



# The Value of **Water**

## 2018 WATER QUALITY **REPORT**



### Water Quality



Learn about the sources and quality of your drinking water, how we monitor it and protect it.

### Sustainability



Discover how you can prevent water waste and protect our most precious resource.

### Santa Ana Kids



Just for kids ... explore and learn about your water, the environment, contests and more.

### Santa Ana News



Read about the latest news, upcoming campaigns, important telephone numbers and more.

## A Message From The City Manager



It was 1869 when William H. Spurgeon rode in on horseback, purchased 74.2 acres of land, built his town and named it Santa Ana. This year marks the 150-year anniversary of the founding of our City and I am proud to be a part of a community that holds a rich heritage deeply rooted in history.

The 120 registered landmarks throughout Santa Ana are a testament to our legacy, such as the historic clock tower that crowns the Spurgeon building on 4th and Sycamore, the Old Orange County Courthouse which is now home to the Orange County History Center, and our historic Santa Ana Water Tower that was erected in 1928.

Standing 153 feet tall as the City's welcome sign, our water tower is one of the most visible and iconic landmarks in Orange County. It not only serves as a symbol of our City, it plays an important role in our water distribution system with its storage capacity of 800,000 gallons of water that services the local surrounding neighborhoods.

It is also an important reminder of our award winning water. Santa Ana has earned recognition for its high quality,

best tasting tap water among all other municipalities nationwide. Santa Ana residents enjoy this valuable resource at a low cost...among the lowest in Orange County. These merits do not come easy. They require vigilant monitoring and setting stringent standards that exceed drinking water health standards required by state and federal agencies. They also require efficient management, ongoing infrastructure improvements, long term planning and a commitment to curb water rate increases and help keep water available and affordable for generations to come.

We have many reasons to be proud of our community. As City Manager, I am honored to join Mayor Pulido and the City Council in hosting Santa Ana's sesquicentennial year. We will be celebrating with official City observances, activities and community events leading up to our 150-year anniversary on October 27, 2019. Please be sure to check the City's website for a listing of the special events we have planned and join us in celebrating this important milestone in our history.

Sincerely,

A handwritten signature in black ink that reads "Kristine Ridge".

Kristine Ridge  
City Manager  
City of Santa Ana



## A Message From Fuad Sweiss



Benjamin Franklin, one of our Founding Fathers, stated, "When the well is dry, we know the worth of water." This could not be truer today. Here in the United States, we expect safe, clean water to flow when we turn on the tap. While the average American may take this for granted, there are one billion people in the world that lack access to potable water. This awareness can be a good reminder to us all of the value of water and importance of managing this essential natural resource in the face of ever increasing demands, degrading environmental conditions and climate change.

This year's water quality report focuses on the *value* of water and what we do, as your Public Works Agency, to ensure that the water coming out of your tap is of the highest quality. Our commitment to Santa Ana water customers extends beyond constant monitoring, sampling, testing and maintenance. It drives our long term planning and capital improvement projects to make sure our water supply and other public works, such as our streets, remain reliable and sustainable to serve the needs of our City for generations to come.

You will read about our improvements to Santa Ana's infrastructure as well as exciting plans to advance important initiatives and pursue new opportunities that will enhance quality of life and economic development.

One opportunity includes the 11 areas in Santa Ana that qualify as "Opportunity Zones," defined as underserved areas where new investments, under certain conditions, may be eligible for preferential tax treatment. Tax incentive investment in Santa Ana has the potential to become an economic engine that will promote commercial and residential development, attract more business and create new jobs for our community. How this development will impact our infrastructure, public services and public safety requires proper planning. With our big picture thinking and interdepartmental, long-term planning in place, we remain one step ahead in preparing for the City's future needs.

We are pleased to present to you this year's water quality report. Please review it and feel free to contact us with any questions you may have. On behalf of the City of Santa Ana Public Works Agency and the men and women of the Water Resources Division, thank you for allowing us to serve you.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Fuad Sweiss'.

Fuad Sweiss, PE, PLS  
Executive Director  
Public Works Agency  
City of Santa Ana

“When the well is dry,  
we know the worth of water.”

— Benjamin Franklin

Safe drinking  
water and  
sanitation are  
indispensable  
to sustaining  
healthy livelihoods  
and maintaining  
the dignity of all  
human beings.

Report  
Sections

# The Value of **Water**



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Water Quality

**Water** is the thread that weaves together the daily lives of all humanity. We are united in our dependence on water.



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Sustainability

Access to clean water is not only a global sustainability issue, it's a mandate for the dignity of human life and progress.



