CALIFORNIA

2021

WATER

VENTURA COUNTY / NORTH LOS ANGELES COUNTY EDITION

THIS DROUGHT IS EXTREME!

The Bidwell Bar Bridge near the Bidwell Canyon Marina on Lake Oroville. On August 3, 2021 Lake Oroville reached a historic low elevation. *Photo, taken on September 28, 2021, is courtesy of the California Department of Water Resources.*

SENATOR FEINSTEIN: State Water Champion

New Metropolitan Leader Builds Bridges

Calleguas MWD Improving Water Reliability

Las Virgenes MWD Focuses on Climate Change

SCV Water District Tackles PFAS Contamination

L.A .County Public Works Leads the Way

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Framework for the Future

Welcome to the third issue of the Southern California Water Coalition's partnership with the publishers of **California Water Ventura and North Los Angeles counties**. This special magazine focuses on the good work being done by water agencies and others throughout Ventura County and northern stretches of Los Angeles County — from far-reaching efforts to identify new water supply alternatives to a pilot project to purify wastewater so it can become a new source of drinking water to frontline efforts to clean-up contaminated groundwater. I'm sure you'll agree that this work toward a water resilient future for Southern California is important, one that we often take for granted.


Charley Wilson

The stories in these pages from Calleguas Municipal Water District, Las Virgenes Municipal Water District and Santa Clarita Valley Water Agency highlight key projects that are working together to bring greater water resilience to Southern California. From expanding regional water supplies to making the most out of every drop of water have, these agencies are making investments to help us today and in the future cope with the impacts of climate change and our region's natural cycles of drought.

In preparing this issue, I have been amazed by the forward-thinking "all-of-the-above" approach taken by so many community and water leaders in Ventura and northern Los Angeles counties. They understand that there is no one size fits all solution to our water supply issues but that all must be considered together. Thanks to them, our region is on the forefront of important efforts to secure water supply resiliency from the impacts of earthquake, droughts, aging infrastructure and more. Their investments in water supply reliability ensure a bright future for generations to come.

I hope you enjoy this look at what's happening with our region's water supply today and continue to join us in our efforts to address California's water issues.

Feel free to send us feedback at *info@socalwater.org*.

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.

"When you don't have enough water, you quickly see battle lines being drawn. Cities, environmentalists, businesses, homeowners, farmers – they all need their share."

Dianne Feinstein
U.S. Senator

Sen. Feinstein is California's Water Policy Champion

Longtime Lawmaker Discusses Industry Challenges and Successes

By Elizabeth Smilor
Special Sections Writer

In her 28 years representing California, U.S. Senator Dianne Feinstein has developed a deep understanding of water policy and has been coined the "water referee" for her ability to negotiate with opposing sides.

"Senator Feinstein is a balanced, solutions-oriented legislator who understands the complexities and nuances of diverse interests, regions and needs in California's water balancing act," said Charley Wilson, Executive Director and CEO of the Southern California Water Committee.

Sen. Feinstein has championed settlements and legislation through several drought cycles and continues to push water issues to the forefront in Washington, D.C.

"When you don't have enough water, you quickly see battle lines being drawn. Cities, environmentalists, businesses, homeowners, farmers – they all need their share. I've come to understand just how complex water policy is in California and it has become clear that we have to do more to hold water in wet years to use in dry years," Feinstein said. "So, my effort toward reforming California water policy has been to bring all sides together to try to come up with a long-term solution that we can all live with."

Feinstein has earned the respect of California water leaders from both the largest agencies including Metropolitan Water District of Southern California and smaller districts serving many diverse regions.

"Senator Dianne Feinstein is one of the most accomplished women of our time," said Metropolitan Chairwoman Gloria Gray. "She has established a reputation as a bipartisan leader willing to work with both sides of the aisle to solve difficult problems, none more vexing than California water."

Coming together to address water challenges is the foundation of the One Water Movement, which has led to water management goals and strategies across the region. One Water encompasses all water sources from imported to stormwater to groundwater to recycled water as well as all users of water from municipalities to agriculture.

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Contributors	Elizabeth Smilor

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

"There is a broad consensus that droughts will grow more severe, and while we may see nearly the same amount of water, it will come in fewer, larger storms. That means it's absolutely critical that we do a better job of storing water during wet years for use in dry years," the Senator said. "Surface and groundwater storage are a key part of the investments we need to make. Larger-scale water recycling projects, like what Los Angeles is proposing, are another key part of the solution."

"In her 28 years in the US Senate, Senator Feinstein developed into the elder statesman, go-to legislator when we needed to get something done."

David Pedersen, P.E.
General Manager
Las Virgenes MWD

The Regional Recycled Water Program, now in the environmental planning phase, is a significant collaboration between Metropolitan and the Los Angeles County Sanitation Districts to develop the largest recycled water project in the nation.

