

CHINO BASIN

Water Conservation District

2022-23 ANNUAL REPORT



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Letter from the General Manager

Fiscal Year 2022–2023 marked a significant milestone for the Chino Basin Water Conservation District with the successful completion of a $1.2 million spillway connecting the Montclair 1 Basin to the Montclair 2 Basin. This critical infrastructure improvement strengthens our ability to capture, convey, and recharge stormwater—directly advancing our mission to protect and enhance the Chino Basin's groundwater supply.

The new spillway allows storm flows captured in Montclair 1 Basin to be safely and efficiently conveyed to Montclair 2 Basin, increasing operational flexibility and maximizing recharge during large storm events and during imported water deliveries. In an era of climate variability, projects like this are essential to ensuring that no opportunity to replenish our basin is lost.

This achievement would not have been possible without strong partnerships. The project was completed in collaboration with the County of San Bernardino and benefited from $300,000 in American Rescue Plan Act (ARPA) funding. We are especially grateful to County Supervisor Curt Hagman for his leadership and support in securing these funds for regional water resilience.

Additional funding support came from Metropolitan Water District's Stormwater for Recharge Pilot Project, which provided $320,850 for the Spillway Project through a joint grant awarded to the District and the Inland Empire Utilities Agency for stormwater improvements in the Montclair chain of basins. This collaboration exemplifies how regional partnerships can leverage limited resources to deliver meaningful, long-term benefits.

I am proud of our staff and partners for delivering this project efficiently and responsibly. Together, we are investing in infrastructure that will serve our communities for generations to come.

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.

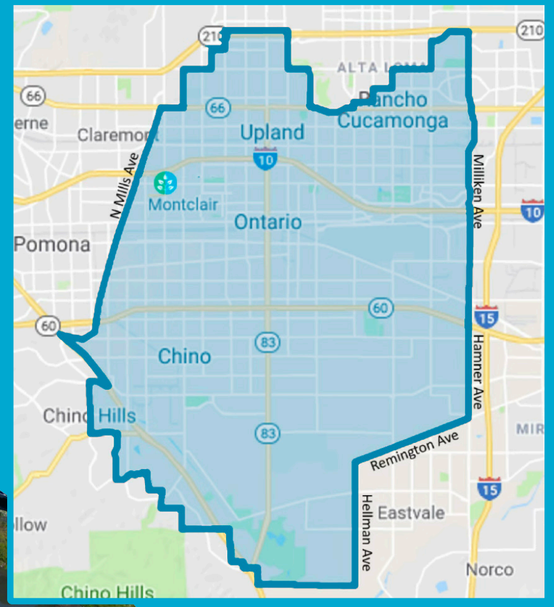
The Waterwise Community Center, located in Montclair, serves as the public face of the District, offering our community free resources and inspiration for water conservation. The Waterwise Community Center provides a nexus in which staff can focus on reducing water demand through community engagement 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, 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

