

CALIFORNIA

2022

WATER

LONG BEACH / SOUTH BAY EDITION

**THIS DROUGHT
IS NOT GOING
AWAY!**

**REGIONAL LEADERS
DISCUSS SOLUTIONS**

**Long Beach Water:
An Innovation Leader**

LADWP: How to Save Water Outdoors

**LA County Flood Control District
Captures Stormwater**



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Low water drought conditions at Folsom Dam and Lake. Photo courtesy of the California Department of Water Resources

California's Drought: What Comes Next?

California's historic drought is far from over and it has caused a stir throughout the Golden State about what the future of our water supply will look like.

This latest issue of California Water magazine takes on this challenge, tackling the causes behind the drought while also highlighting innovative ways that residents, businesses, and water agencies are stretching water supplies through efficient use, recycling, reuse and more during these hard times.



Charley Wilson

Causes of the Drought

The drought that has gripped California and the Western United States for the past several years has been caused by a combination of factors. Low precipitation levels are obviously a major contributing factor, but other factors such as high temperatures, increased evaporation, and changes in atmospheric conditions

have also played a role. The net result is that reservoirs that California depends on are at dangerously low levels, with some even approaching dryness.

What's Needed Next

To address the water crisis, we need to change both our individual habits and our state policies. On an individual level, we can all do our part to conserve water by making small changes in our daily lives, such as taking shorter showers, watering our plants during cooler hours of the day, and using a broom instead of a hose to clean our driveways and sidewalks. If everyone does their part, it will make a big difference. On a policy level, state leaders need to prioritize investment in infrastructure projects that will ensure the reliability of our state's water supply. Only by working together can we hope to bring an end to this crisis.

Please connect with us on Facebook or Instagram, where you'll find us under the username socialwater. We will love to hear from you!

Charley Wilson Executive Director

The Southern California Water Coalition, a nonprofit, nonpartisan public education partnership is dedicated to informing Southern Californians about our water needs and our state's water resources.



Regional Leaders Advocate for Water Supply Improvements

Business, Labor and Disadvantaged Communities Call for Long-Term Solutions, Investment

By Elizabeth Smilor
Special Sections Writer

The California Department of Water Resources recently announced that current conditions indicate we're heading into a fourth year of drought. This should not be surprising news. Lawns are browning as residents have been asked to limit outdoor watering. Restaurants only serve water upon request. Daily news photos show reservoirs at drastically low levels.

"A cycle of wet and dry years is common in California, but now the storms are more severe and less often. We can't change the weather, but we can prepare for drought years by investing in an 'all-of-the-above' strategy to sustain a reliable water supply for all," said Ray Baca, Executive Director of the Engineering Contractors' Association (ECA), a diverse group of construction contractors and suppliers focused on new water and wastewater infrastructure projects, as well as emergency repair and replacement of aging water infrastructure throughout the Southern California region.

Baca sums up the belief of many regional leaders across the business, labor and construction sectors, and in disadvantaged communities. These leaders, like most Californians, recognize the drought as a long-term challenge in need of diverse solutions.

A majority of Californians see water supply as a big problem in their area, according to a survey by the Public Policy Institute of California (PPIC) conducted in July. About two in three adults or 68 percent and more than three in four likely voters (77 percent) say it is a big problem - up from a year ago (63 percent of adults, 69 percent of likely voters), the survey reported.

The same survey shows that most Californians also believe not enough is being done by local and state governments and by the public in general. Again, the PPIC survey shows 68-69 percent of all adults say not enough is being done in response to the current drought.

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For comments or questions, email Sean Fitzgerald at sean@voxcivic.com.

“California cannot afford to waste time in repairing our aging water infrastructure. California has the tools to secure our water future, and now is the time to use them,” said Marci Stange, Director of Water and Environmental Relations for ReBuild SoCal Partnership. “We need a strong voice in our legislature that will move forward with both short- and long-term infrastructure projects. A secure water future is achievable, if it is made a priority.”

The Rebuild SoCal Partnership (RSCP) consists of 2,750 contractors throughout Southern California that represent more than 90,000 union workers. RSCP is dedicated to working with elected officials and educating the public on the continued need for essential infrastructure funding, including airports, bridges, ports, rail, roads, and water projects.

We are in the midst of our driest year to date with 97.5 percent of the state experiencing severe drought conditions and 40 percent in severe drought, according to the U.S. Drought Monitor. The drought is affecting 37.2 million Californians from farmlands to urban centers. California's DWR estimates that without action, hotter, drier weather could reduce California's water supply by up to 10 percent by 2040, which is roughly 6 to 9 million acre-feet.

Gov. Gavin Newsom introduced the California Water Supply Strategy in August. The plan prioritizes actions to capture, recycle, de-salt and conserve more water.

“The best science tells us that we need to act now to adapt to California's water future. Climate change means drought won't just stick around for two years at a time like it historically has – extreme weather is the new normal here in the American West and California will adapt to this new reality,” Newsom said. Newsom characterized these strategies as “moving away from a scarcity mindset to one more of abundance.”

“How can we take the existing resources and be more resourceful, in terms of advancing policies, and direct our energies to create more water, to capture more water?” he said.

Robert Sausedo, President and CEO of Community Build and a leader of the Groundswell coalition, said the next question should be how to distribute that water more equitably.

“It's really important to look at water justice for disadvantaged communities, because historically we get left out of the discussion and then we take the brunt of the disaster,” he said, citing Flint, California's Central Valley, Vernon and Carson as some examples. Groundswell is a coalition comprised of community groups, faith-based organizations and other stakeholders advocating for new policies that enhance water delivery by supporting small water system operators throughout the state, many serving low-income communities as well as people of color.

“This coalition is designed to address that problem from the Delta all the way down to the border and everything in between to make sure that access to clean water is appropriate, and that as they tap other water sources, communities of concern have a voice at the table so they're not left out in the end,” Sausedo said. “We need policy makers to not pander to groups that call themselves environmental groups when they're really just set up to slow down development and don't do anything to accommodate the need for water rights in communities of concern. The endangered lizard and fly have more water rights than I do.”

Community Build offers many social services and helps develop affordable housing to tackle California's other crisis of homelessness, which Sausedo also ties to water. “In order to build housing, you have to reasonably account for access to water for that building.”

Rich Lambros, Managing Director of the Southern California Leadership Council (SCLC), agreed that water supply is tied to housing and growth.