"Dianne Feinstein is one of the very few in Washington D.C that have taken an interest and developed an understanding in water," said Sanitation Districts' Chief Engineer and General Manager Robert Ferrante. "Her leadership as the senior Senator from California has been invaluable in helping us diversify our water portfolio and invest in our future."

In addition to her support for new technologies to treat, store and recycle water, Feinstein recognizes the need for new water infrastructure and conservation strategies.

"California's statewide infrastructure was primarily built in the 1960s for a population of 19 million, which leaves us far short of what is needed for our current population of 40 million. Climate change makes the problem significantly worse," Feinstein said. "Our current debates are over who gets how much water. We need to change that to an aggressive "all-of-the-above" strategy for drought resilience. This will include major conservation initiatives and environmental initiatives. We also need to return to an infrastructure construction era like the 1960s, with a focus on ensuring that our investments improve drought resilience for cities, farms and the environment."

Feinstein continues to advocate for the Canal Capacity Conveyance Restoration Act would authorize $633 million, one-third of the cost to restore the conveyance capacity of San Joaquin Valley canals that benefit Southern California and the valley agriculture. The bill would restore major canals to their original capacity that has been reduced by 15 to 60 percent by subsidence. The bill will also restore a salmon run and help farmers comply with the Sustainable Groundwater Management Act, which requires sustainable groundwater pumping by the early 2040s.

Feinstein succeeded in securing $200 million for drought relief and is advocating for another $250 million for drought in the broader government funding bill. That continuing resolution also includes $205 million for some key water storage projects in the state, $21 million for nine water recycling projects and $12 million for four desalination projects, all in California.

"Senator Feinstein has been a valuable and trusted champion for California water issues throughout her career in Washington," said Director of Los Angeles County Public Works Mark Pestrella. "Her trusted voice has helped advance significant water infrastructure investments and resulted in a more sustainable water supply future for all Californians."

Finally, Feinstein is advocating for additional federal funding to test and treat contaminated water to ensure a safe drinking water supply today and into the future.

"I have long championed funding for the cleanup of contaminants in our drinking water supply, including tens of millions of dollars for cleaning up perchlorate in the San Gabriel Basin," said Feinstein.

That cleanup has been coordinated by the San Gabriel Basin Water Quality Authority for the past 28 years and 96 tons of contaminants have been removed.

"Senator Feinstein's support is vital as we continue to identify new sources of contamination in the Basin and for the long-term operation of our 32 treatment plants," said WQA Board Chairwoman Valerie Munoz. "We appreciate her dedication to our mission and our region."

"Senator Dianne Feinstein is one of the most accomplished women of our time. She has established a reputation as a bipartisan leader willing to work with both sides of the aisle to solve difficult problems, none more vexing than California water."

Gloria Gray
Chairwoman
Metropolitan Water District

Senator Feinstein also plans to introduce comprehensive legislation with $100 million in drinking water assistance for disadvantaged communities, and to address water contamination by per- and polyfluoroalkyl substances (PFAS), a manufactured chemical with adverse health effects.

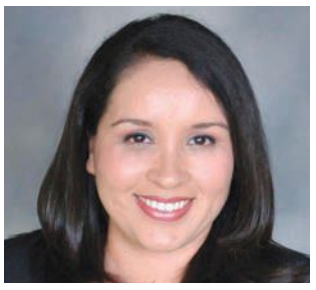
"In her 28 years in the US Senate, Senator Feinstein developed into the elder statesman, go-to legislator when we needed to get something done," said David Pedersen, General Manager of Las Virgenes Municipal Water District, which serves western L.A. County.

The longtime Senator has seen California weather drought before and trusts in the water leaders and users of the state to continue along a path of resiliency.

"The eye-opening projections about climate change's effect on western drought should not cause despair but should galvanize us to action," said Feinstein. "We can prepare for the coming droughts through aggressive water conservation and invest in water storage and conveyance to make sure we are using every raindrop and snowflake we get." ❍

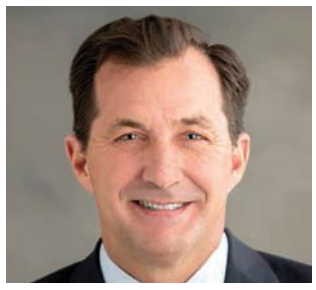
Gloria Gray
Chairwoman
Metropolitan Water District

Robert Ferrante
Chief Engineer/General Manager
L.A. County Sanitation Districts



Valerie Muñoz
Chairwoman
Water Quality Authority

David Pedersen, P.E.
General Manager, Las Virgenes
Municipal Water District



Mark Pestrella
Director, Los Angeles County
Public Works

Charley Wilson
Executive Director, Southern
California Water Coalition

A One Water Future, Together

New Metropolitan General Manager Adel Hagekhalil Plans to Bring All Stakeholders to the Table

By Elizabeth Smilor
Special Sections Writer

"It's really about coming together, collaborating and thinking outside the box to find new chapters in the water playbook."