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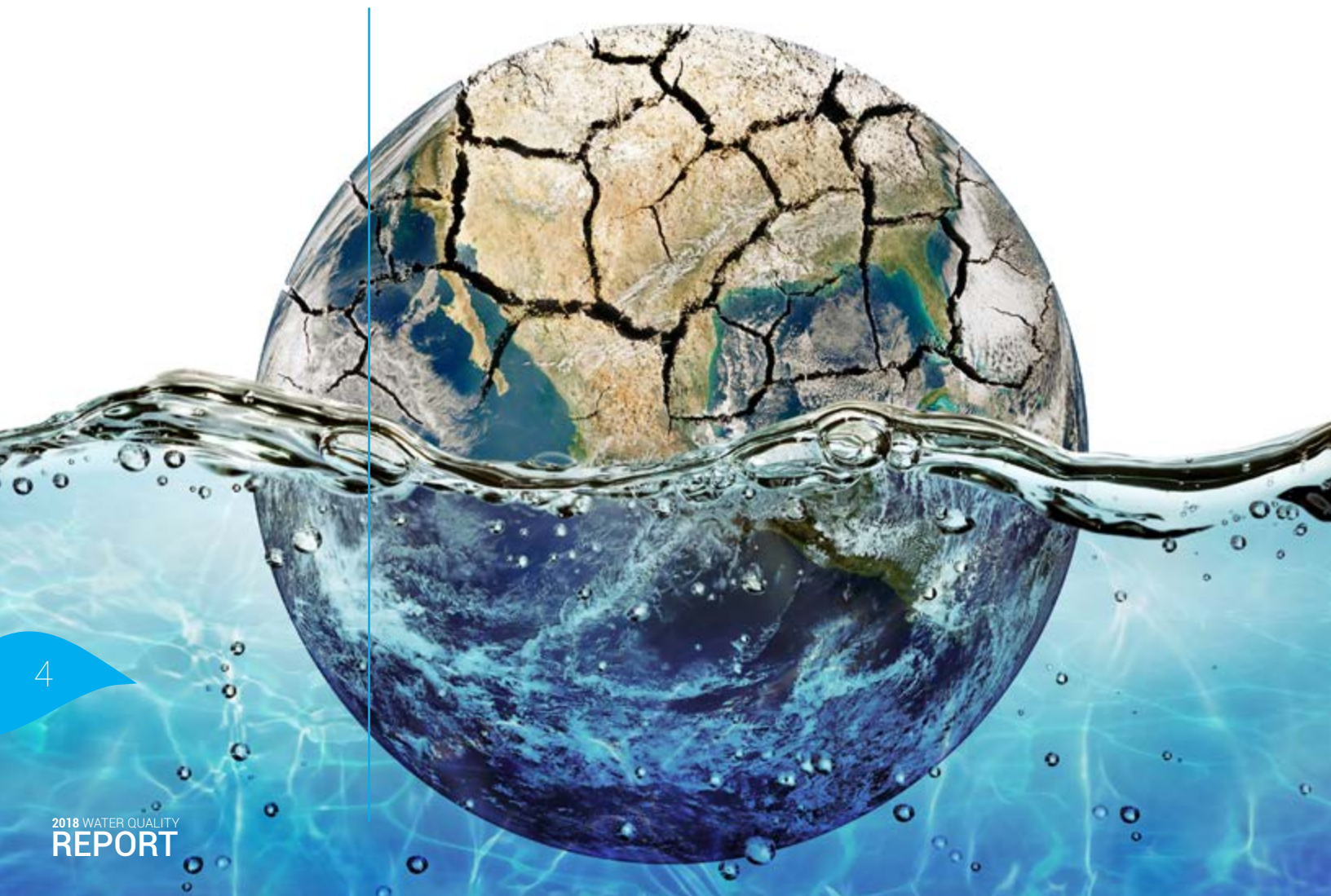
Santa Ana **KPS**

**And it begins with  
how we value water.**



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Santa Ana News



## About This Report

The Consumer Confidence Report (CCR) is an annual water quality report that informs you where your drinking water comes from and what's in it.

The focal point of the CCR is a series of tables that list the results of year-round monitoring for more than 120 constituents. Included in these tables is the quantity of each constituent found in Santa Ana's water supply, how it compares with the allowable state and federal limits, and the constituent's likely origin. Only the constituents that are found in Santa Ana's water are listed in the data tables. Bottled water is not covered in this report.

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Your tap water met all U.S. EPA and State drinking water health standards in 2018. Santa Ana vigilantly safeguards its water supplies and once again, we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard.

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Read this report to learn more about the water provided by Santa Ana and what the City is doing to ensure the highest quality of water is delivered to you year after year.

The following questions and answers, will explain the important elements of the data tables and more.

### Where does Santa Ana get its water?

The City of Santa Ana relies on two sources for the 12.5 billion gallons of water it supplies each year: 70 percent is groundwater and 30 percent is imported water purchased from Metropolitan Water District of Southern California (MWD). MWD is a regional wholesaler that provides water to 26 member public agencies like Santa Ana throughout Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties.

**Groundwater** – Groundwater accumulates and is stored beneath the surface of the earth and then pumped to the surface by 20 city-owned wells.

**Imported** – MWD brings Colorado River water from Lake Havasu through the 242-mile Colorado River Aqueduct. It also transports water from Northern California via the State Water Project's 444-mile California Aqueduct. The water is then treated at either the Diemer Filtration Plant in Yorba Linda or the Weymouth Water Treatment Plant in the City of La Verne before it is delivered to Santa Ana. There are seven MWD connections located in the city.

Most of our customers receive a blending of the two sources: groundwater and imported water. You can read about the water quality standards for each of these sources in the data tables. We have listed groundwater and imported water in separate tables. An additional table lists the water quality standards for Santa Ana's water distribution system.



### What's in my drinking water?

Your tap water may contain different types of chemicals (organic and inorganic), microscopic organisms (e.g., bacteria, algae, viruses) and radioactive materials (radionuclides), many of which are naturally occurring. Health agencies require monitoring for these constituents or substances, because at certain levels they could make a person sick. The column marked "Constituents" lists the substances found in the water Santa Ana delivers.

### What are the maximum allowed levels for constituents in drinking water?

Health agencies have maximum contaminant levels (MCL) for constituents so that drinking water is safe and looks, tastes and smells good. A few constituents have the letters "TT" (Treatment Technique) in the MCL column because they do not have a numerical MCL. Instead, they have certain treatment requirements that have to be met. One of the constituents, total chlorine residual, has an MRDL (maximum residual disinfection level) instead of an MCL.