“Southern California Leadership Council appreciates the important role water availability, affordability and reliability play in supporting economic development, job creation and quality of life in Southern California,” said Lambros. “In particular, water supply security is a critical enabler of growth, development and increased housing supply.”



The ongoing drought is stressing water supply as reservoirs drop to historically low levels. At left, low water conditions surrounding Granite Bay Main Beach at Folsom Lake on Sept. 30. On this date, the reservoir storage was at 35 percent of the total capacity. Above, an aerial view of Loafer Point boat ramp showing Lake Oroville on Aug. 4. On this date, the storage was 1,439,844 reservoir acre-feet, which is 41 percent of the total capacity.

Photos courtesy of the California Department of Water Resources.

Three former Governors (Wilson, Davis and Schwarzenegger) and three dozen President/CEOs of major companies and agencies comprise SCLC, a nonprofit, nonpartisan organization formed to provide leadership on major public policies critical to Southern California's future.

The projects that are of interest and widely supported by business and labor leaders in our region include: The Sacramento-San Joaquin Delta Conveyance modernization project; recycled water projects including Pure Water Southern California and many smaller projects including one by Las Virgenes-Triunfo Joint Powers Authority and a Central Coast Groundwater Basin project by the Water Replenishment District (WRD) of Southern California; and storage reservoirs including Sites Reservoir in the Sacramento Valley.

“BizFed speaks for warehouses, hospitals, food processing plants, educational institutions, restaurants, hotels, builders, refineries, retail, recreational facilities and other community staples, thanks to our diverse and ever-growing membership. These industries all need clean, reliable and affordable water to thrive and serve Southern Californians,” said BizFed Founding CEO Tracy Hernandez. “We must modernize the region's water distribution system by investing in water infrastructure projects such as the Cadiz Water Project in the Mojave, the Delta Conveyance Project and innovative proposals to harness desalination technology. This is how we ensure the flow of water that our trillion-dollar economy demands.”

BizFed, the Business Federation of Los Angeles, is an alliance of 225 business organizations representing 410,000 employers and 5 million employees in the greater L.A. area.

Actions included in the governor's water strategy include: Creating storage space for up to 4 million acre-feet of water for dry periods; recycling and reusing at least 800,000 acre-feet of water per year by 2030; freeing up 500,000 acre-feet of water through more efficient water use and conservation; and making new water available for use by capturing stormwater and desalinating ocean water and salty water in groundwater basins.

“While our water agency leaders are doing a good job of bringing forward much needed water projects, these projects are often delayed by a lack of funding or challenged by environmental or NIMBY opposition,” said ECA's Baca. “Because of that, there's a growing need for all of us in Southern California, especially organizations like ECA and our strategic partners in business, labor and construction, to fight for these projects and the funding needed to bring these water supply solutions online.” ○



Ladera Park

Safe Clean Water Program Improves Resilience

Los Angeles County's Safe Clean Water Program (SCWP) is a one-of-a-kind initiative of the Los Angeles County Flood Control District (District), managed by Los Angeles County Public Works, that invests approximately \$280 million annually into multi-benefit stormwater capture projects and programs. The SCWP is designed to clean and conserve billions of gallons of stormwater that would otherwise be lost to the ocean when it rains, and to do so in a manner that improves the livability and resilience of LA County's communities through development of green space, recreational opportunities, and other enhancements, as able. The SCWP strongly promotes and facilitates regional collaboration while prioritizing investments in disadvantaged communities and the utilization of nature-based solutions. The success of both the collaborative development and collaborative implementation have made SCWP a model for others across the country.

Like other California regions, LA County navigates an array of complex water resilience challenges, including polluted waterways, the impacts of climate change (such as more frequent and severe droughts), limited and aging infrastructure, and a dependence on imported water. Additionally, the County and the 86 municipalities within it are mandated to develop infrastructure projects to improve stormwater quality and reduce pollution as part of the region's compliance with the Federal Clean Water Act.

These are regional issues requiring a regional approach.

Much of LA County is covered in impermeable area – i.e., surfaces such as rooftops, parking lots, and roads where water cannot soak into the ground. This can create flooding as well as the loss of potential local water supplies. Additionally, when water hits these surfaces, it runs off, often collecting trash and pollutants that flow, untreated, into the region's rivers, lakes, streams, and the Pacific Ocean. Capturing and cleaning up this stormwater is difficult and expensive.

In 2018, LA County residents voted to approve a ballot measure, Measure W, that created the SCWP and allowed for the collection of a special parcel tax of 2.5 cent (\$0.025) per square foot of impermeable area. This tax is levied on more than 2.1 million parcels within the District's boundary and generates a dedicated revenue source to help address the above water resilience challenges. Robust tax relief options were also built into the SCWP for qualifying parcel owners, including low-income senior exemptions, other income-based reductions, and credits.



SWCP projects improve water quality, increase water supply, and do so in a way that improves the quality of life for LA County communities.



SAFE CLEAN WATER PROGRAM

SCWP revenue, collected annually, is managed by the District and allocated across three programs: 50 percent for a Regional Program to support regional projects and studies, 40 percent for a Municipal Program that returns funds directly to municipalities in proportion to the taxes collected within their jurisdiction, and 10 percent for a District Program that supports public education and engagement, curriculum for local schools, workforce development, and overall SCWP management and oversight.

The SCWP Regional Program includes governance committees that are composed of a diverse set of participants including subject matter experts in water quality, water supply, community investment, and nature-based solutions. There are representatives from cities, water agencies, sanitation agencies, parks agencies, environmental groups, environmental justice advocates, community-based organizations, academia, business leaders, and members of the public. Committee members vet each project seeking SCWP funds and recommend those that best support SCWP goals and the priorities of the area.

For the Regional Program to date, 78 multi-benefit infrastructure projects, 38 project concepts, and eight scientific studies have been approved for funding. This represents over \$570 million in investments (\$385 million benefitting disadvantaged communities) over five years, which, when completed, will capture stormwater runoff from over 207,000 acres. Additionally, these investments leveraged another \$480 million from other funding sources to maximize SCWP goals. Further information about the planned and funded projects is available online (<https://portal.safecleanwaterla.org/scw-reporting/dashboard>). These numbers will continue to grow with each annual cycle and the next set of investments (bringing the infrastructure project count to 102) is anticipated to be approved in October 2022.

