

Fiscal Year 2023–24 was marked by exceptional snowpack and rainfall across the Sierra Nevada and the western United States. In response to these wet conditions, the Metropolitan Water District of Southern California (MWD), Chino Basin Watermaster, Inland Empire Utilities Agency (IEUA), and Chino Basin Water Conservation District (CBWCD) coordinated the delivery of imported water to the Chino Basin for groundwater recharge. During the fiscal year, a total of 34,708 acre-feet (AF) of imported water was delivered to the Chino Basin. Of this amount, 25,952 AF was recharged through CBWCD-owned percolation basins. The four Montclair Basins accounted for 20,667 AF of recharge, while the College Heights Basins in Upland recharged an additional 5,285 AF. One acre foot of water would cover an NFL football field with one foot of water and is enough to serve 2-4 families with water for an entire year.

Historically, the Chino Basin was naturally replenished by rainfall and snowmelt flowing from surrounding mountain watersheds. As the region urbanized, natural streams were channelized and flood control infrastructure reduced the basin's ability to recharge naturally. Today, CBWCD's facilities play a vital role in restoring that function by capturing water from the channelized streams allowing it to sink into the ground. Local water, delivered during winter rainstorms, is called stormwater. CBWCD also accepts recycled water from the Inland Empire Utilities Agency's Reclamation Plan #4. Lastly, imported water acts as a piggy bank for our region, allowing water agencies to literally bank snowmelt during wet years for use during dry years.

Imported water originates as snowmelt in the Sierra Nevada mountains and is conveyed to Southern California through the State Water Project, a canal built in California's Central Valley, which takes water all the way from the Bay Delta region in the north to Lake Silverwood in our local mountains. By capturing wet-year supplies and storing them underground, CBWCD helps ensure a reliable, locally available water supply that supports regional resilience during future dry periods.





Conservation Programs
Metrics

LANDSCAPE EFFICIENCY AUDITS

FY24: 58 landscape efficiency audits conducted with the potential to save 2.7 million gallons or 8.2 acre-feet of water per year.

FY23: 111 landscape efficiency audits conducted with the potential to save 23.8 million gallons or 73 acre-feet of water per year.

FY22: 148 landscape efficiency audits conducted with the potential to save 4.4 million gallons or 13.7 acre-feet of water per year.

FY21: 16 landscape efficiency audits conducted, potentially saving 16.3 million gallons or 50.16 acre-feet of water per year.

FY20: 144 audits conducted

FY19: 161 audits conducted

FY18: 106 audits conducted

FY17: 49 audits conducted



RESIDENTIAL LANDSCAPE WORKSHOPS & ATTENDEES

FY24: 9 in-person and one online workshops with 1,084 attendees

FY23: 11 online workshops and 30 in-person workshops with 1,084 attendees

FY22: 35 online workshops with 2,389 attendees.

FY21: 44 online workshops with 2,359 attendees.

FY20: 6 online workshops and 33 in-person workshops with 1,208 attendees

FY19: 34 workshops with 893 attendees

FY18: 22 workshops with 385 attendees

WATERWISE GARDEN PLANNER WEBSITE USERS

FY24: 315,001

FY23: 220,000

FY22: 329,963

FY21: 363,878

FY20: 225,374

FY19: 113,386

FY18: 51,543

Waterwise Garden Planner for Southern California

YOUTUBE ON-DEMAND RECORDED WORKSHOP VIEWS

FY24: 132,220

FY23: 315,001

FY23: 42,954

FY22: 37,357

FY21: 9,777

LANDSCAPE PROFESSIONAL WORKFORCE DEVELOPMENT CERTIFICATE PROGRAM PARTICIPATION

FY24: California Native Landscaper Certificate Program: 69, Water Efficient Landscape Dual Certificate Program: 75, Qualified Water Efficient Landscaper at Valley View High School: 25 certificates earned

FY23: California Native Landscaper Certificate Program: 21, Water Efficient Landscape Dual Certificate Program: 61 program participants