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

RECYCLED WATER

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

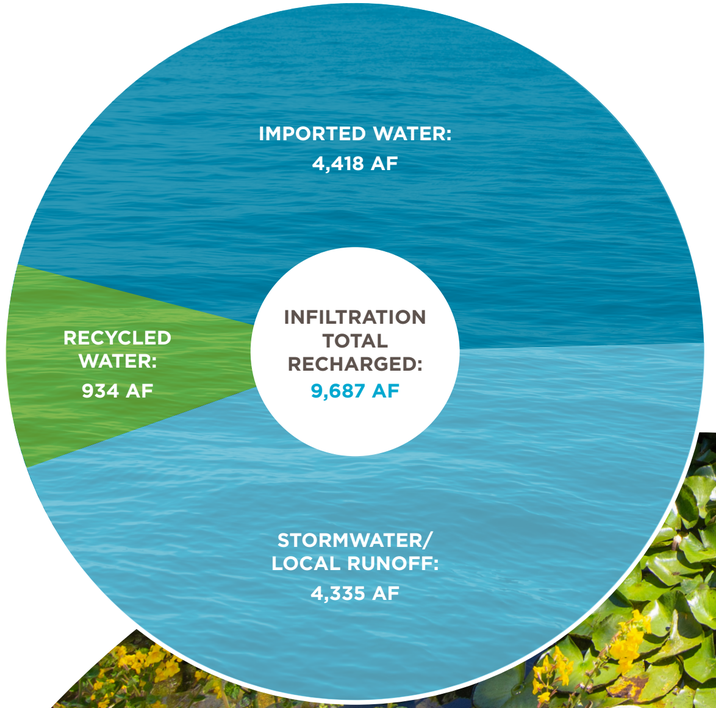
IMPORTED WATER

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

STORMWATER/LOCAL RUNOFF

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)

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 2022)

827,662 gallons



Montclair Basin No. 2 Spillway
Ribbon Cutting & Dedication

Fiscal Year 2022–23 marked an important milestone in the ongoing effort to rebuild and modernize infrastructure at Chino Basin Water Conservation District's (District) percolation basins. The District owns and operates eight percolation basins across the cities of Upland, Ontario, and Montclair. Five of these basins are located in Montclair, including Montclair Basins 1 through 4, which run north to south from Arrow Highway to the south side of the I-10 Freeway, parallel to the San Antonio Channel.

These basins play a critical role in capturing stormwater and, at times, imported State Water Project supplies. Captured water percolates into the Chino Basin Aquifer, helping sustain a reliable groundwater supply for residential, commercial, industrial, and institutional uses. The Montclair Basin No. 2 Spillway Project increases water capture by approximately 56 acre-feet per year, strengthening regional drought resilience.

Water is conveyed between basins by gravity-fed infrastructure. At Montclair Basin No. 2, water flows from Basin No. 1 through box culverts and over a 70-foot concrete spillway. Inspections during imported water operations in 2011 and 2017 revealed significant deterioration of the aging spillway. Temporary repairs were made, but the District ultimately suspended its use and developed a long-term replacement plan.

On June 13, 2022, the District's Board of Directors unanimously approved construction of a new spillway. Construction began in August and was completed in October 2022, extending the facility's useful life by an estimated 75 years.
The total project cost was approximately $1.2 million, with nearly 50 percent funded through grants from the Metropolitan Water District of Southern California and the American Rescue Plan Act, made possible by San Bernardino County Supervisor Curt Hagman. In January 2023, a ribbon cutting was held for the spillway just after a series of storms came through the region, underscoring the need for infrastructure to capture rainwater. This investment ensures continued protection and reliability of the Chino Basin's groundwater resources for the next generation.



Ribbon Cutting Ceremony
(Matt Hacker, Marco Tulle, Curt Hagman, Gilbert Aldaco, Elizabeth Willis, Mark Ligtenberg, Kati Parker, Teri Layton, Amanda Coker)

Conservation Programs
Metrics

LANDSCAPE EFFICIENCY AUDITS

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

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

FY23: 220,000

FY22: 329,963

FY21: 363,878

FY20: 225,374

FY19: 113,386

FY18: 51,543

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

YOUTUBE ON-DEMAND RECORDED WORKSHOP VIEWS

FY23: 42,954

FY22: 37,357

FY21: 9,777

LANDSCAPE PROFESSIONAL WORKFORCE DEVELOPMENT CERTIFICATE PROGRAM PARTICIPATION

FY23:

- **California Native Landscaper Certificate Program: 21 certificates earned**
- **Water Efficient Landscape Dual Certificate Program: 61 program participants**



MULCH/COMPOST GIVEAWAYS

FY23: 440 cubic yards of free mulch, 438 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 Plant Landscaper Certificate Program Trains Industry Professionals for Success with Water Conserving Landscapes

In 2023, CBWCD taught its first cohort of the California Native Plant Landscaper Certificate (CNPLC) program. California native landscapes are growing in popularity due to their beauty, significant water conservation benefits, and critical habitat value for native birds, butterflies, and pollinators. Compared to turf, native landscapes use 64–84% less water in inland areas and 20–30% less water than general low-water landscapes, making them a best practice for water conservation.