– Adel Hagekhalil
General Manager
Metropolitan Water District of Southern California

As California faces a historic drought and unprecedented water supply conditions, a new leader has taken the helm of the largest drinking water provider in the state, and nation. His philosophy for managing through this drought and the more extreme conditions brought on by climate change is simple in language, but complex in practice: working together as one, across the state, across rural and urban areas, and across environmental, agricultural and business sectors.

"Metropolitan was formed as a collaborative of agencies in 1928 to build the Colorado River Aqueduct, with the approach that we are stronger when we work together," said Adel Hagekhalil, general manager of the Metropolitan Water District of Southern California. "That thinking is what built our resilience over the last 100 years and it will be even more critical as we plan for the next century."

Hagekhalil became Metropolitan's 14th general manager in the summer following the retirement of Jeffrey Kightlinger, who led the agency since 2006. A registered civil engineer and board-certified environmental engineer, Hagekhalil in 2018 was appointed to lead StreetsLA, the department that manages and maintains Los Angeles' vast network of streets and urban forests.

Prior to that, he served for nearly 10 years as assistant director of Los Angeles' Bureau of Sanitation, heading the city's wastewater collection system, stormwater and watershed protection program, water quality compliance, and facilities and advance planning. Hagekhalil helped develop the One Water LA 2040 Plan, a roadmap for connecting plans, ideas, and people for fiscally responsible water planning solutions.

Now, he is leading the nation's largest water wholesaler into the next era to ensure a reliable water future for the 19 million people across Southern California his agency serves.

"Mr. Hagekhalil is a highly respected leader who is helping Metropolitan meet the challenges climate change is bringing to all of our water resources, now and in the decades ahead ," Metropolitan

New Metropolitan General Manager Adel Hagekhalil is working with all stakeholders to lessen Southern California's reliance on imported water from the State Water Project, shown at left and right. One major project is the Regional Recycled Water Program being developed in partnership with LA County Sanitation Districts. The demonstration facility is shown above. The full-scale program could produce up to 150 million gallons per day of purified water, which is the equivalent to the water needs of half a million homes. Metropolitan is working with its 26 member agencies, businesses and non-profits to create more regional sources of water, increase water storage and support conservation programs.

Chairwoman Gloria D. Gray said. "His commitment to innovation, sustainability and focus on partnerships in California and across the Colorado River Basin will be critical to our success."

A cooperative of 26 member agencies, Metropolitan provides more than half the water within its six-county, 5,200-square-mile Southern California service area. As the region's water planner, Metropolitan imports water from the Colorado River and Northern California and invests in local supplies such as recycling, storage and other water management programs to ensure Southern California has reliable, safe water. It has also been a critical force in increasing water conservation across the region, through rebate programs for water-efficient appliances, landscaping and devices; education programs; and other resources offered through its water conservation hub bewaterwise.com. Metropolitan has an annual operating/capital budget of $1.8 billion, about 1,800 employees and more than 30 facilities throughout Southern California.

Going forward, Hagekhalil said he will work as one with all stakeholders, including its member agencies, businesses, environmental organizations, and communities to promote a resilient water supply for everyone. The pillars of his plan are the "three I's: innovation, integration and inclusion."

"It's really about coming together, collaborating and thinking outside the box to find new chapters in the water playbook," he said. "We need to bring everyone into the tent of water management to plan for our future."

That unified message advocates for innovation and investment to expand Southern California's local water resources through recycling, stormwater capture, and more surface and groundwater storage. Efforts by Metropolitan, its member agencies and communities have helped Southern California begin 2021 with 3.2 million acre-feet of water in stored reserves to better respond to the current dry conditions. The success is due to investments in a flexible and resilient water system, and to the conservation ethic of Southern Californians, who over the last 30 years reduced their per person water use by 40 percent.

However, Metropolitan in August declared a Water Supply Alert to call for its service area to voluntarily reduce water use to preserve as much water in storage as possible, if the drought continues into next year. It also supports Gov. Gavin Newsom's call for all Californians to voluntarily reduce water use by 15 percent.

Hagekhalil said the current drought should serve as a wake-up call to do more to prepare for the challenges ahead. For Metropolitan, that means creating a "fourth aqueduct."

"The virtual fourth aqueduct is a combination of many things from recycled water to groundwater storage to new conservation methods, such as addressing leaky pipes in disadvantaged communities," said Hagekhalil. "All these things have to come together in what I call the fourth aqueduct."