The Municipal Program 40 percent local return is distributed annually to the 86 municipalities within the District boundaries. This funding is utilized by the municipalities for development of their own local multi-benefit stormwater capture projects and programs and may be used to contribute to regional-scale projects. Annual Plans and Annual Reports are available on the webpage to demonstrate how each municipality is pursuing SCWP goals within their jurisdiction.



The Los Angeles County Flood Control District's Safe Clean Water Program, funded by a voter-approved special parcel tax, is designed to capture and clean stormwater to increase water supply. The projects in parks and medians, as illustrated here, are spread across the 86 county municipalities and benefit many disadvantaged communities. In addition to providing more water for residents, the projects create green spaces for recreation and improve the quality of life in the region.

WATER RESILIENCE PROJECT EXAMPLE

The City of Inglewood's Edward Vincent Junior Park Stormwater Capture Project benefits a Disadvantaged Community and already has strong community support. Located in the park, the proposed project would divert flows from three existing storm drains to a large infiltration chamber, restore a creek, and include a vegetated bioretention area at the low-lying end of the park where nature is used to filter polluted stormwater. It would also install above-ground park amenities such as enhanced ball field space, seating, shade, walking trails, and educational signage.

This project first received SCWP funding through the Regional Program's Technical Resources Program, a program intended to assist small municipalities, community-based organizations, non-governmental organizations, and others who may not have the technical resources to develop the Feasibility Study that is required for project proposals.

Following the completion of the Feasibility Study, the City of Inglewood applied for \$4.3 million in design funding. After the proposal was thoroughly reviewed, discussed at public meetings, and ultimately recommended for approval by the governance committees, it is now anticipated for Board approval in October 2022.

This project, like those approved before it and those still to come, will continue to improve the quality of life for LA communities. It's a testament to the region's commitment to achieving water resilience collaboratively and strategically – and an example for others looking to achieve similar goals. Please visit safecleanwaterla.org to track benefits as they continue to unfold and to learn more about getting involved! ○



WRD's Albert Robles Center for Water Recycling and Environmental Learning is located in Pico Rivera. It is a 5.2-acre facility with an award-winning sustainable design.



Recycling Water for 60 Years

Water Replenishment District Maintains Groundwater Supply Throughout Drought

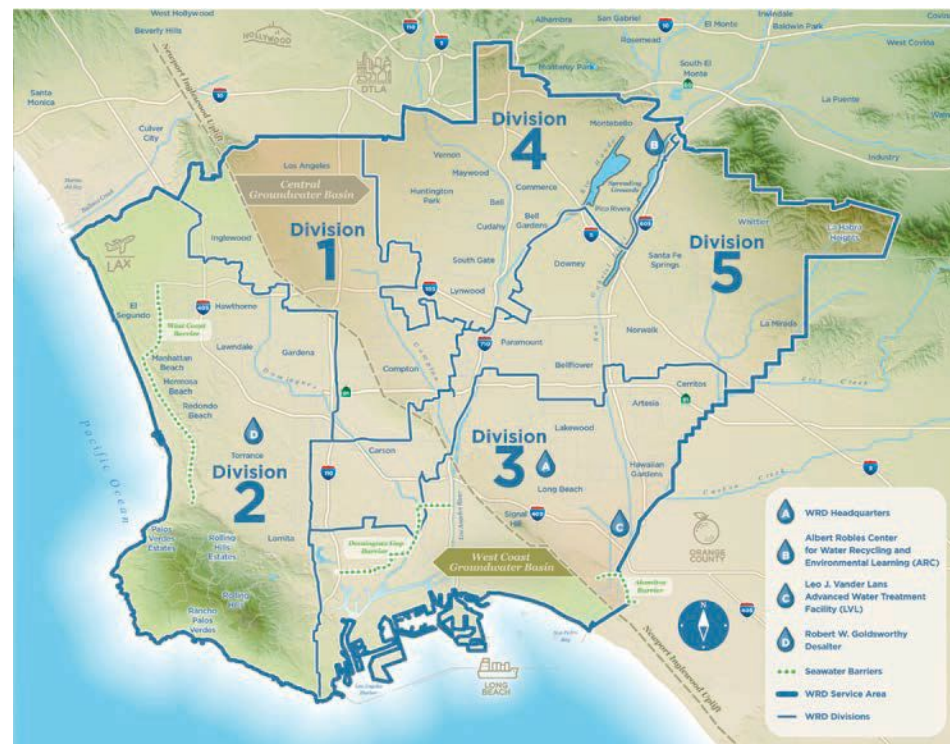
We often don't give a second thought to the journey of water before it reaches our homes. But as we face the worst drought on record in 1,200 years, water is at the forefront of our minds. Some families are facing water restrictions required by cities and utility companies and many are asking why.

Drought conditions have significantly reduced the amount of water that can be imported to Southern California. The bad news is some data shows our existing water supply may diminish by 10 percent in the next 20 years. The good news is the Water Replenishment District (WRD) has been planning for extreme drought conditions for 60 years.

WRD manages southern Los Angeles County's groundwater supply – billions of gallons of fresh water held in naturally formed aquifers located right under our feet. This water provides nearly half of our drinking water supply. This year, WRD celebrates 60 years of using recycled water to replenish our groundwater basins and maintain a drought-proof supply of drinking water.

After World War II, Los Angeles County experienced a population boom. Billions of gallons of water were pumped out of the ground faster than nature could replenish. As a result, groundwater fell to extremely low levels. In some inland areas, wells went dry. In some coastal areas, seawater encroached into our drinking water aquifers making the water too salty to drink.

To repair the groundwater basins, voters approved a measure to create WRD in 1959. The immediate objective of WRD was to purchase replenishment water to restore the over-drafted basins and inject water into a barrier system to prevent the migration of seawater into aquifers.



Today, WRD protects groundwater for a 420-square-mile service area covering 43 cities, including parts of the City of Los Angeles. WRD serves four million people and groundwater managed by the district provides nearly half of the region's water supply. The other half of the water is imported from hundreds of miles away through a series of canals and pipelines.



Above, the Leo J. Vander Lans (LVL) facility, located in Long Beach, treats recycled water used for injection wells at the Los Alamitos Barrier to prevent seawater intrusion. Left, a purple pipe at LVL carrying treated water from the Los Angeles County Sanitation Districts' Long Beach Water Reclamation Plant; water undergoes three more treatment processes at the facility.