However, native landscapes require different care and water management than traditional landscapes. Unfortunately, there are inadequate industry resources and training opportunities for landscape professionals to develop the skills needed to successfully design, install, and maintain native landscapes. This training gap has contributed to many well-intentioned projects failing to thrive long term.

To address both water conservation and workforce needs, CBWCD partnered with the Theodore Payne Foundation and the California Native Plant Society to deliver the CNPLC curriculum at CBWCD's Waterwise Community Center. The program includes 20 hours of instruction, demonstrations, and hands-on training covering plant selection, installation, maintenance, and irrigation management for California native landscapes for both residential and commercial landscapes. While focused on native species, many concepts also apply to other low-water plantings.

In June, the pilot cohort of 21 participants completed the program. Survey results showed 100% of participants increasing confidence working with native landscapes, 94% of industry professionals reporting the program will change how they work, and 100% expecting to implement changes within 12 months. Based on this success, CBWCD plans to expand the program next year.





Community Engagement
Metrics

WALK-IN VISITORS TO THE WATERWISE COMMUNITY CENTER

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

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

FOLLOWERS ON SOCIAL MEDIA PLATFORMS

(Facebook, Instagram, LinkedIn):

FY23: 4,050

FY22: 3,626

FY21: 3,656

FY20: 3,225

FY19: 2,848

FY18: 2,419

ATTENDEES TO CBWCD SPONSORED EVENTS

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



*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.





Waterwise Garden & Pumpkin Fest Makes a Joyful Return After Two-Year Hiatus

After a two-year break due to the COVID-19 pandemic, the District proudly welcomed over 1,000 attendees back to its signature fall event, newly rebranded as the **Waterwise Garden & Pumpkin Fest.** Held on Saturday, October 1, 2022, at the Waterwise Community Center in Montclair, CA, the festival blended family fun with water-conservation education.

Hosted by CBWCD and supported by sponsors from local cities and utilities agencies, the event serves as the kickoff of the fall planting season for water-wise plants and to provide opportunities for attendees to learn more about water conservation in a fun, family-friendly setting.

Originally launched in 2006 and formerly known as the Landscape & Water Conservation Festival, the newly renamed event reflects CBWCD's goal to educate residents on sustainable landscaping and gardening practices in a region impacted by frequent drought.

Visitors enjoyed a vibrant pumpkin patch, pumpkin succulent centerpiece workshops, and decorating stations, while children reveled in a free petting zoo, bounce house, face painting, crafts, and games. Additional highlights included raffle prizes, food vendors, a native plant sale, compost giveaway, DJ, and the interactive LA River Rover mobile museum.

The Waterwise Garden & Pumpkin Fest marked a joyful return to in-person community engagement, blending environmental education with fall celebration. With its refreshed name and format, the District's annual festival continues to grow as a cornerstone event promoting sustainable landscaping as our region looks to conserve its precious water supply.





CBWCD In the News:
July 2022 – June 2023

- **9/9/22:** Fontana Herald, ***Severe drought makes free waterwise resources more crucial than ever***
- **2023 California Water Inland Empire**, Recent Storms Demonstrate Benefits of New Spillway for Groundwater Recharge
- **1/20/23**: Spectrum News, ***LA County captures 33B gallons of stormwater from winter storms***
- **1/26/23:** Stormwater Solutions Magazine, ***Chino Basin cuts ribbon on new concrete spillway***
- **April 2023:** Treatment Plant Operator Magazine, ***A Connection with Plants and Gardening Helps this District Deliver Messages About Water's Value***
- **6/1/23:** LA Times, ***Love jacarandas? Here are 8 other L.A. trees to adore***



Employee Spotlight:
Judy Taylor

Judy is an avid gardener and takes pride in tending her home garden and aviary, answering visitor garden-related questions, and appreciates being the first friendly face our visitors see when they walk into our lobby. Amongst gardening and landscaping, she takes part in composting, recycling, and up-cycling. She particularly enjoys up-cycling items into garden trinkets.