The MRDL is the maximum level of a disinfectant added for water treatment that is allowed in water. While disinfectants are necessary to kill harmful microbes, drinking water regulations protect against too much disinfectant being added. Another constituent, turbidity, has a requirement that 95 percent of the measurements taken must be below a certain number. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the efficiency of the filtration system.

### Why are some of the constituents listed in the section labeled "Primary Standards" and others in the "Secondary Standards"?

Constituents that are grouped in the "Primary Standards" section may be unhealthy at certain levels. Constituents that are grouped under the "Secondary Standards" section can affect the appearance, taste and smell of water, but do not affect the safety of the water unless they also have a primary standard. Some constituents (e.g., aluminum) have two different MCLs, one for health-related impacts, and another for non-health-related impacts.



## How do I know how much of a constituent is in my water and if it is at a safe level?

With a few exceptions, if the average amount of a constituent found in tap water over the course of a year is no greater than the MCL, then the regulatory requirements are considered to be satisfied. The highest and lowest levels measured over a year are shown in the range. Requirements for safety, appearance, taste and smell are based on the average levels recorded and not the range.

## How do constituents get into our water supply?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic contaminants**, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides** that may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application and septic systems.
- **Radioactive contaminants**, that can be naturally-occurring or be the result of oil and gas production and mining activities.

## Water Quality



### Are there any potential sources of contamination in our system?

**Groundwater**—An assessment of the drinking water wells for the City of Santa Ana was completed in December 2018. Santa Ana's wells are considered most vulnerable to historic agricultural activities, golf courses and application of fertilizers, which are associated with contaminants detected in the water supply. Our wells are also considered most vulnerable to chemical/petroleum pipelines, chemical/petroleum processing/stores, dry cleaners, gas stations, junk/ scrap/salvage yards, metal plating/finishing/ fabrication, plastics/synthetics producers and sewer collection systems, although constituents associated with these activities were *not* detected.

**Imported Water**—Every five years, MWD is required by the Division of Drinking Water (DDW) to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters. MWD submitted to DDW its most recent Watershed Sanitary Surveys: the Colorado River Watershed Sanitary Survey-2015 Update and the State Water Project Watershed Sanitary Survey-2016 Update.

You can request a copy of the most recent Watershed Sanitary Surveys by calling Metropolitan at 213-217-6000.

### Safeguarding Our Groundwater Is Everyone's Responsibility

Here's what you can do to help protect Santa Ana's drinking water source:

- Limit your use of fertilizers and pesticides. The hazardous chemicals in both can reach our drinking water source.
- Pick up after your pets.
- Dispose of chemicals properly; take used motor oil and paint to a recycling center.
- Find a watershed protection organization, like the Santa Ana Watershed Association, and volunteer to help.





## Water & Your Health

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's (U.S. EPA) Safe Drinking Water Hotline at 800-426-4791.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. Additional information on bottled water is available on the California Department of Public Health's website ([bit.ly/BottledWaterFAQs](http://bit.ly/BottledWaterFAQs)).

## Water Quality



## People with Weakened Immune Systems

Although Santa Ana meets all drinking water standards, some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other

immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.



## Additional Information of Interest

### Cryptosporidium.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. To date, cryptosporidium has not been detected in our water supply. U.S. EPA/CDC (U.S. Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791. For more information, visit [cdc.gov/parasites/crypto/index.html](http://cdc.gov/parasites/crypto/index.html).

### Fluoride.

The City of Santa Ana receives approximately 30 percent of its water supply from MWD. Beginning in October 2007, MWD joined a majority of the nation's public water suppliers in adding fluoride to the treated water it supplies to state water agencies, a plan approved by the CDC and the State Water Resources Control Board (SWRCB). Santa Ana's well water has a naturally occurring fluoride range level of 0.18 to 0.5 ppm. Water provided by MWD has been adjusted to the optimal level for dental health of 0.7 to 0.8 parts per million. Additional information may be found by calling MWD's Water Quality Information Hotline at 800-354-4420. You can also download MWD's fact sheet at [bit.ly/MWD\\_flouride](http://bit.ly/MWD_flouride) or visit [bit.ly/ADA\\_flouride](http://bit.ly/ADA_flouride).

### Lead.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Santa Ana is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the U.S. EPA Safe Drinking Water Hotline at 800-426-4791 or at [epa.gov/lead](http://epa.gov/lead).



**Perchlorate.**

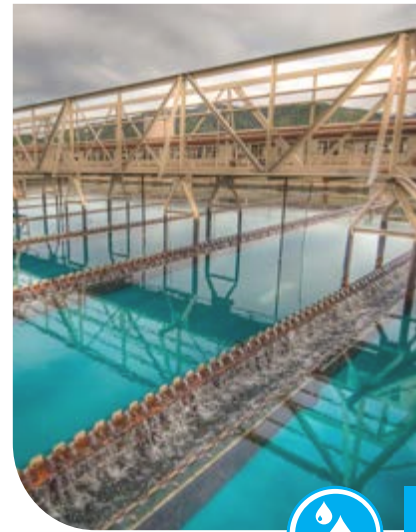
Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse effects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.

## Get Involved

If you would like to be involved in issues and decisions that affect the quality and cost of your drinking water, City Council meetings are open to the public and held at 5:45 p.m. on the first and third Tuesday of each month. The meeting location is at City Council Chambers, 22 Civic Center Plaza Santa Ana, CA 92701.