He said Metropolitan will also focus on promoting better access to conservation rebates in underserved communities.

As a National Association of Clean Water Agencies board member for more than a decade and a contributor to the Obama Administration's Homeland Security's report on infrastructure and resiliency, Hagekhalil is committed to advocating for state and federal funding.

"The message I'm sending to our representatives in Sacramento and Washington D.C. is that investments in our area is an investment in the future of California. It's an investment in resolving conflicts along the Colorado River and the Sacramento San-Joaquin Bay Delta," he said.

In August, more than 70 officials from cities, water agencies, business and labor organizations and environmental non-profits signed joined Metropolitan in a letter to the governor and state legislative leaders in Sacramento. The letter urges support for investments of more than $1 billion in water-use efficiency programs, and local supply and groundwater storage projects.

"I believe as a water agency we need to make a splash. We can no longer be out of sight, out of mind," said Hagekhalil. "We need to let people know the issues and challenges, and how we're going to address them." ❍

Improving Water Supply Reliability

Calleguas Municipal Water District

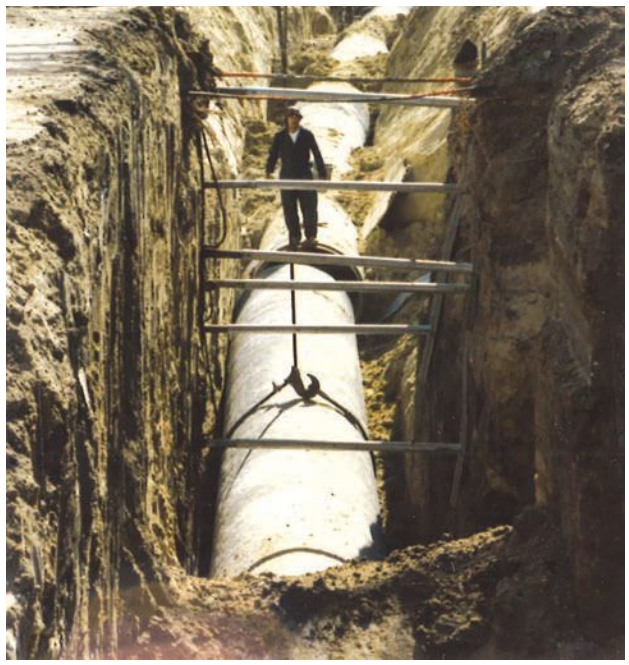
From Initial Importation to the Water Supply Alternatives Study

In the early twentieth century, land use in Ventura County was predominantly agricultural. By the mid-1900s, communities were developing among the agricultural areas, and the population was steadily growing. Water availability varied across the County, with local supplies generally of poor quality that contained high concentrations of salts. Artesian wells, which were originally plentiful on the Oxnard Plain, began to require pumps as the groundwater was extracted faster than it could be replenished. Multiple dry years contributed further uncertainty to the reliability of local water supplies.

By the early 1950s, officials in Ventura County were exploring options to increase water supplies and obtain higher quality water. Calleguas Municipal Water District, named for the watershed in which it was established, formed in 1953 for the purpose of providing a safe and reliable water supply to southeast Ventura County.

Calleguas explored potential options for a supplemental supply that included exporting water from the Santa Clara River watershed to the Calleguas Creek watershed and obtaining imported water through the Metropolitan Water District of Southern California. The immediacy that Metropolitan offered with imported water deliveries from the Colorado River Aqueduct was attractive to stakeholders, as well as the promise of eventual deliveries from the State Water Project for a higher quality water supply. In 1960, voters in the Calleguas district approved joining Metropolitan, including the bonds to construct facilities for direct importation of water.

Over time, Calleguas built additional facilities that bolster the reliability of its system and buffer the impact of water supply



Above: Calleguas crews work to remove the protective inlet screens at the East Portal hydroelectric facility. Water supply conditions require the removal of these screens to keep the hydroelectric generator in service during periods of drought. Right: Archive images that show construction of the Calleguas water distribution system.

outages. The addition of the Las Posas Aquifer Storage and Recovery Project enables storage of imported water in the Las Posas groundwater basin for extraction in times of supply outages. To facilitate development and use of local water supplies, Calleguas constructed the Regional Salinity Management Pipeline. This facility makes it possible for water agencies in and around the Calleguas Creek watershed to make better use of local water supplies.

Today, Calleguas faces a variety of challenges with water supplies strained by increased demands on shared supplies, more stringent regulations, degrading water quality, and the unpredictability of climate change.