**CBWCD programs were closed or canceled March 2020 – February 2022 due to COVID-19 health restrictions.*

MULCH/COMPOST GIVEAWAYS

FY24: 500 cubic yards of free mulch, 544 cubic yards of free compost

FY22: 400 cubic yards of free mulch, 546 cubic yards of free compost

FY21: 325 cubic yards of free mulch, 619 cubic yards of free compost

FY20: 260 cubic yards of free mulch, 425 cubic yards of free compost

FY19: 1,177 community members received free mulch

FY18: 944 community members received free mulch



“California Native Landscapes for Commercial, Institutional, and Municipal Sites” Guide Helps Scale-Up Success with Water Conserving Plantings

This year CBWCD staff created and digitally published “California Native Landscapes for Commercial, Institutional, and Municipal Sites,” a 148 page guide aimed at meeting the unique challenges the industry faces with successfully designing, installing, and maintaining native landscapes at these larger scales. Before its publication, no similar resource existed.

CBWCD promotes California native landscapes, defined as those which focus on using plants that evolved and historically grew within California, as a best practice in meeting our region’s ongoing need for water conservation. Compared to turf, native landscapes use 64–84% less water in inland areas and 20–30% less water than general low-water landscapes. In addition to water conservation benefits, native landscapes, in general, provide much greater critical habitat value for native birds, butterflies, and pollinators compared to other low-water plant choices.

Staff created this guide as a resource for landscape industry professionals, including landscape architects, landscape maintenance crews, and students preparing to enter the field, to provide clear recommendations for simple ways achieve success with California native landscapes at the commercial scale.

The guide focuses on providing planting design templates that use widely available plant selections which are adapted to a variety of soil conditions, are simple to maintain, and which are usually free of significant pest and disease issues if properly sited and cared for. It also features guidelines for irrigation, planting, plant care / pruning, and links to CBWCD’s other relevant resources.

The guide is available for free download at **cbwcd.org/commercialnative.**





Community Engagement
Metrics

WALK-IN VISITORS TO THE WATERWISE COMMUNITY CENTER

FY24: 9,188

FY23: 3,578

FY22: 0*

FY21: 0*

FY20: 0*

FY19: 3,190

FY18: 3,233

K-12 STUDENTS SERVED BY CBWCD NEXT GENERATION SCIENCE STANDARDS-ALIGNED YOUTH EDUCATION PROGRAMS

FY24: 5,497

FY23: 6,460

FY22: 4,832

FY21: 1,817**

FY20: 5,928 (In-person field trips ran through March 12, 2020)*

FY19: 7,738

FY18: 8,430



CBWCD programs were closed or canceled March 2020 – February 2022 due to COVID-19 health restrictions.

***All field trips were virtual due to COVID-19 health restrictions.*

FOLLOWERS ON SOCIAL MEDIA PLATFORMS

(Facebook, Instagram, LinkedIn):

FY24: 4,605

FY23: 4,050

FY22: 3,626

FY21: 3,656

FY20: 3,225

FY19: 2,848

FY18: 2,419

ATTENDEES TO CBWCD SPONSORED EVENTS

FY24: 1,404

FY23: 1,331

FY22: 260* (Small in-person events restarted in March 2022)

FY21: 0*

FY20: 1,189* (In-person events were cancelled in March 2020 due to COVID-19 pandemic)

FY19: 800

FY18: 1,435





Waterwise Community Center Lobby Updates

Great things happened at the Waterwise Community Center this year, marking an exciting period of growth and transformation that invited the community to engage with water conservation in new and meaningful ways. Early in the year, visitors were welcomed by the addition of the Book Nook, a cozy space featuring a rug, nature-inspired cushions, and a curated collection of children's books that encouraged quiet reflection and learning about the natural world.

The Center's lobby then underwent a significant refresh as the central area was reimagined to accommodate new events and rotating displays. This transformation debuted with the Waterwise Lotería Gallery Evening, which showcased custom artwork by CBWCD intern, Laura Rodriguez Pinto. The vibrant pieces visually told the story of the work being done at CBWCD, highlighting the importance of water infiltration, sustainable landscapes, and the benefits they provide to the community. Guests enjoyed meeting the artist, playing rounds of Lotería, and sharing warm drinks and pan dulce, while the artwork remained on display through February for continued public enjoyment.

In December, the lobby evolved again with the installation of a large-scale mural created in collaboration with Studio Tutto. This striking art wall celebrates California native plants, pollinators, and garden residents, offering visitors a moment to reflect on the beauty, calm, and inspiration found in native landscapes and outside in our public Demonstration Garden.