For more information, contact:

**Santa Ana City Council**  
20 Civic Center Plaza  
P.O. Box 1988, M31  
Santa Ana, CA 92702  
phone: 714-647-6900  
fax: 714-647-6954



# Glossary

Use this glossary to understand the terms, abbreviations, quality standards and measurements used in the data tables.

## Terms & Abbreviations

### Constituents

Components or elements found in drinking water.

### Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

### Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

### Maximum Residual Disinfectant Level (MRDL)

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

### Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

### Primary Drinking Water Standard (PDWS)

The MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

### Public Health Goal (PHG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency (Cal/EPA).

### Regulatory Action Level

The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

### Treatment Technique (TT)

A required process intended to reduce the level of contaminants in drinking water that are difficult and sometimes impossible to measure directly.

### Additional Abbreviations

- AL** = Regulatory Action Level
- NA** = Not Applicable
- ND** = Not Detected
- NL** = Notification Level
- SMCL** = Secondary MCL



## Measurements

Santa Ana conducts extensive sampling and testing to ensure your water meets all water quality standards. In 2018, we collected 11,555 samples for contaminants at various sampling points in our water system; all of which were below state and federal maximum allowable levels. Contaminants are measured in:

**Parts per million (ppm)**  
or milligrams per liter (mg/L)

**Parts per billion (ppb)**  
or micrograms per liter (µg/L)

**PicoCuries per liter (pCi/L)**  
A measurement of radioactivity in water.

**Micromhos per centimeter (umho/cm)**  
A measurement for conductivity of water.

**Grains per gallon (grains/gal)**  
A measurement of water hardness often used for sizing household water softeners. One grain per gallon is equal to 17.1 mg/L of hardness.

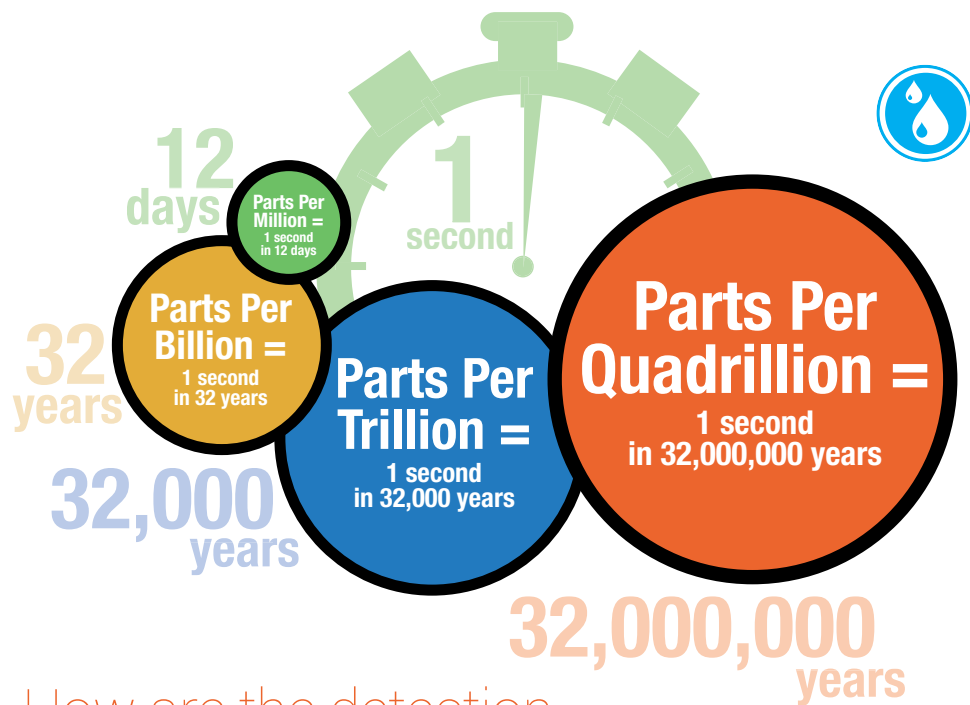
**Nephelometric Turbidity Units (NTU)**  
A measurement of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.

## Quality Standards

**Primary Standards**  
Mandatory health-related standards that may cause health problems in drinking water.

**Secondary Standards**  
Aesthetic standards (non health-related) that could cause odor, taste, or appearance problems in drinking water.

**Unregulated Parameters**  
Information about contaminants that are monitored, but are not currently regulated by federal and state health agencies.



How are the detection levels we measure equivalent to time?