At first, imported water was the main source of water WRD relied on for groundwater replenishment. Between 1961 and 1962, WRD purchased over 62 billion gallons of water to replenish groundwater aquifers. Today, no imported water is purchased for groundwater replenishment. This is thanks to WRD's transition from imported water to recycled water.

In 1960, WRD began its journey to offset the need for imported water. WRD financed the world's first water treatment plant for the specific purpose of producing water for groundwater replenishment- the Whittier Narrows Reclamation Plant. The facility is owned by the Los Angeles County Sanitation Districts (LACSD) and has been a source of recycled water for WRD's replenishment activities for 60 years.

In 1971, WRD expanded its use of recycled water by taking deliveries from the LACSD Pomona Water Reclamation Plant. Two years later, recycled water from their San Jose Creek Plant began flowing.

To prevent seawater intrusion, seawater barrier injection wells were strategically placed along the coast. These wells inject water at high-pressure levels to create an artificial "wall" that prevents seawater from creeping into freshwater aquifers. Initially, imported water was used at these seawater barrier injection wells. Now, there are multiple sources of recycled water used at the seawater barriers.

In 1995, the West Basin Municipal Water District began producing advanced treated water from its Edward C. Little Recycling Facility that WRD buys for injection into the West Coast Seawater Barrier. In 2006, WRD completed the construction of its Leo J. Vander Lans Advanced Water Treatment Facility to provide recycled water to the Alamitos Seawater Barrier. That same year the Los Angeles Bureau of Sanitation completed the Terminal Island Advanced Water Purification Facility to provide recycled water that WRD buys for seawater injection. To date, the three plants have produced over 91 billion gallons of recycled water

for that purpose and have the capacity to meet the needs of all seawater barriers.

In 2004, WRD set out on a monumental mission - to create a resilient and locally sustainable source of water for groundwater replenishment. WRD called this initiative the Water Independence Now (WIN) program. Prior to WIN, about 37 percent of WRD's operations relied on imported water. To offset the need for imported water, WRD increased its portfolio of recycled water.

In 2019, advanced treated recycled water from WRD's Albert Robles Center (ARC) began deliveries to the spreading grounds. This facility treats up to 14.8 million gallons of water a day that is used as a source to replenish groundwater basins.

The completion of ARC brought the mission of WIN to fruition. Since construction has been completed, WRD and partner agencies produce enough recycled water to meet our replenishment needs.

As WRD's history illustrates so well, recycled water is the most reliable option in the face of diminishing imported supply. The three LACSD plants and ARC have delivered over 749 billion gallons of recycled water for groundwater recharge. This was accomplished without a single drop of imported water.

WRD's next goal is to raise the stakes and completely offset the need for imported water in the region. This vision is called the Water Independence Now for All (WIN 4 All) plan. To reach this goal, WRD will take advantage of available groundwater space to store recycled water. These steps will strengthen our water security and help us build a drought-proof water system in southern LA County. ○



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HELPING TO MAKE CONSERVATION A LIFESTYLE ONE CUSTOMER AT A TIME



As our climate continues to warm and drought conditions become more frequent, converting thirsty lawns to drought-tolerant landscaping increases in importance. Currently, roughly one-third of all potable/drinking water is used outdoors on irrigation.

This is why LADWP offers outdoor water conservation programs and resources to help our residential and business customers make the switch from thirsty grass to a beautiful drought-tolerant landscape to save thousands of gallons of water.





TURF REPLACEMENT PROGRAM

Starting October 1, 2022, the turf replacement rebate will be \$5 per square foot to replace your thirsty lawn with drought-friendly landscaping.

Available to Residential and Commercial Customers. **Learn more here:** ladwp.com/landscaping

LANDSCAPE DESIGN SERVICES

Get a free customized, professional design to help you plan your own turf replacement project. Customers receive a planting and irrigation plan, list of low-water use plants, and a rough cost estimate for their project.

Single Family Residential Customers Only. **Learn more here:** designyourgarden.ladwp.com

LAWN BE GONE HANDS-ON WORKSHOPS

Free workshops where customers can learn how to make their garden drought-tolerant and become waterwise gardeners.

Residential Customers Only. **View upcoming classes here:** lawnbegone.ladwp.com

CA NATIVE PLANT LANDSCAPER CERTIFICATE

A free program designed for professional gardeners to educate on proper maintenance of a water-efficient, California-friendly or native garden. Held in partnership with the Theodore Payne Foundation. **Learn more here:** theodorepayne.org/learn/landscaper-certification

ONLINE RESOURCES & INSPIRATION

From downloadable low water use landscape design templates to searchable plant databases to landscape transformation videos, LADWP has the help you need for your next water conservation DIY project. **Learn more at** ladwp.cafriendly/landscaping.com

FREE MATERIALS

Mulch is a great way to save water by keeping the soil around your plants cool and moist. Free mulch is available through our partners at LA Sanitation. **Find a location nearest you at:** lacitysan.org/freemulch

City Plants distributes free trees to residents for yards and parkways. You may be able to receive up to 7 free trees for use on your project and to help save energy and cool your home. **Learn more at** CityPlants.org

NOT READY TO MAKE THE SWITCH?

LADWP also offers rebates on efficient irrigation products like efficient sprinkler heads and weather-based irrigation controllers to help reduce the amount of water used on your existing landscape. **See all our available rebates at** ladwp.com/save

For more information on landscape transformation resources from LADWP, visit ladwp.com/landscaping.



Photo Courtesy of the California Department of Water Resources



Photo Courtesy of the United States Bureau of Reclamation

At left, an aerial view of the South Fork of Lake Oroville in Butte County on Aug. 2. On this date, the storage was 1,440,432 reservoir acre-feet (AF), which is 41 percent of the total capacity. Lake Oroville is the largest reservoir in the State Water Project and it peaked this year at just over half its capacity. Above, the light-colored ring around Lake Mead shows the decreased water level from years of drought conditions on the Colorado River. The photo was taken on Feb. 16. The reservoir was formed by Hoover Dam and is considered one of the largest artificial lakes in the world with 750 miles of shoreline. The lake helps provide water for 25 million people in Nevada, Arizona, and California. The historic water shortage on the Colorado River will likely lead to mandatory water cutbacks.

