

a Much-Needed Boost to Groundwater Supplies



AFTER 25 YEARS, THERE IS STILL MORE WORK TO BE DONE!

A MESSAGE FROM THE EXECUTIVE DIRECTOR

Looking Back Across Our 25-Year History. Water Quality Authority (WQA) was formed in 1993 because contamination found in the 1970s remained untreated over a decade later. In response, the State legislature decided a new organization, WQA, was needed to coordinate, plan, and implement groundwater quality management programs.

Unprecedented Cleanup Success. When WQA started working, no one knew how to treat the water or where funding would come from. Since then, working with local water agencies, cities, regulators, legislators, responsible businesses, and many others, we have jointly funded over \$950 million to treat over 1.6 million acre-feet of contaminated water.

Groundwater cleanup is critical to ensure safe, healthful, quality water for our communities!

Looking to the Future, Over \$470 Million More Will Be Needed to Get the Job Done! Despite our successes, over \$470 million in unfunded cleanup remains. The WQA will continue playing its role in getting the job done, but Federal funding for the cleanup has virtually dried up since 2010—threatening long-term efforts.

PROGRESS CONTINUES:

- Historic Baldwin Park Operable Unit Agreement Completed. Following two years of successful negotiations among numerous stakeholders the BPOU was renewed, with funding commitments of at least \$250 million to ensure cleanup of the largest area of contamination in the Basin.
- First Use of Reverse Osmosis in the Valley. Construction will soon begin on the Puente Valley Operable Unit Intermediate Zone remedy, which will be the Valley's first treatment facility to utilize reverse osmosis treatment technology.

Finally, Improving the Water Supply Through Use of Treated Water Is Increasingly Important. Despite better rain totals this past year, the Main San Gabriel Basin aquifer—the source for most of our water—has not rebounded to comfortable levels. In addition, imported water supplies from both Northern California and the Colorado River are increasingly unreliable. It remains imperative that we continue cleaning up our local aquifer.



Kenneth R. "Ken" Manning Executive Director

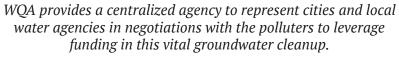
25 YEARS IMPROVING WATER QUALITY IN THE SAN GABRIEL BASIN

Following the discovery of extensive groundwater contamination in the San Gabriel Valley in the late 1970s, cleanup progress was slow. So in 1993, the State formed the WQA. Its mission: to coordinate, plan, and implement groundwater quality management programs to efficiently remediate groundwater contamination and assist in preventing future contamination.

Our Focus: Work with Others to Fund Groundwater Cleanup. From the start, WOA worked with cities, water producers, and regulatory agencies to facilitate treatment and then serve clean water to the San Gabriel Valley. WOA also worked to garner Federal funding to supplement funds from the parties responsible for the contamination. WOA's priority has always been to limit the impact of the cleanup on ratepayers.

Legislation Extends WQA Mission Through 2030.

In legislation sponsored by State Senator Ed Hernandez, WQA was authorized to continue carrying out its mission until 2030. "The WQA's ongoing cleanup efforts are key to a safe and reliable source of water for the San Gabriel Valley's present and future needs," said former congressman David Dreier.



State Sen. Ed Hernandez (D-West Covina)

This is a perfect example of how community water systems, regulatory agencies, responsible parties and consumers can come together and get it done right. Thank you for 25 years of LEADERSHIP!

> Erin Brockovich, Environmental Activist in a Facebook message to WQA

25 YEARS OF SUCCESS

In 25 years, the San Gabriel Basin Water Quality Authority has coordinated efforts to:

Remove More Than 160,000 **Pounds of Contaminants**

Equal to the weight of more than a dozen adult elephants



Thereby Cleaning 1.6 Million **Acre-Feet of Groundwater**

Enough to serve over 8 million residents for a full year





Water Quality Authority



HISTORY OF CLEANING GROUNDWATER AND ENHANCING THE WATER SUPPLY

Over its 25-year history, San Gabriel Basin WQA has worked with its partners to clean up 1.6 million acre-feet of contaminated groundwater—enough to meet the water needs of Basin customers for over six years.

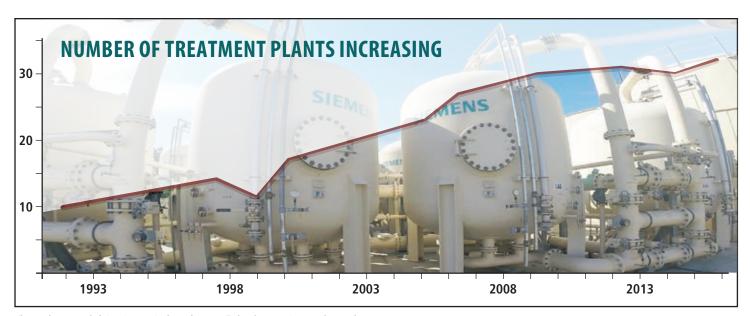
WQA's work initially focused on treatment and water quality. Now it also uses the treated water to improve the water supply in water-short Southern California.