## How To Read The Data Tables

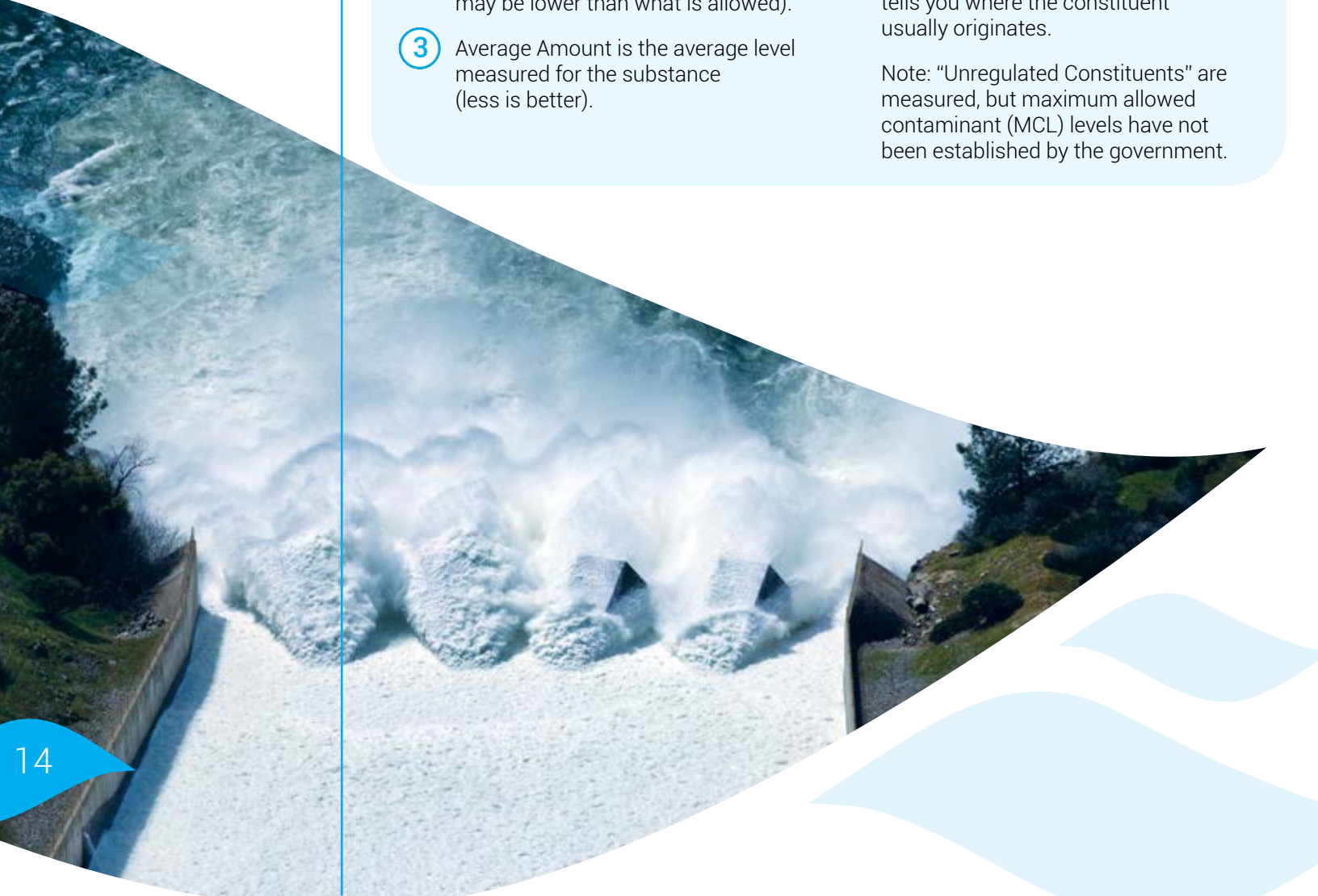
You will find three data tables showing a list of constituents tested in each of the following water sources:

- Santa Ana Distribution System
- Santa Ana Groundwater
- Metropolitan Water District of Southern California Treated Surface Water

For each table, begin with the Constituent and read across.

- 1 The column marked "Constituents" lists the substances found in the water Santa Ana delivers.
- 2 MCL is the highest level of substance (contaminant) allowed. MCLG is the goal level for that substance (this may be lower than what is allowed).
- 3 Average Amount is the average level measured for the substance (less is better).
- 4 Range of Detections is the highest and lowest amounts measured.
- 5 A "No" under MCL Violation indicates government requirements were met.
- 6 Typical Sources in Drinking Water tells you where the constituent usually originates.

Note: "Unregulated Constituents" are measured, but maximum allowed contaminant (MCL) levels have not been established by the government.





## 2018 CITY OF SANTA ANA DISTRIBUTION SYSTEM WATER QUALITY

1	2	3	4	5	6
Type	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source in Drinking Water
<b>DISINFECTANT RESIDUAL AND DISINFECTION BY-PRODUCTS</b>					
Chlorine Residual (ppm)	(4 / 4)	0.94	ND - 2.96	No	Disinfectant Added for Treatment
Total Trihalomethanes (ppb) <sup>1</sup>	80	28	ND - 29	No	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb) <sup>1</sup>	60	9	ND - 7.1	No	Byproducts of Chlorine Disinfection
<b>AESTHETIC QUALITY</b>					
Color (color units)	15*	3	ND - 7.5	No	Naturally-occurring organic materials
Odor (threshold odor number)	3*	1	1 - 2	No	Naturally-occurring organic materials
Turbidity (ntu)	5*	<01	ND - 1.3	No	Erosion of natural deposits

Eight locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids. Fifty locations are tested monthly for color, odor and turbidity. \*Chemical is regulated by a secondary standard to maintain aesthetic qualities (color, odor, and taste).

Microbiological	MCL	MCLG	Highest Monthly Percent Positives	MCL Violation?	Typical Sources in Drinking Water
Total Coliform Bacteria <sup>2</sup>	5.0	0	1.2%	No	Naturally present in the environment

No more than 5.0% of the monthly samples may be positive for total coliform bacteria. The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/E.coli, constitutes an acute MCL violation.

## LEAD AND COPPER ACTION LEVELS AT RESIDENTIAL TAPS

Chemical	Action Level (AL)	Public Health Goal	90th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation?	Typical Source in Drinking Water
Lead (ppb) <sup>3</sup>	15	0.2	ND	0 / 135	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) <sup>3</sup>	1.3	0.3	0.14	0 / 135	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

In 2018, 135 residences were tested for lead and copper at-the-tap. Lead was detected in 3 samples, none of which exceeded the AL for lead. Copper was detected in 95 samples, none of which exceeded the AL for copper. A regulatory action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow. In 2018, 63 schools submitted requests to be sampled for lead.