Region-Wide Mandatory Water Conservation Possible in 2023

You don't need to be a fortune teller to predict what the future may hold for water availability in Southern California next year. The region's limited imported supplies will prompt water officials to consider region-wide mandatory conservation measures should the ongoing drought continue.

The Metropolitan Water District of Southern California's six-county service area normally relies on supplies from Northern California and the Colorado River to cover more than half of the region's water demands. The ongoing drought has reduced supplies from Northern California over the last three years to historic low levels. And the Colorado River is facing its first-ever shortage condition, with a call by federal officials for river users to prepare for deeper cuts next year.

In response, Metropolitan staff has informed its Board of Directors that it is preparing ways to implement mandatory conservation across Southern California, if necessary. The board could consider actions as early as January.

"We need to prepare for this drought to continue," said Metropolitan General Manager Adel Hagekhalil. "Even if the rains return, it will take a lot for the State Water Project system to recover, and the Colorado River will remain in a historic shortage condition. A region-wide response may prove necessary."

Portions of the Metropolitan service area are already facing various mandatory conservation measures because constraints in Metropolitan's distribution system and limited local supplies make them heavily dependent on extremely limited water deliveries from Northern California. Three consecutive years of low supplies from the State Water Project prompted Metropolitan to direct numerous local agencies starting last June to reduce demand. Those agencies are in parts of Los Angeles, Ventura, and San Bernardino counties, affecting six million people.

"We are working closely with these local agencies to manage through this challenge and develop plans to fast-track lasting solutions," Hagekhalil said. "Even with these efforts, supplies will be limited until the State Water Project can deliver more water."

While Southern California's water challenges during this drought have most affected these areas, the worsening shortage on the Colorado River from a decades-long drought could prompt region-wide mandatory conservation as early as next year.

The federal Bureau of Reclamation declared the first-ever shortage condition for the river in August 2021. With storage levels continuing to decrease, Reclamation recently announced that additional cuts would be necessary in

2023. Those cuts have yet to be identified while Metropolitan continues to work with other water users in California, Arizona, and Nevada to negotiate a collaborative response.

In addition to pulling from its local reservoirs, Metropolitan has operated its Colorado River Aqueduct at nearly its full capacity to meet the region's demands this year. In future years, that might not be possible.

Metropolitan staff informed the board earlier this summer that it would develop a plan to enforce mandatory conservation on its 26 member agencies next year, taking into account unique local circumstances. "We are planning for the worst and hoping for the best," Hagekhalil said. "In the meantime, everyone can do their part by never wasting a drop of water."

Although all eyes are on water availability in 2023, Hagekhalil added that the region also must plan for the future and address climate change by increasing supply resiliency through infrastructure investments. "All options must be in our resource mix, from imported supplies, conservation, and recycling to local stormwater capture, recharging and remediating ground water basins and building storage. We also must improve our regional water system to move water across our service area to equitably meet future demands," he said. ○

For more conservation tips, visit www.bewaterwise.com



Metropolitan General Manager Adel Hagekhalil speaks at a news conference about water restrictions. He is flanked by the Metropolitan Board Chairwoman Gloria D. Gray, left, and Chief Operating Officer Deven Upadhyay.



Central Basin Municipal Water District's regional recycled water program, with infrastructure shown above, delivers 4,500 to 5,500 acre-feet of recycled water each year. Using recycled water for irrigation, as seen in the photo below of the Los Amigos golf course, and planting drought tolerant gardens, as shown to the left, increases resilience by conserving drinking water.



A Commitment to High-Quality Service

Central Basin Municipal Water District Provides Recycled and Imported Supply

Central Basin Municipal Water District (the District) has a long history of ensuring water supply is sustainable, safe and affordable.

The District provides recycled and imported water to cities and retail water agencies in southeast Los Angeles. The District's service area is 227 square miles, encompassing 24 cities and serving nearly 2 million people.

In 1952, the District was formed by a vote of the people to mitigate the over-pumping of underground water resources in the region. In 1954, the District became a member agency of Metropolitan Water District to use imported water to curtail the use of diminishing groundwater supplies. In 2015, the District began supplying recycled water to provide regional water reliability.

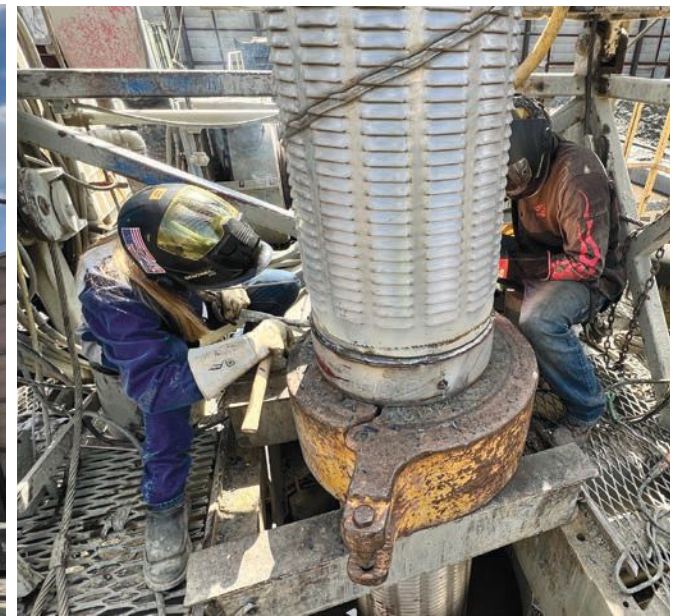
"Drought conditions becoming the 'new normal' in addition to increasing demands for water and limitations on imported water supplies are a strong reminder of the imminent need to prioritize investments in local, sustainable water supplies," said the District General Manager Dr. Alejandro Rojas. "The District's commitment to expanding its recycled water programs, innovation, and focus on equity is critical to promoting a resilient water supply."

The District has an enduring record of ensuring water demands and supplies stay balanced. The District developed a regional water recycling program that delivers 4,500 to 5,500 acre-feet of recycled water to more than 400 industrial, commercial, and landscape irrigation water connections. Over the next three to five years, the District plans to expand its recycled water use by 2,000 acre-feet to reduce the strain on drinking water supplies. The District hasn't raised water rates in two years and will uphold the Human Right to Water to ensure that its customers have access to safe, clean, affordable water.