Before starting her journey at the District, Judy held 27 years of administrative and customer service experience in the construction industry. Judy started working at the District in 2012 where she grew into her role as the District's Administrative Analyst. She takes on an array of responsibilities with a positive outlook, including office management, bookkeeping, and event planning. She plays a vital role in keeping the District operating effectively, sometimes even bringing in fresh baked cookies for staff.

"My favorite part of working at the District is the people," says Judy. She knows everyone and greets them with warmth and enthusiasm, including the District's regular visitors, and even their dogs. The Waterwise Community Center's Demonstration Garden is free and open to the public six days a week.



EMPLOYEE OF THE YEAR

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

DIVISION 1

Terry King served on the CBWCD Board from 2002 to 2022 and has been an Upland resident since 1978. A civil engineer with degrees from UCLA and UC Riverside, he spent over 35 years with the Army Corps of Engineers overseeing major flood control and water conservation projects and currently works as a project director for Citadel CPM. A Marine Corps combat veteran, he is active in several professional and veterans' organizations. He and his wife of 34 years have two grown children.

DIVISION 2

Marc Grupposo served on the CBWCD Board from 2016 to 2022. Marc is a small business owner and long-time advocate for water conservation. He has served as Treasurer and chaired both the Finance and Personnel Committees. A resident of Upland with three children, he is active in charity work with Kerus Global Education, supporting youth health initiatives and orphan care in South Africa. His passion for water conservation and public education guides his commitment to ensuring a sustainable water future for the Chino Basin.

DIVISION 3

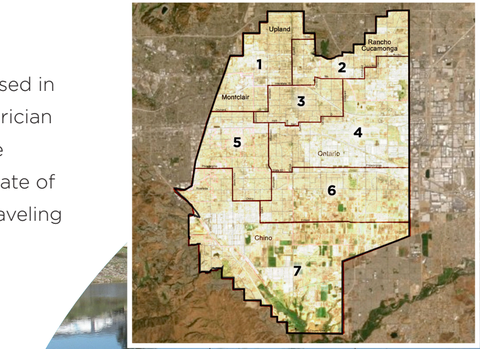
Margaret Hamilton served on the CBWCD Board from 2012 to 2022 and is focused on public education and water-wise programming, including the District's K–12 field trips, poster contest, and interpretive signage. A retired teacher and Ontario resident of over 40 years, she has taught in local schools and on military bases abroad. She is active in community service, her church, and recycling efforts. Married 41 years, she enjoys gardening, traveling, reading, and spending time with her daughters and seven grandchildren.

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 is 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.



Margaret Hamilton
In Memoriam



Margaret Hamilton dedicated her life to education, service, and the stewardship of water in our community. Appointed to the Chino Basin Water Conservation District Board of Directors on January 9, 2012, she faithfully served Division 3 for a decade, including six years as Board Vice President. Throughout her tenure, she championed programs that educated residents, especially children, about the importance of water and using it wisely.

A lifelong educator, Margaret taught first and second grade in Ontario, CA and for the United States Department of Defense on military bases in England and Japan. She loved teaching children to read, believing it to be the key to success, and encouraged her students to fully develop their unique talents and abilities. Her passion for education naturally extended to her Board service, where she was a driving force behind the District's growing K-12 Field Trip Program, which expanded to serve thousands of local students each year.

On November 14, 2022, the District proudly dedicated the Margaret Hamilton Education Building in recognition of her decade of Board service and lifetime commitment to children. She retired on November 21, 2022, and passed away on November 27, 2022.

> ***"Margaret's legacy lives on in the thousands of students she inspired, the programs she strengthened, and the community she served with warmth, integrity, and unwavering dedication."***

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

Water Conservation District