- **2018:** The first reverse osmosis treatment system in the San Gabriel Valley breaks ground.
- **2016:** Thirty-one cleanup facilities are removing groundwater contaminants that have been there since the 1950s or earlier.
- **2014:** WQA acquires the General Discharge Permit needed to continue the cleanup.
- 2013: The WQA mandate is extended through 2030.
- **2012:** WQA secures \$10 million in State funding for four projects.

- 2009: WQA Obtains additional \$50 million for WQA Restoration Fund. H.R. 910, which established the San Gabriel Basin Restoration Fund to facilitate groundwater cleanup, became Public Law 106-554.
- 1999: WQA spearheads legislation for \$75 million in Federal funding.
- **1995:** WQA's first treatment facility is completed in Monrovia.
- **1994:** WQA adopts a consensus approach to integrating water supply and cleanup programs.
- **1993:** WQA is established by the State legislature.

- **1983:** The US Environmental Protection Agency (USEPA) declares four Superfund sites in portions of the Main San Gabriel Basin.
- **1979:** Groundwater contamination is first detected in the San Gabriel Groundwater Basin

LOOKING FORWARD: CONTINUED PROGRESS ON GROUNDWATER CLEANUP



Cleanup has expanded since its start in the early 1990s. Today there are six groundwater cleanup areas and 31 treatment facilities, with the most recent breaking ground in September 2018.

HISTORIC 10-YEAR AGREEMENT EXTENDS LARGEST CLEANUP

Following two years of negotiations, water agencies in the San Gabriel Valley and representatives of five major industries that the USEPA designated as obligated to clean up contamination have signed a new agreement that paves the way for water reliability and groundwater cleanup for another decade.

Renewed BPOU. The new agreement took effect in May 2017 and binds the parties until 2027. This 10-year agreement continues the operation of five water treatment plants within the BPOU site—one of six zones in the San Gabriel Basin that contain contaminated water.

Protecting 400,000 Residents. The BPOU agreement and cleanup addresses decades-old groundwater contamination under portions of Azusa, Irwindale, Baldwin Park, West Covina, La Puente, City of Industry, and unincorporated areas of Los Angeles County, where 400,000 San Gabriel Valley Residents live and work.

Improving Both Water Supply and Water Quality. Today the five BPOU water treatment facilities use state-of-the-art technology to treat over 30,000 gallons per minute, or 15.7 billion gallons per year, to better than drinking water standards. The treated water is then served to the public.

Extensive Interagency Cooperation. Water Agencies in the Agreement include WQA, Main San Gabriel Basin Watermaster, San Gabriel Valley Water Company, Valley County Water District, La Puente Valley County Water District, Suburban Water Systems, and California Domestic Water Company, plus the responsible parties.

"The new agreement is worth about \$200 to \$250 million dollars to the residents of the San Gabriel Valley and guarantees that water rates will not rise due to groundwater cleanup!"

Ken Manning, WQA Executive Director

AREA THREE OPERABLE UNIT FUNDING CHALLENGE

The City of South Pasadena was affected by a new regulation that more strictly limits the maximum contaminant level of 1,2,3,-trichloropropane (TCP). The city's Wilson #3 and Wilson #4 wells have TCP levels above the maximum, so the city immediately took the wells out of service and has had to rely on imported water at a significant cost. To offer immediate assistance, the WOA Board approved the transfer of a \$589,000 grant to the City from the Graves #2 wellhead treatment project to the urgently needed Wilson Reservoir wellhead treatment project.

EL MONTE OPERABLE UNIT (EMOU) PROGRESS

WQA CONTRIBUTED \$6.1 MILLION TO CLEANUP AT EMOU FORMER CROWN CITY PLATING SITE

The EMOU site is on an abandoned property of a bankrupt corporation. It is a suspected source of shallow Chromium VI contamination and contains a well that could be acting as a conduit to spread contamination into the deeper portion of the aquifer. WQA proposed to destroy and cap the well as part of the City of El Monte's cost share on the project, but that became unnecessary when a new owner agreed to cover the cost.

WESTSIDE SHALLOW ZONE REMEDY

In 2018, due to a decline in the water table, it was decided to enhance the shallow zone remedy by installing eight new extraction wells.