## UNREGULATED CHEMICALS REQUIRING MONITORING IN THE DISTRIBUTION SYSTEM

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
Chlorate (ppb)	800	NA	49.8	37.5 - 85.8	2014
Chromium, Hexavalent (ppb)	NA	0.02	0.73	0.09 - 1.1	2014
Chromium, Total (ppb) **	MCL = 50	MCLG = 100	0.56	ND - 0.9	2014
Molybdenum, Total (ppb)	NA	NA	4.38	3.8 - 5.2	2014
Strontium, Total (ppb)	NA	NA	715	547 - 959	2014
Vanadium, Total (ppb)	50	NA	2.45	2.3 - 2.8	2014

\*\* Total chromium is regulated with an MCL of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 10 ppb. Total chromium was included as part of the unregulated chemicals requiring monitoring.

# 2018 Water Quality Table



## 2018 CITY OF SANTA ANA GROUNDWATER QUALITY

Chemical	1 MCL	2 PHG (MCLG)	3 Average Amount	4 Range of Detections	5 MCL Violation?	6 Most Recent Sampling Date	Typical Source of Chemical
<b>Radiologicals</b>							
Gross Alpha (pCi/L)	15	(0)	<3	ND - 13.96	No	2018	Erosion of Natural Deposits
Uranium (pCi/l)	20	0.43	3.05	ND - 8.18	No	2018	Erosion of Natural Deposits
<b>Inorganic Chemicals</b>							
Barium (ppm)	1	2	< 0.1	ND - 0.14	No	2018	Erosion of Natural Deposits
Fluoride (ppm)	2	1	0.36	0.18 - 0.49	No	2018	Erosion of Natural Deposits
Nitrate (ppm as N)	10	10	2	0.44 - 3.5	No	2018	Runoff and Leaching from Fertilizer Use; Leaching from Septic Tanks and Sewage; Erosion of Natural Deposits
Nitrate + Nitrite (ppm as N)	10	10	2	0.44 - 3.5	No	2018	Runoff and Leaching from Fertilizer Use; Leaching from Septic Tanks and Sewage; Erosion of Natural Deposits
Perchlorate (ppb)	6	1	< 4	ND - 4	No	2018	Discharge from Industrial Operations
<b>Secondary Standards*</b>							
Chloride (ppm)	500*	NA	52.7	20.4 - 98.9	No	2018	Erosion of Natural Deposits
Specific Conductance (umho/cm)	1,600*	NA	684	545 - 1,140	No	2018	Substance that forms Ions when in Water
Sulfate (ppm)	500*	NA	91	63.8 - 134	No	2018	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	NA	414	256 - 602	No	2018	Erosion of Natural Deposits
Turbidity (ntu)	5*	NA	< 0.1	ND - 0.2	No	2018	Soil Runoff
<b>Unregulated Constituents</b>							
Alkalinity, total as CaCO3 (ppm)	Not Regulated	NA	165	154 - 186	NA	2018	Erosion of Natural Deposits
Bicarbonate (ppm as HCO3)	Not Regulated	NA	201	188 - 2227	NA	2018	Erosion of Natural Deposits
Boron (ppm)	NL=1	NA	< 0.1	ND - 0.22	NA	2018	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	NA	75.8	55.3 - 114	NA	2018	Erosion of Natural Deposits
Hardness, total (grains/gall)	Not Regulated	NA	15	11 - 22	NA	2018	Erosion of Natural Deposits
Hardness, total (ppm as CaCO3)	Not Regulated	NA	250	189 - 372	NA	2018	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	NA	14.7	11.7 - 21.5	NA	2018	Erosion of Natural Deposits
pH (pH units)	Not Regulated	NA	7.8	7.5 - 8	NA	2018	Acidity Hydrogen Ions
Potassium (ppm)	Not Regulated	NA	2.3	1.7 - 3	NA	2018	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	NA	45.2	35.4 - 69.9	NA	2018	Erosion of Natural Deposits

\* Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

## UNREGULATED CHEMICALS REQUIRING MONITORING

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
1,4-Dioxane (ppb)	1	NA	0.14	ND - 0.24	2014
Chlorate (ppb)	800	NA	63.3	21.1 - 249	2014
Chromium, Hexavalent (ppb)	NA	0.02	1.01	0.21 - 2.06	2014
Chromium, Total (ppb) **	MCL = 50	MCLG = 100	0.85	ND - 1.8	2014
Molybdenum, Total (ppb)	NA	NA	4.92	2.6 - 11.1	2014
Strontium, Total (ppb)	NA	NA	529	244 - 766	2014
Vanadium, Total (ppb)	50	NA	2.69	1.4 - 5.2	2014

\*\* Total chromium is regulated with an MCL of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 10 ppb. Total chromium was included as part of the unregulated chemicals requiring monitoring.