The District is also a proud partner of Pure Water Southern California, a new, large-scale local recycled water project that will turn wastewater into high-quality drinking water. Once completed, it will produce 150 million gallons of water daily, becoming one of the largest advanced water treatment plants in the world.

The District has been providing reliable and effective operations for 70 years and will continue to deliver high-quality water and service to its customers. ○





At left, to increase local supply, construction is planned for 12 new groundwater wells. Above, Long Beach groundwater wells are critical source of reliable and affordable water.

Doing our Part for a Sustainable Future

Long Beach Water Leads in Innovation and Conservation

Drought and water supply shortages have happened in the past. We know dry conditions are common in California.

But the past several years have brought record-breaking conditions like nothing we've ever seen before. To combat climate change and water scarcity, local water agencies must go above and beyond to conserve now and plan for the future. Changes in the way we use water are critical to adapting to a drier future.

Long Beach Water has long been a leader in conservation, offering innovative programs and community education, along with robust future planning and infrastructure development.

We recognize that the onus for water conservation is often placed on the consumer. While saving water in homes and businesses does make an impact, it's only one piece of the pie.

As Long Beach residents and businesses do their part, here are some ways that Long Beach Water is doing ours.

WE'RE ALL IN THIS TOGETHER

Everyone in the Long Beach community has a different water story.

For some, conservation is a natural way of life. Others struggle to find the budget for water-saving projects or appliances. And some just don't want to think about it. To help all the different water users find their way, Long Beach Water offers a variety of innovative programs, community outreach and education.

For the homeowner, our Lawn-to-Garden Program offers an incentive to convert their thirsty lawns to a beautiful, drought-friendly garden — plus money to pay for a professional landscape designer.

Homeowners struggling to find the money for a garden project can participate in our Direct Install Garden Program. Our team, with the help of the Long Beach Conservation Corps, designs and installs a drought-friendly landscape at no cost to the homeowner.

For those wanting to start small, our Native Plant Parkway Program provides residents with everything they need to convert their parkway, the area between the street and the sidewalk, at no cost.

Apartment dwellers can also find conservation help with our Direct Install Multifamily Efficiency Program, where Long Beach Water purchases and installs efficient appliances in apartments and condominiums at no cost to residents.

Residents and businesses can apply for dozens of rebates on efficient appliances. And a new pilot program helps low-income homeowners do the same, providing a free head-to-toe efficiency upgrade to participants.

Long Beach businesses can get help with a water-wise upgrade through the Certified Blue Restaurant Program. Business owners can also take advantage of the Lawn-to-Garden program to transform any grass areas on their property.

At Long Beach Water, we're partners with our community, which is why we employ robust outreach and education efforts. Water staff attend dozens of events every year to promote the water-wise lifestyle in all parts of the city, from the Cambodian American Cultural Center to the Long Beach Pride Parade and beyond.

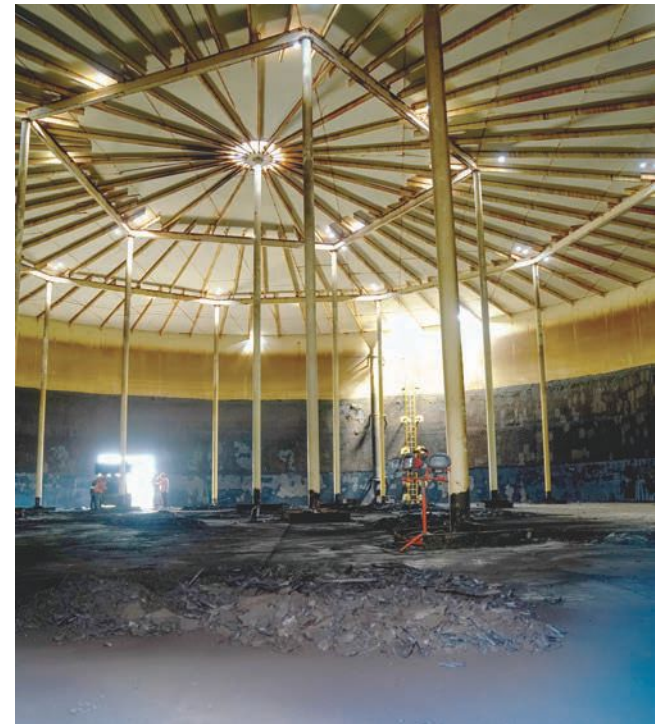
Our mascot, Conservin' Mervyn, has become a regular celebrity in the community and can be seen promoting water-saving tips, programs and selfies at nearly every event. In-school education programs, career day talks and informational presentations are also a critical part of getting our message out.

With innovative programs and extensive outreach, Long Beach Water is proud to lead the way in community support for water conservation.

And it has paid off — Long Beach residents and businesses have clocked in significant water savings all summer, consistently exceeding statewide conservation numbers.



Conservin' Mervyn increases water savings through community outreach.



At left, community support programs encourage conservation. Above, well optimization increases system efficiency and yield. At right, tank project allows for more reclaimed water use.

INVESTING IN LOCAL SUPPLY

Long Beach is fortunate to have a sustainable, affordable and reliable source of water right beneath our feet.

Local underground water basins already provide about 60 percent of the water we serve our customers. That water is pumped via 24 active wells throughout the city to our centralized Groundwater Treatment Plant and then distributed to the community.

Long Beach has rights to pump about 33,000 acre feet of groundwater each year out of the Central Basin. To maximize that allotment, plans are in motion to build 12 new groundwater wells. Six of those are already in construction and the rest are in the design process.

But we're not stopping there. We are actively studying and planning for new well sites in the southwestern part of Long Beach that could give us pumping access to another groundwater basin, the West Coast Basin. This would increase the amount of water we can get from local sources.

In addition to increasing our potable water supply, Long Beach Water also has plans to enhance our reclaimed water program. Currently, we partner with Los Angeles County Sanitation District to treat thousands of gallons a day of wastewater that is used to irrigate parks and golf courses throughout Long Beach.

To increase our capacity to provide recycled water, we're adding storage tanks dedicated to reclaimed water. We're also partnering with other water agencies to contribute resources to the Pure Water Southern California project in Carson, which will increase recycled water available to the region for groundwater replenishment, irrigation and more.

In our future, we see no drop wasted.

BIG PLANS FOR THE FUTURE

Some of the most important work for saving every drop and planning for our future supply goes on behind the scenes.