Calleguas is responding to these challenges by actively investigating additional water supply opportunities through a Water Supply Alternatives Study. The study identifies and evaluates over 100 potential projects and programs, such as additional surface and subsurface storage, groundwater desalters, additional interconnections to nearby water agencies, enhanced water use efficiency, and onsite stormwater use, that will enable Calleguas to continue to provide a reliable water supply particularly in the event of a supply disruption when imported water is not available.

Perhaps the most comprehensive water supply study undertaken in Ventura County, the effort harks back to the original mandate tasked to Calleguas: plan for a water future that brings the greatest value to its customers – the economic viability of southeast Ventura County depends on Calleguas' ability to continue to achieve its mission. ❍

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For more information visit www.calleguas.com

Las Virgenes Municipal Water District

Addressing Climate Change

with Pure Water Project Las Virgenes-Triunfo

Big problems require impactful solutions. Las Virgenes Municipal Water District (LVMWD) has a storied history of addressing its water challenges head-on with sustainability as a mindset. Success has required a combination of planning, investing, innovating, and collaborating. Taking complexity and drilling down to its component parts has helped LVMWD provide clarity on solutions that make sense both economically and environmentally.

California continues to be on the front line of responding to the effects of a changing climate with infrastructure planning years in the making aimed to mitigate the ever-escalating consequences on resource availability. Water is not just a commodity that provides hydration and meets the needs for cooking, cleaning, bathing, and irrigation. It has many hidden uses that are often taken for granted. Manufacturing one automobile requires 39,000 gallons of water, while just one cell phone requires 240 gallons to produce. The cotton t-shirt on your back took 660 gallons of water to make.

Being the fifth largest economy in the world, California contends with a shrinking water supply that is arguably the foundation of all goods and services produced here. This means that competition for this critical resource will only increase over time to maintain the delicate balance for agricultural, manufacturing, technological, residential, commercial, industrial, and environmental needs.

Erratic weather patterns, inconsistent precipitation, warming temperatures, and rising sea levels are causing concern among all water agencies tasked with ensuring long-term water supply reliability for their customers. While some water providers have a diverse supply portfolio, others like LVMWD are not so fortunate. LVMWD relies 100% on

imported supplies from the Sierra Nevada Mountains for its drinking water. The region has very little groundwater, and the sparse supply is loaded with sulfates, manganese, and other naturally-occurring minerals that render it effectively unusable. The low yield and poor quality prevent an economical return on investment for treatment.

LVMWD and 25 other member agencies throughout Southern California rely on the Metropolitan Water District of Southern California (MWD) to supply their imported water needs. MWD receives water from both the State Water Project and the Colorado River. Both aqueduct systems depend on runoff from snowpack and storage in large reservoirs to supply millions of people and businesses with a consistent and reliable water service. As emergency drought conditions again take hold throughout California, we have to ask if we're experiencing a "new normal" that warrants adaptations in how we source our water.

Climate science is our guide to developing resiliency to combat this developing issue. But it's not just the science stating that something is different; many long-lived Californians will tell you that weather patterns have changed, and not for the better. Above average temperatures, below normal precipitation, early snowmelt, reduced runoff, and more frequent wildfires have become a regular occurrence. Addressing this "new normal" from a water agency perspective is not an easy task, and there is no one-size-fits-all solution to water reliability. The responses are best determined locally and will vary across the state.

LVMWD has long partnered with Triunfo Water and Sanitation District to provide sanitation, water recycling, and composting services through the Las Virgenes – Triunfo Joint Powers Authority (JPA). In recent years, and informed by a comprehensive stakeholder-driven process, the JPA decided that the best solution to address its regional water supply reliability challenges was to embark upon a potable reuse project that would beneficially reuse highly treated wastewater for drinking water.

In September 2020, the JPA opened the Pure Water Project Las Virgenes – Triunfo Demonstration Facility (PWDF), an educational resource and pilot project using the former LVMWD headquarters building. By repurposing an existing building to create the demo facility, the JPA minimized the overall cost to customers and showcased its on-going commitment to sustainability. The PWDF will also pave the way for the full-scale Pure Water Project Las Virgenes – Triunfo, which is expected to be among the first potable reuse projects using reservoir water augmentation in California and will source up to 15% of the JPA's water supply locally.

Elected officials, students, business owners, industry personnel, and the general public are among the first to have been welcomed to the facility to learn about the advanced water purification process, concepts of sustainability, and how mother nature has provided the blueprint for the pure water cycle. And, the PWDF is not just about the advanced purification process. With the facility's surrounding sustainability garden, the JPA highlights climate-appropriate landscaping that serves as inspiration for those looking to replace their own lawns with climate appropriate plants. With nearly 70% of water consumption attributed to outdoor watering for thirsty turf, ornamental gardens, or runoff from poorly-maintained irrigation systems, significant water savings can be found outside of your home.