As the Lotería exhibit concluded, the lobby transitioned into a new interactive experience called "An Incredible Journey." This hands-on display guided visitors through the water cycle, inviting them to imagine themselves as a water drop traveling through different environments while tracking their journey with a passport.

Throughout the year, the lobby became a dynamic space for rotating educational, artistic, and interactive displays, creating an engaging destination for visitors of all ages.



Employee Spotlight:
Monica Curiel

Monica Curiel, Community Program Educator II at CBWCD, was named Employee of the Year by her peers for her passion, creativity, and community-centered leadership. Monica joined the District in 2018 as a Community Programs Specialist, bringing with her a diverse background shaped by environmental education and community-based work both locally and internationally. Raised in Pomona and educated at UC Berkeley in Conservation and Resource Studies with a minor in Geography, her experience included sustainable agriculture in Brazil, toxics and mercury research in Baton Rouge, ecotourism in Senegal, and environmental education and community programs throughout Southern California.

In her current role, Monica teaches onsite school field trips, co-leads the Volunteer Youth Cohort, assists with event planning, and leads special projects designed to enhance visitor experience and community engagement. During the 2023–2024 fiscal year, she proposed and executed two major initiatives that significantly expanded the District's public reach. Monica spearheaded a complete renovation of the District lobby, managing the project from concept to completion, including Board presentations, budgeting, timelines, demolition, and installation of a new lobby mural, Book Nook, and interactive tables. She also planned and executed the District's first Waterwise Lotería Night, welcoming 70 community members to an interactive evening focused on water conservation.

Monica also launched a new summer story time program for children. While initially tasked with creating four programs, she ultimately delivered nine programs that reached 316 participants.

Colleagues recognize Monica for her creativity, dedication to education, and ability to connect with audiences of all ages. When asked what she enjoys most about her job, Monica shared, "Teaching has allowed me the space to create curriculum that is important, hands-on, and creative... knowing that our work is a service to our community fuels my desire to bring people in and inspire them to save water."



Serving the Public:
The Chino Basin Water Conservation District Board of Directors

DIVISION 1

Katherine "Kati" Parker represents Division 1 and previously served on the CBWCD Board from 1999–2016 before being re-elected in 2022. With degrees in environmental resources and civil engineering, she has nearly 30 years of water industry experience, including engineering roles and extensive leadership on regional water agencies and committees. A long-time Upland resident, she is also deeply involved in community service, historic preservation, and policy development. She manages several historic properties and is committed to protecting water quality and water supply reliability.

DIVISION 2

Theresa "Teri" Layton, a lifelong Californian mostly residing in Rancho Cucamonga, has over 30 years of experience in the water utility industry and currently serves as Assistant General Manager at San Antonio Water Company. She has held leadership roles in the Chino, Six Basins, and Cucamonga water basins and holds a bachelor's degree in business and a Water Distribution Grade 2 certification. A dedicated family- and faith-oriented individual, she enjoys traveling and spending time with her two granddaughters.

DIVISION 3

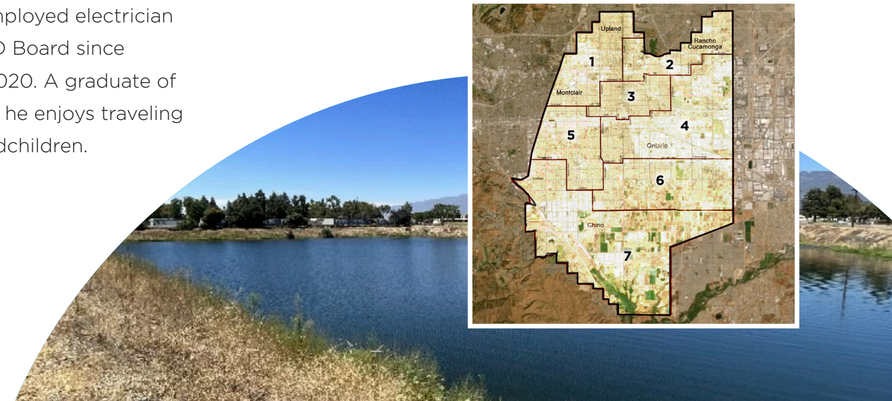
Amanda Coker lives in Ontario with her family and works as a water resources engineer with a decade of experience, including eight years in public agencies within the Chino Basin. She holds a BS in Civil Engineering from Cal Poly Pomona, an MS in Environmental Engineering from Cal State Fullerton, and is a licensed Professional Engineer with a Water Treatment Grade 2 certification.