In 2019, we completed a Water Resources Plan, which provides a guide for how we plan to enhance our water supply system in the coming decades. And it is the foundation for several implementation plans underway. Long Beach Water is developing a Well Asset Management Plan to enhance our access to by-the-minute water production data and provide a strategic roadmap for essential groundwater infrastructure maintenance.

An Optimization Study will soon provide a comprehensive implementation strategy to increase local groundwater production. The study will help guide future well construction and other system improvements. And as we increase our groundwater pumping, we're also studying how to ensure that the supply doesn't run dry. Long Beach Water staff are currently conducting a Groundwater Augmentation Study to contribute to a sustainable groundwater future by replenishing the basins.

Finally, two Recycled Water studies will allow Long Beach Water to increase access to reclaimed water for non-potable uses. This, in turn, frees up potable water for community needs.

At Long Beach Water, we're committed to thinking ahead and exploring all options to continue to provide safe, affordable and delicious drinking water to the community.

Thanks to all of these efforts and our dedicated, waterwise customers, we're confident in Long Beach's future. ○

For more information on Long Beach Water programs and water-wise tips, visit LiveH2OLB.com

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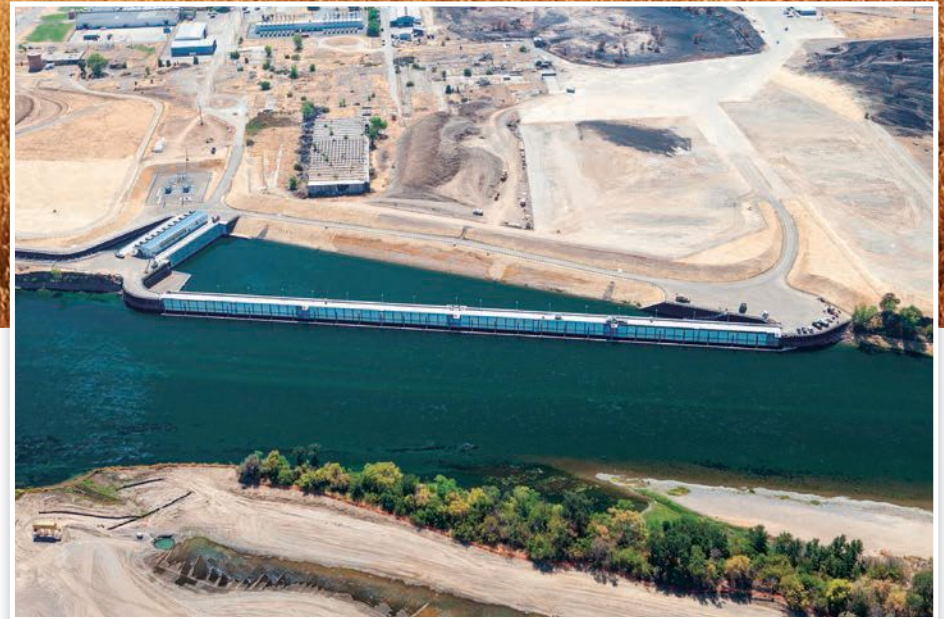
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lbwater.org

The Sites Reservoir Project will be situated on the west side of the Sacramento Valley, approximately 10 miles west of Maxwell, Calif., in Glenn and Colusa Counties.

Inset: Existing Tehama Colusa Canal Authority Fish Screens



Sites Reservoir

Is a Solution to California's Megadrought

When it comes to water, California continues to break records, and not the kind we like to brag about. According to a recent study by Nature Climate Change, the West Coast's drought **has worsened so much in one year**, that it is now the driest in at least 1,200 years and is a worst-case climate change scenario playing out live. In fact, it's being labeled as a "megadrought."

As we close out a brutally dry summer, many water suppliers are leaning more on their stored water supplies.

In many ways, Sites is exactly what a state burdened by droughts needs. Sites would capture and store water from the Sacramento River during big, flashy rain storms — after all other water rights and regulatory requirements are met — and is made available to California's environment, communities, and farms when it's most needed — especially during times of drought.

Here in Southern California, we are utilizing all the tools in our toolbox — recycling, conservation, desalination, groundwater replenishment, and yes, more water storage. Although Sites is located in Glenn and Colusa counties up north, public water agencies throughout California have the opportunity to invest in Sites to secure more water for the customers they serve.

Sites Reservoir is looking to make a big impact on water supply while keeping its environmental footprint small. The project does not dam any major river. Sites is designed to help the environment, not cause harm. And a large portion of the water saved in Sites is specifically set aside for fisheries and the environment during dry years. This is a first of its kind and a model for successful future water management.

If Sites had been in place prior to 2021, we could have captured and stored much of the excess prior years flood flows for use in what was a very dry year, and California would have had an additional 1 million acre-feet of water available for use during 2021 when it was badly needed. And a good portion of that water would have been held over for use in 2022 which is an equally bad or worse water year.