Pure Water Technology like microfiltration/ultrafiltration, reverse osmosis, and ultraviolet light/advanced oxidation are used to further treat recycled water to above drinking water standards. By the end of the decade, our region will receive 15% of its water supply from indirect potable reuse.

The PWDF and sustainability garden are just a couple ways LVMWD is pushing the envelope to practice and encourage efficient water use. When considering how to improve your own water savings, start with your outdoor watering. LVMWD offers assistance and resources – such as discounted weather-based irrigation controllers – to help you save water and money.

Grim headlines regarding the drought are hard to miss these days – but a collective effort towards better water use habits is key to ensuring a reliable supply for the future for our region. We all share the responsibility to be good stewards of our precious and finite supply of water. ❍

LAS VIRGENES MUNICIPAL WATER DISTRICT EST. 1958

Acting Fast to Safeguard Water Supply

Santa Clarita Valley Water Agency

Opens First PFAS Treatment Facility

By Elizabeth Smilor
Special Sections Writer

"Our top priority is our customers. We knew we needed to act fast and proactively to set up our internal strike team and strategies to address all aspects of the emerging PFAS issue."

Matt Stone
SCV Water
General Manager

Santa Clarita Valley Water Agency (SCV Water) is acting swiftly to address Per- and Polyfluoroalkyl (PFAS) contamination with a three-pronged approach: testing, treatment and transparency. The agency opened its first state-of-the-art PFAS treatment facility in October 2020 at the William S. Hart Baseball and Softball complex in Valencia and is hard at work on several more facilities to restore the groundwater quality in the Santa Clarita Valley.

Matt Stone

"Our top priority is our customers. We knew we needed to act fast and proactively to set up our internal strike team and strategies to address all aspects of the emerging PFAS issue," said SCV Water's General Manager Matt Stone. "We are thankful that taking quick action allowed us to develop treatment facilities and establish an onsite lab that will benefit our long-term water supply so that we can provide safe, high-quality water to thousands of Santa Clarita Valley residents."

SCV Water, which serves nearly 300,000 residents and businesses in a 195 square-mile service territory in Newhall, Valencia and Santa Clarita, is one of many water agencies facing new state and federal regulations regarding PFAS, a group of man-made chemicals found in food packaging, carpets and household products. The chemicals, many of which are no longer used in products manufactured in the U.S., have seeped into the groundwater in more than 2,000 communities.

About half of SCV Water's supply comes from groundwater and at one point 20 of 42 wells were taken offline due to PFAS contamination. Exposure to these chemicals may cause adverse health effects.

After thoughtful research, SCV Water moved quickly to build its first synthetic ion exchange adsorption (IX) treatment facility. The IX technology was selected as the most appropriate following analysis of the

Construction is complete at SCV's first PFAS groundwater treatment facility (left). SCV Water team members proactively work on monitoring local water quality 1,000s of times annually (center). The $6-million PFAS facility in the parking lot of the Hart sports complex treats enough water to serve 5,000 families annually (right).

site, water quality and other conditions. The $6-million facility in the parking lot of the Hart sports complex treats up to 6,250 gallons per minute or enough to serve 5,000 households annually.

"Restoring our groundwater quality, especially during times of drought, was crucial to our long-term success. This treatment facility was an ambitious undertaking to safeguard our water supply," said SCV Water's Board President Gary Martin.

One more groundwater treatment plant is under construction and is expected to begin operation in 2022. Several more are in final design. Combined, these facilities will treat enough water equivalent to the needs of another 4,000 households.

"We're looking forward to bringing these projects online soon, so we can continue to have a local water source for years to come," noted SCV Water's Director of Operations and Maintenance Mike Alvord. "Our commitment doesn't stop there; we are regularly reviewing new strategies to treat and restore our water supplies."

SCV Water is proud to be a leader in restoring groundwater affected by PFAS. In addition to the PFAS treatment facilities, they have also installed a Liquid Chromatography Tandem Mass Spectrometer. It allows the SCV Water team to test for PFAS in-house instead of sending to an outside lab, saving time and money. SCV Water is one of only three water agencies in California – and 25 labs nationwide – to be certified by the California's Environmental Lab Accreditation Program.

"Thanks to this new equipment, we will see a return on investment within two years once the lab is fully certified," said Alvord.

The Agency's preemptive PFAS efforts have been recognized with several awards, including the Best Environmental Project from the American Public Works Association (APWA) – High Desert Branch, as well as communications awards for its outreach efforts regarding PFAS removal.

"We're honored that our ambitious PFAS treatment program was recognized with this prestigious award by a well-respected, national industry association," said Stone.

Now and moving forward, it is paramount for SCV Water to continue to look for new ways to safeguard its water supply for thousands of customers. The success of restoring water quality hinges on staying committed to the Agency's goals of transparency, treatment and testing.