FIRST REVERSE OSMOSIS FACILITY IN PUENTE VALLEY OPERABLE UNIT (PVOU)

In fall 2018, groundbreaking is expected for the first reverse osmosis treatment plant in the region. La Puente Valley County Water District will

operate and maintain the facility and use the treated water to meet water supply needs. The plant is being paid for by Northrop Grumman Corporation, and will also clean up naturally occurring contaminants not caused by the company, in order to make the water drinkable.



A model of the first reverse osmosis treatment facility in the San Gabriel Valley at the PVOU.

SOUTH EL MONTE OPERABLE UNIT (SEMOU)

INTERMEDIATE ZONE CLEANUP

The treatment facility will end the need for redundant wellhead treatment at City of Monterey Park wells through the construction of a centralized advanced oxidation treatment facility. This new facility will streamline the city's production and distribution while decreasing the city's treatment and remediation costs.

WHITTIER NARROWS OPERABLE UNIT (WNOU)

INTERMEDIATE ZONE

In 2018, the Department of Toxic Substances Control (DTSC) is expected to receive some Proposition 1 funding that will be used to add infrastructure to turn the WNOU intermediate zone remedy back into a potable water supply project.

CONSOLIDATING MONITORING WELL LICENSES

WQA coordinated the construction of several monitoring wells in the BPOU in the 1990s. Over time, WQA also executed long-term site access agreements with the entities that owned the properties. Recently, WQA has systematically consolidated all the BPOU monitoring well license agreements to improve management and lower costs.

This year, WQA approved a BPOU monitoring well lease agreement with the City of Irwindale. The renewal of this agreement allows WQA continued access to the wells for sampling and maintenance.

WQA COLLABORATING TO FUND SOUTH EL MONTE SOURCE INVESTIGATIONS

In 2017, the WOA Board authorized staff to work with the State Water Resources Control Board (SWRCB) to develop Proposition 1 applications for the purposes of funding the identification, assessment, and remediation of high-priority sites within the SEMOU in cooperation and partnership with the Los Angeles Regional Water Ouality Control Board (RWQCB), DTSC, and California Department of Drinking Water (DDW). The identification, assessment and remediation of contaminant sources have been a growing concern as lack of funding has limited the resources of the regulatory agencies. However, the willingness of the SWRCB Division of Financial Assistance to allow funding for these activities has the potential to meaningfully advance cleanup in the San Gabriel Basin. In the past, WOA did not work on these kinds of projects because regulatory oversight is provided by the RWQCB.

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COMMUNICATIONS: KEEPING THE PUBLIC INFORMED

WQA works to ensure that the public is regularly informed about progress on the ground-water cleanup and related water supply and quality issues.

EXTENSIVE OUTREACH AND COMMUNICATION PROGRAMS

EcoVoices Summer Science Program for Youth. This exciting program is a science, technology, engineering, and mathematics (STEM) rich hands-on program that provides young people lessons on the San Gabriel River watershed, including: groundwater quality, drought preparedness, pollution prevention and restorative biodiversity. It is delivered in a dynamic and theatrical way that helps students remember and retain what they hear.

English, Spanish and Chinese Newspaper Advertorials. WQA regularly publishes information in various newspapers in the region to provide updates on the groundwater cleanup.

Collaborative Chinese Language Television Interviews. The WQA Executive Director and Main San Gabriel Basin Watermaster General Manager jointly participate in interviews on Chinese language television.

Advertorial Distribution to Over 62,000 People. WQA regularly distributes advertorials with water quality and water supply information through the special sections of local newspapers.







Examples of recent advertorials with water quality and water supply information

ENGAGING WITH THE WATER INDUSTRY AND COMMUNITY

WQA participates intensively in water-related conferences, trainings, and tours. Below are a few examples:

- Presented at the National Groundwater Association Conference in Tennessee.
- Conducted a WOA 101 workshop.
- Made a presentation to the League of Women Voters.
- Spoke at the American Groundwater Trust conference on emerging contaminants.
- Conducted several briefings and tours, including for State Controller Betty Yee.
- Supported Important Recycled Water Legislation.
 Supported AB 869, which recognizes the importance of recycled water.



WQA Executive Director Ken Manning speaking at the Water 101 information session.

COLLABORATION WITH THE COALITION FOR ENVIRONMENTAL PROTECTION, RESTORATION AND DEVELOPMENT IS MAKING PROGRESS

WQA is participating in a working group—organized by the Coalition for Environmental Protection, Restoration and Development—focused on improving implementation of SWRCB DDW Policy 97-005, which regulates how highly impaired water sources can be permitted and used for drinking water. The working group asked WQA to produce a guidance manual for both DDW staff and water purveyors, to help make implementation easier and less costly.