DIVISION 4

Mark Ligtenberg, born in Pasadena and raised in Chino and Ontario, is a self-employed electrician and has served on the CBWCD Board since 2016, with reappointment in 2020. A graduate of Ontario Christian High School, he enjoys traveling and quality time with his grandchildren.

DIVISION 5

Gilbert Aldaco has served on the CBWCD Board from 2002–2012 and 2016–present. A longtime Chino resident and Chino High School graduate, he holds an Associate of Science in Water Treatment Technology along with multiple state certifications in water production, treatment, and conservation. With 45 years of experience in water utilities management, he is a life member of the American Water Works Association and has extensive expertise in water supply, wastewater, stormwater, and recycled water operations.



DIVISION 6

Dr. Hanif Gulmahamad is an accomplished entomologist with degrees from Cal Poly Pomona and UC Riverside, where he graduated with honors and received multiple academic awards. His career spans teaching, technical work at Terminix, and training roles with the Los Angeles Unified School District. Now a consultant in urban and structural entomology, he is a Board-Certified Entomologist and has published 76 technical papers and several books. He is recognized in Marquis Who's Who and is also an active poet.

DIVISION 7

Ryan Sonnenberg s a lifelong Chino resident and a water treatment plant operator for Three Valleys MWD, operating a 25-million-gallon-per-day facility. His background includes seven years with the City of Chino Hills across several water and public works divisions. He holds multiple high-level certifications in water treatment and distribution. A graduate of Don Lugo High School, Mt. SAC, and various vocational programs, he brings strong operational expertise to the field.



CBWCD In the News: July 2022 – June 2023

- July 19, 2023: LA Times, ***He wanted a 'low-water, colorful, smell-good garden.' But first, the lawn had to go***
- January – February 2024: ***Landscape Contractor magazine, The Uncertain Future of Artificial Turf in California***
- May 23, 2024: ***Claremont Courier, Golden State: surface water from Claremont aquifer no cause for concern***
- May 25, 2024: Chino Valley Champion, ***Snowpack delivers lots of water***
- 2024 California Water | Inland Empire, ***Celebrating 75 Years of Innovation Chino Basin Water Conservation District Storing Water for the Future***





Save Water with Us

Being “waterwise” in our everyday lives is more important than ever as we recognize that California regularly experiences both droughts and floods. At the Waterwise Community Center, we have lots of resources to help you save water inside and outside your home and your business or organization. Here are just a few highlights:

YOUTH EDUCATION PROGRAMS

CBWCD offers a variety of programs for students from Pre K-12th grade to inspire, inform, and empower the next generation of water stewards.

SPRINKLER CHECKUPS

CBWCD offers qualifying properties a free and complete evaluation of their landscape and irrigation system and recommendations on how to improve overall water use efficiency.

HOMEOWNERS’ WORKSHOPS

A variety of online and in-person workshops scheduled throughout the year educate residents on how to water their lawns and gardens, landscape with native and drought-tolerant plants, take advantage of rebate programs, maintain irrigation systems, and more.



LANDSCAPE CONSERVATION

In addition to our online and in-person workshops, we offer several resources to assist with using less water outdoors, such as the Waterwise Garden Planner website which helps people learn about and choose the best plants for inland Southern California landscapes.

WATERWISE DEMONSTRATION GARDEN

A stroll through our 1.75-acre Demonstration Garden inspires many visitors to try waterwise plants in their landscapes. This Certified Wildlife Habitat includes garden sections in styles including Southwest, Mediterranean, and Woodland, each designed to thrive in our sunny, inland climate without using too much water. You can also view our turf demonstration area to learn more about how much water your lawn needs, discover how bioswales help collect runoff water when it rains, and why permeable surfaces help our groundwater basin.

CHINO BASIN
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