"Our ample groundwater is the backbone of our water supply, and we'll continue to put the health and safety of our community first and make forward-thinking decisions to eliminate PFAS in our groundwater," said Board President Martin.

SCV WATER

For more information, visit
www.yourSCVwater.com

Providing Resilient Water Service in the Santa Monica Mountains

The water provided to the 22,300 customers from Los Angeles County Waterworks District No. 29 (District) originates hundreds of miles from the Santa Monica Mountains and Malibu coastline. Every conserved drop is one less that must be exported from the wild and scenic riverways of the Sierras and Rocky Mountains and can be left to support the fragile ecosystems of the California Bay Delta and the Colorado River. It is a finite resource, and District staff are committed to improving the resiliency of the system that delivers it to customers.

What have we done?

Improved resiliency by going solar on our monitoring and communication equipment.

Following the lessons learned from the Woolsey Fire in 2018 and the new reality that power and communication services have the potential to be shut off during extreme weather events, District staff procured and installed solar panels and battery back-up systems to provide resilient power for the control and communication equipment at all tanks and pump stations. The District is now able to remotely verify the amount of water available in each tank even when the power grid or communication networks are down. While these solar and battery power systems are limited in comparison to large industrial pumps that push water up into the canyons of the District, they keep operators informed of any potential water shortages so that the District staff can mobilize a fleet of portable, clean running generators to provide temporary power to the pump stations that refill these tanks in emergencies to ensure a more resilient water supply for customers.

What will the District be doing?

Improving resiliency by constructing new infrastructure

This past year, the Los Angeles County Board of Supervisors who serve as the governing board for the District, adopted an Environmental Impact Report for a six-year capital improvement program to construct projects addressing the most critical needs within the existing water system. This includes new and replaced pipelines, tanks, and pump stations that will significantly improve the resiliency of the water system, water quality, water pressure, and the ability of the system to protect customers from structure fires.

The Encinal Canyon Water System Improvements will replace approximately 10,000 feet of older water pipes and a water storage tank. Additionally, the Encinal Canyon Road Emergency Interconnection Project will install 7,200 feet of pipe to connect the Malibu water system to the Las Virgenes Municipal Water District and provide a much-needed emergency water source and redundancy for the District. These Encinal projects are scheduled to be completed by 2023.

The District is improving water resiliency by promoting conservation through drought-tolerant landscaping, shown on the left, as well as smart irrigation devices such as those shown on the right. Above, the District installed solar panels to create a more resilient power source for their tanks and pumping stations.

What can customers do?

Improve resiliency by using water saving fixtures and innovative technology

It is sometimes counterintuitive from a business perspective, but potable water providers across California are serious about helping customers use, and therefore, buy less of the product they sell. The District is no exception. Customers who are interested in being part of making the system more resilient by using less water can do so in many creative ways. The District still promotes the tried-and-true ideas of buying water-efficient appliances, taking shorter showers, and shutting off the faucet when not in use. Often the most effective ideas to use a more sustainable amount of water are implemented outdoors. Begin by choosing native plants for landscaping. Once established, landscape can survive and thrive without needing supplemental irrigation.

The District, through partnerships, now offers incentives for:

- Residential irrigation controllers that adjust with the weather
- Soil moisture sensors that adjust the amount of water applied by irrigation controllers
- Replacement sprinkler heads that apply water more efficiently to your landscaping
- Flow monitoring devices (in addition to the meter serving your home) that track water use patterns, send notifications via an app on your phone, and alert you of abnormal use patterns and potential leaks

The best source of information for these devices and rebates that are offered to offset the cost to purchase and install them is the SoCal Water Smart website, www.socalwatersmart.com. Simply input your residential address and the website will identify the water saving rebates that are available to you.

The District is also making a difference through innovative water conservation practices, automatic metering infrastructure, and the MalibuSmart Rebate Program in partnership with West Basin Municipal Water District and the City of Malibu to reduce high water demand. This program offers rebates for fixtures and appliances, such as high-efficiency clothes washers and toilets, installation of water smart technologies, rotary sprinkler nozzles, and lawn assessments and replacement for residential and commercial customers. Along with its partners, the District also offers education and outreach programs, including classes on such topics as firescaping and information on ongoing projects.