## 2018 Water Quality Table

### 2018 MWD TREATED SURFACE WATER

1 Chemical	2 MCL	2 PHG (MCLG)	3 Average Amount	4 Range of Detections	5 MCL Violation ?	6 Typical Source in Drinking Water
<b>Inorganic Chemicals - Tested in 2018</b>						
Aluminum (ppm)	1	0.6	0.124	ND - 0.31	No	Treatment Process Residue, Natural Deposits
Barium (ppm)	1	2	0.117	0.117	No	Refinery Discharge, Erosion of Natural Deposits
Bromate (ppb)	10	0.1	2	ND - 4.7	No	Byproduct of Drinking Water Disinfection
Fluoride (ppm) treatment-related	2	1	0.7	0.6 - 0.9	No	Water Additive for Dental Health
<b>Secondary Standards - Tested in 2018</b>						
Aluminum (ppm)	200*	600	124	ND - 310	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	NA	94	92 - 95	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	NA	ND	ND - 1	No	Naturally-occurring Organic Materials
Odor (threshold odor number)	3*	NA	2	1 - 4	No	Naturally-occurring Organic Materials
Specific Conductance (umho/cm)	1,600*	NA	906	852 - 961	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	NA	199	178 - 220	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	NA	565	523 - 607	No	Runoff or Leaching from Natural Deposits
<b>Unregulated Constituents - Tested in 2018</b>						
Alkalinity, total as CaCO3 (ppm)	Not Regulated	NA	106	99 - 114	NA	Runoff or Leaching from Natural Deposits
Boron (ppm)	NL=1	NA	0.13	0.13	NA	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	NA	58	52 - 65	NA	Runoff or Leaching from Natural Deposits
Hardness, total as CaCO3 (ppm)	Not Regulated	NA	240	219 - 262	NA	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gallon)	Not Regulated	NA	14	13 - 15	NA	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	Not Regulated	NA	23	21 - 25	NA	Runoff or Leaching from Natural Deposits
pH (pH units)	Not Regulated	NA	8.1	8.1	NA	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	NA	4.4	4.0 - 4.8	NA	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	NA	92	86 - 98	NA	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	TT	NA	2.4	2.1 - 2.7	NA	Various Natural and Man-made Sources
<b>Turbidity - combined filter effluent <sup>4</sup></b> Metropolitan Water District Diemer Filtration Plant		<b>Treatment Technique</b>	<b>Turbidity Measurements</b>		<b>TT Violation?</b>	<b>Typical Source of Chemical</b>
1) Highest single turbidity measurement		0.3 NTU	0.07		No	Soil Runoff
2) Percentage of samples less than 0.3 NTU		95%	100%		No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms.

Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT).

A treatment technique is a required process intended to reduce the level of chemicals in drinking water that are difficult and sometimes impossible to measure directly. NTU = nephelometric turbidity units

### UNREGULATED CHEMICALS REQUIRING MONITORING

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
Chromium, Total (ppb) **	MCL = 50	MCLG = 100	<0.2	ND - 0.5	2014
Germanium (ppb)	NA	NA	0.1	ND - 0.4	2018
Manganese (ppb) ***	SMCL = 50	NA	2.2	0.8 - 3.3	2018
Molybdenum, Total (ppb)	NA	NA	4.8	4.5 - 5.3	2014
Strontium, Total (ppb)	NA	NA	938	854 - 1,070	2014
Vanadium, Total (ppb)	50	NA	2.8	2.3 - 3	2014

SMCL = Secondary MCL

\*\* Total chromium is regulated with an MCL of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 10 ppb. Total chromium was included as part of the unregulated chemicals requiring monitoring.

\*\*\* Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated chemicals requiring monitoring.

## Notes

### 1. Trihalomethanes and Haloacetic Acids.

Eight locations in the distribution system are tested quarterly for total trihalomethanes (TTHMs) and haloacetic acids (HAAS).

### 2. Coliform.

No more than 5% of the monthly samples may be positive for total coliform bacteria. The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/E.coli, constitutes an acute MCL violation. This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems are required to comply with the state Total Coliform Rule. Effective April 1, 2016, all water systems are also required to comply with the federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct

an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.

### 3. Lead and Copper.

In 2018, 135 residences were tested for lead and copper at-the-tap. Lead was detected in 3 of the samples, none of which exceeded the AL for lead. Copper was detected in 95 samples, none of which exceeded the AL for copper. A regulatory action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow. In 2018, 60 schools submitted requests to be sampled for lead.

### 4. Combined Filter Effluent Turbidity (NTU).

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT). A treatment technique is a required process intended to reduce the level of chemicals in drinking water that are difficult and sometimes impossible to measure directly.



# The Right To Safe Water For All

Water. H<sub>2</sub>O. We shower with it, brush our teeth, wash and cook with it. We drink it. It covers over seventy-one percent of our planet. It's not just a basic necessity, it's the building block of all life on earth. Humans are 60 percent water themselves. No matter who we are, what we do, or where we live—we're all united by water.

Water is so much more than a resource for consumption. With over seventy percent of freshwater being utilized in the agricultural sector globally, water is a major player in industry and commerce—fostering an international, interconnected ecosystem of human and economic wellness.

Sadly, WHERE we live determines access to this interconnected wellness. In fact, according to the 2018 New Climate Economy Report on Water, approximately 2.1 billion people live without access to safe, clean water and over 4.3 billion people live in areas where the demand for safe, fresh water vastly outnumbers the resources that can deliver it.

What does water scarcity look like? It looks like outbreaks of fatal waterborne diseases, which 4.5 billion people across the globe

experience today. It looks like height limitation and bone frailty, which are not only more frequent in children born during droughts, but in fact, genetically passed down to their descendants too. In recent studies among young women in Niger, where the responsibility of gathering water resources for the family falls upon the shoulders of women, the drought's impact was seen as women's literacy rates fell. This, in turn, sparked a steep decline in their economic power and financial prosperity.

Last year, the United Nations' Intergovernmental Panel on Climate Change (IPCC) reported that we have twelve years to limit climate change to avert a global crisis. And with humanity's population surging, we will need to produce sixty to seventy percent more food to sustain ourselves. History speaks for itself: where droughts occur, poverty, famine and conflict inevitably follow. A call to action has never been more pressing and more personal.