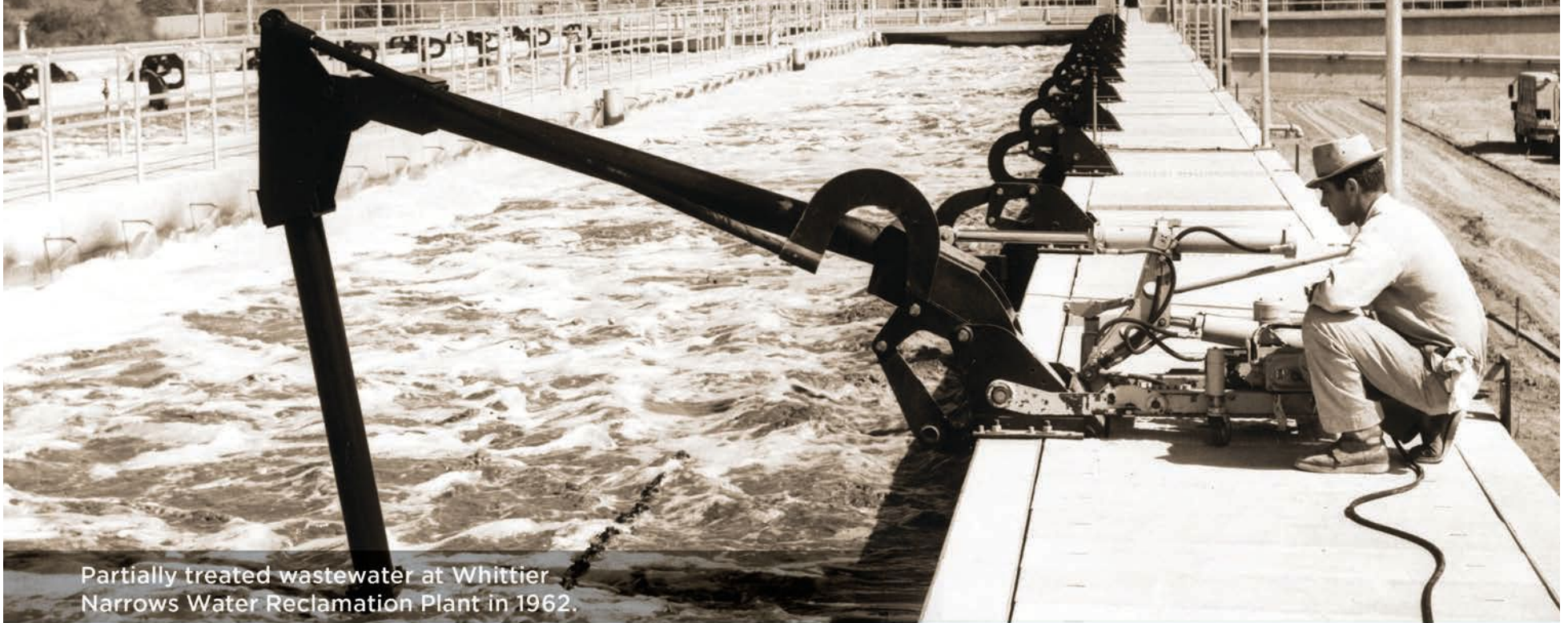
Sites can best be described as an insurance policy. And if the scientific projections are correct about the impacts of climate change, then having Sites Reservoir will mean we will be able to collect even more water in the reservoir for use during future extended droughts.

The Sites Project Authority is advancing Sites Reservoir because our state needs more water during dry years. And we're proud the project is supported by local water agencies, irrigation districts, and municipalities across California. We're also proud to have the State and Federal government investing in the project.

It's critical that we continue to invest in a broad range of solutions to ensure a resilient water future, and Sites Reservoir would increase water storage, help alleviate symptoms, and address the impacts of a megadrought. It's time to build Sites now. ○



60 YEARS of Water Recycling



Partially treated wastewater at Whittier Narrows Water Reclamation Plant in 1962.

OVER 1 TRILLION GALLONS RECYCLED

In Los Angeles County, about half of our drinking water comes from wells pumping up groundwater and the remainder is imported from hundreds of miles away—from the Colorado River and Northern California. In 1962, our Whittier Narrows Water Reclamation Plant began producing recycled water that is used to refill our groundwater basins. Since then, we have been recycling at 10 of our 11 wastewater treatment plants and, along with our water agency partners, have recycled over 1 trillion gallons. That's enough water to fill an 8-foot diameter pipe that circles the earth 23 times! This recycling reduces the need to import water and makes our region more sustainable.

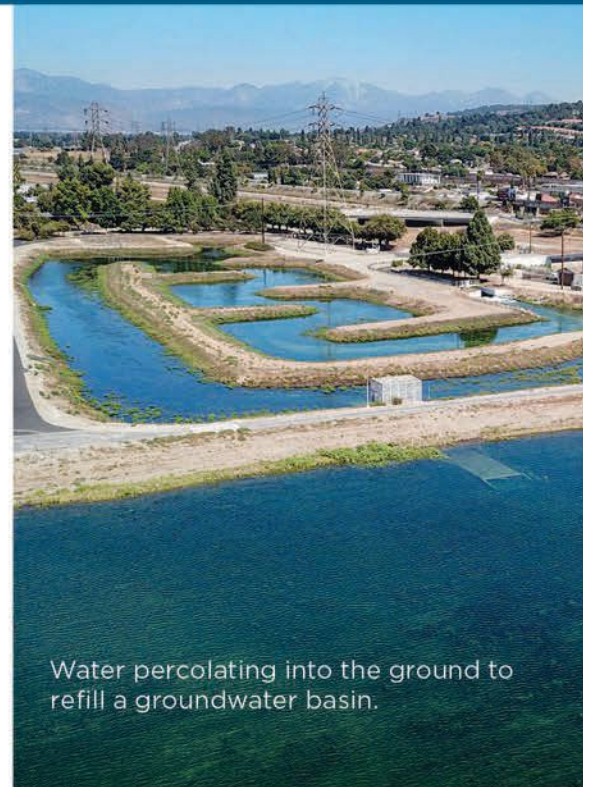
Nonetheless, we are striving to do more. We have partnered with the Metropolitan Water District of Southern California on a project to reuse the water from our 11th treatment plant. This project could produce enough water for 1.5 million people, making it one of the world's largest water recycling projects.

For more info, contact us at info@lacsdc.org or 562-908-4288, ext. 2301. For more on the new recycling project, visit www.mwdh2o.com/rrwp.



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Water percolating into the ground to refill a groundwater basin.



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HEAR FROM TOP WATER LEADERS

EPISODES

#1 | **Adel Hagekhalil**, General Manager, Metropolitan Water District

#2 | **Joaquin Esquivel**, Chair, State Water Resources Control Board, and **Karla Nemeth**, Director, California Department of Water Resources

#3 | **Ellen Hanak**, Public Policy Institute of California; **Newsha Ajami**, then with Stanford University's Water in the West; **Faith Kearns**, author, Getting to Heart of Science Communications

#4 | **Senator Henry Stern** and **Assemblyman Eduardo Garcia**

#5 | **Martha Guzman**, head of US EPA, Pacific Southwest; **Felicia Marcus**, fellow Stanford University Water in the West.

#6 | **Heather Dyer**, GM, San Bernardino Valley Municipal Water District; **Sandra Kerl**, GM, San Diego County Water Authority; **Joone Kim-Lopez**, GM, Moulton Niguel Water District; **Kris Murray**, Chair, Santa Ana Regional Water Quality Control Board

#7 | Sites Reservoir and the Future of California Water Storage

#8 | What's Next for Metropolitan Water District

#9 | A Collaborative Approach to Colorado River Management

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