It is a partnership between the District and its customers that will make the water system serving the Malibu and Topanga communities more resilient to climate change. The District has implemented measures to provide reliable control of the system. The District will construct new projects to improve the delivery of water to customers. We request your help in reducing the amount of water that must be imported to the area. Together we can improve the area's water resiliency. ❍

RACHIO SMART IRRIGATION CONTROLLER

RAINBIRD HIGH EFFICIENCY ROTARY NOZZLES

FLUME SMART WATER METER MONITOR

Located in Carson, this demonstration facility purifies 500,000 gallons of treated wastewater per day by using membrane bioreactors, reverse osmosis and ultraviolet light to remove bacteria, minerals and other chemicals. A full-scale facility would make the region less dependent on imported water. *Photos courtesy of the Metropolitan Water District of Southern California*

Regional Recycled Water Program Advances

L.A. County Sanitation Districts and Metropolitan Water District Working Together

By Elizabeth Smilor
Special Sections Writer

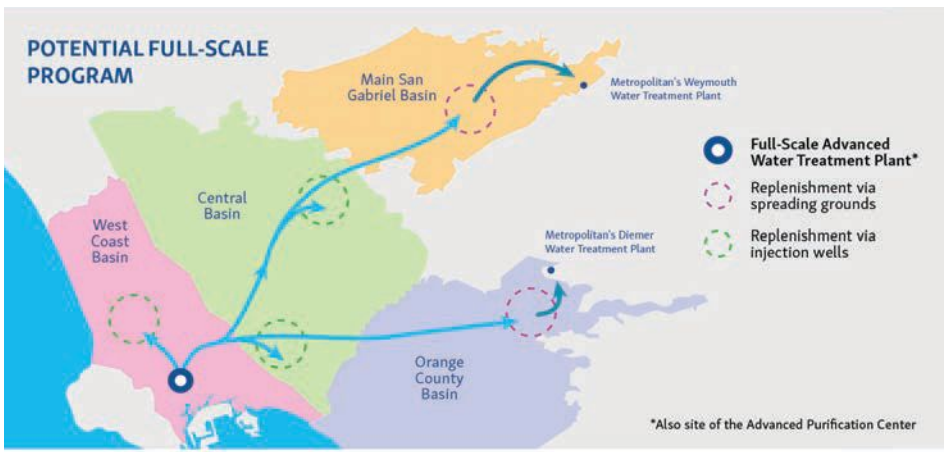
"This is a significant program that could contribute to water resiliency for all of Southern California."

Robert Ferrante
Chief Engineer and General Manager
Sanitation Districts

Environmental review work began this year on what could become the largest recycled water program in the nation. The Regional Recycled Water Program would provide purified water for groundwater replenishment and other uses – enough for 1.5 million people. This program is the result of a partnership between the Metropolitan Water District of Southern California and the Los Angeles County Sanitation Districts.

"This is a significant program that could contribute to water resiliency for all of Southern California," said Sanitation Districts' Chief Engineer and General Manager Robert Ferrante. "Climate change and a large earthquake threaten our imported water supply, so advancing this program is an important step in meeting the region's water needs."

In Fall 2019, the two agencies opened a $17-million demonstration facility, the Advanced Purification Center, at the Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) in Carson. The JWPCP cleans wastewater generated by homes and businesses and currently discharges cleaned water to the



ocean. The demonstration facility purifies 500,000 gallons per day of the JWPCP's cleaned water using an innovative three-step process. First, membrane bioreactors remove ammonia along with other tiny particles. Next, molecules like salts are removed through reverse osmosis, which is the technology used for ocean water desalination. Finally, ultraviolet light and a powerful oxidant destroy any remaining pathogens and trace chemical compounds.

Robert Ferrante

The Regional Recycled Water Program is currently in the planning phase, which includes preparing documents to assess environmental impacts, engineering and technical studies, and public outreach. This phase will take approximately three years to complete. If the environmental document and overall project are approved, design and construction would follow for approximately eight years.

The full-scale program could produce up to 150 million gallons per day of purified water, which is equivalent to the water needs of half a million homes. The program is estimated to cost $3.4 billion to build and $129 million annually to operate, resulting in a water cost of about $1,800 per acre-foot. (An acre-foot of water is enough for three California households.) Purified water would be delivered through up to 60 miles of new pipelines to potentially four groundwater basins in Los Angeles and Orange counties, industrial facilities and possibly two MWD treatment plants. These groundwater basins supply water to 7.2 million people.

The new demonstration facility, above, uses a three-step process to purify treated wastewater into purified water. Data from this plant will be used to meet regulatory requirements for a full-scale facility that could eventually provide water to half a million homes. At top, the Los Angeles County Sanitation Districts Joint Water Pollution Control Plant in Carson.

"The [Regional Recycled Water Program] is a major investment to reduce Southern California's reliance on imported water supplies. By tapping an unused source of [water], we're continuing to diversify the region's water sources to ensure we always have reliable water," Metropolitan Chief Operating Officer Deven Upadhyay said.

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

For more information, video tours, or to set up a group or classroom virtual tour of the demonstration plant, visit www.mwdh2o.com/rrwp.

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