FUNDING CHALLENGE: LONG-TERM TREATMENT AND REMEDIATION

The \$950 million invested in the cleanup to date has primarily covered facility construction, which represents just a fraction of the overall funding requirements. Long-term costs for treatment and remediation account for 75% of the total cost of Basin cleanup. Because Federal funding has been unavailable for several years, WQA is working to develop new sources of funds.

WQA WORKING ON ALL FRONTS TO SECURE FUNDING

STATE PROPOSITION 1: A CRITICAL ONGOING SOURCE OF FUNDING

- WQA has helped secure three Proposition 1 grants for a total of \$8.5 million, and continues to seek more.
- Statewide, a total of \$720 million is available for groundwater cleanup under Proposition 1.
- In addition, \$80 million is available for groundwater treatment and remediation under Section 79722 of Proposition 1, which has language very favorable to the San Gabriel Valley.

FEDERAL REQUESTS AND ACTIONS SEEKING NECESSARY FUNDS

- WQA sought a \$10 million appropriation for the San Gabriel Basin Restoration Fund for Fiscal Year 2017.
- WQA is working to amend Public Law 106-554 to provide five additional years of treatment and remediation on any project constructed under the San Gabriel Basin Restoration Fund.
- WQA is also paying administrative costs to the US Bureau of Reclamation to continue administration of past restoration fund agreements. These agreements have been on hold since 2010 because Congress has not appropriated funds for their administration.
- Congress has authorized \$54.4 million to WQA but has not appropriated the funds. WQA continues working to free up those funds for critically needed treatment projects.

Over \$950 Million Raised To Date \$470 Million in Unfunded Costs Remain ASSESSMENT HELD STEADY. The Assessment on Prescriptive Pumping Rights that helps fund WQA's programs remains steady at \$10 for the fifth year in a row. The Assessment began at \$14 per acre-foot pumped in 1993–94 and was decreased to \$7.25 for 11 years.

WQA HELPS OBTAIN PROPOSITION 1 FUNDING FOR THREE CLEANUP SITES

Proposition 1 is providing critically needed funding during a long period in which Federal funding is unobtainable. WQA has been actively working with the State at many levels to ensure the maximum amount of funding is available to San Gabriel Valley groundwater cleanup projects.

PROJECTS FUNDED BY PROPOSITION 1

WQA worked closely with local agencies to apply for funding for 11 projects. Three were funded.

\$7.1 Million Grant to WNOU. WQA helped the DTSC obtain an important Proposition 1 grant of \$7.1 million to modify the WNOU project to allow for increased pumping of the extraction wells. This will make the project more effective at containing the contaminant plume while providing potable water to the public.

\$1.1 Million Grant to B6 Plant for Updated Treatment Technology. San Gabriel Valley Water Company's B6 treatment facility received \$1.1 million in Proposition 1 grant funding. The funding will be used to construct a new, advanced UV-treatment system. This new facility will require less energy to operate and will optimize treatment for 1,4-Dioxane and other contaminants.

WQA Whitmore Street Project Earns Funding. WQA's Whitmore Street Groundwater Remediation Facility project obtained \$115,000 in grant funding. This project collects groundwater samples to address data gaps for VOCs and 1,4-Dioxane contamination, and provides further analysis to pinpoint the source of contamination in an area of South El Monte. The Whitmore Street project could lead to cleanup or prevention of the spread of VOCs and 1,4-Dioxane in the Basin.

WQA CONTINUES TO SEEK FUNDING FOR UNFUNDED PROJECTS

Proposition 1 funding focuses on regional groundwater cleanup. WQA considers its projects to be integral to a larger regional cleanup and is working with State officials to have them recognized as such. Because of a lack of alternative sources of funds, it may be necessary to seek out loans or other new funding sources to match Proposition 1 funding of future projects.

TROUBLING CONCERNS REGARDING LONG-TERM FUNDING

If WQA is unable to secure additional Federal funding in the very near future, a number of high value groundwater cleanup projects in the San Gabriel Basin could be forced to shut down, jeopardizing the efforts to contain the plume of contaminants, and reducing a much-needed source of water.

WATER QUALITY AUTHORITY WHO WE ARE:

Over its 25-year history, San Gabriel Basin Water Quality Authority (WQA) has worked with its partners to clean up 1.6 million acre-feet of contaminated groundwater—enough to meet the water needs of Basin customers for almost six years.

WHAT WE DO:

COORDINATE Groundwater Cleanup

INFORM the Public

CHARACTERIZE Groundwater Contamination

ASSIST Cooperating Respondents

PREVENT or Minimize Migration of Contamination

REMOVE Contamination Quickly and Efficiently

PROTECT Groundwater Resources

FUND WQA Projects and Programs with Outside Money



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