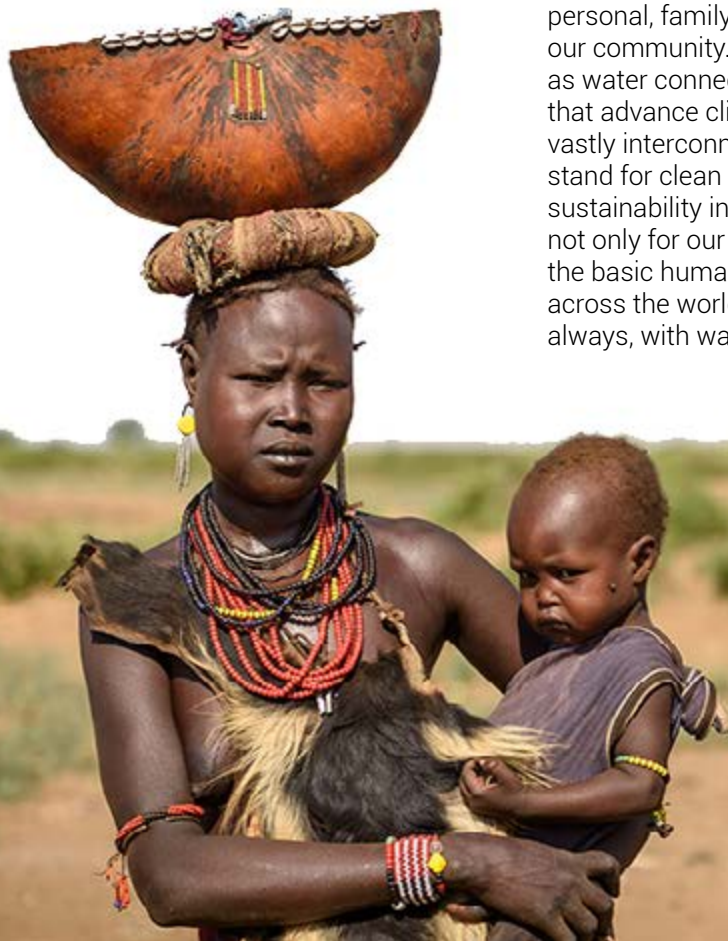
## What Can We Do?

We can advocate for clean and sustainable water practices in all areas of our lives: personal, family, the workplace and our community. Remember that, just as water connects all life, the factors that advance climate change are also vastly interconnected. When we take a stand for clean energy and support local sustainability initiatives, we come together not only for our own benefit, but to uphold the basic human rights of all peoples across the world. It begins and ends, always, with water which unites us all.

## Sustainability



Access to clean water is not only a global sustainability issue, it's a mandate for the dignity of human life and progress.



## The Value of Water

In the developed world, water is largely taken for granted. It's accessible at every tap, treated and filtered for—what may seem to many—our unlimited use.

When we turn on the faucet and water flows—to take a shower, quench our thirst or cook, clean and wash our hands—we get our basic needs met. Because of this accessibility, it is easy to forget the complexity of the system needed to collect, monitor, deliver and, eventually, treat this water before sending it back to the natural environment. It is only at the moment when water stops flowing that people recognize the value of water—when it's not available.

Water is in the cup of coffee we drink each morning. It's what helps produce much of the food we eat. It's our most critical defense against a raging fire. It keeps surgical tools and equipment clean. It fuels scientific and medical research. And it's used in manufacturing in almost every product we use from iPhones, computers and cars. It's hard to imagine our daily lives without water. Now can you imagine an entire community without water?

### A Common Thread

Water is the thread that weaves together our daily lives. We are united in our dependence on water and the infrastructure that connects, protects and supports it. Ongoing access to clean, safe water keeps our communities healthy, our cities running and our economies growing as well as our way of life.

Without access to a sustainable water supply, our community would be at risk. Inadequate water and wastewater infrastructure would disrupt all services, impacting our medical facilities, schools, daycares and fire stations, just to mention a few. Nearly every aspect of our lives is connected to water. Without clean water and clean water services, our lives would stop. The high quality way of life we enjoy would not be possible without water and the infrastructure that fuels it.

### How Many Gallons of Water Does It Take?

19  
to grow one apple



32  
to make one glass of wine



2,110  
to make one pair of shoes



1,230  
to yield one beef steak



40,000  
to make one car



Source: Science Media Center 2009



## The Invisible Infrastructure & Services

While essential, water infrastructure is largely invisible. Few people realize what it takes to collect, treat and deliver clean drinking water every day or how wastewater is cleaned so that it can be safely reused or returned to the environment.

Santa Ana's Water Resources Division is committed to providing safe and reliable drinking water for more than 45,000 customers. We carefully manage the operations of our 20 city-owned wells, 8 pumping stations, 50 water quality monitoring stations, 8 storage reservoirs, 480 miles of water pipelines, as well as our sewer system consisting of sewer lines, manholes, lift stations and trunk sewers. Few people think about the invisible infrastructure and services we provide 24 hours a day, 365 days a year until a water main breaks or they are without water.

Your water and sewer bill ensures that you and your community have reliable access to clean, safe water. You can read about the investments we are making in our infrastructure to ensure you have reliable access to clean, safe water in the article titled "Your Dollars Working For You."

## Do You Value Water?

The value of water is not simply what it allows us to do. The value of water is in recognizing that it is an inseparable part of our families and communities. Ongoing access to clean, safe water is critical to our economy, health and way of life. We are united in our dependence on water and the infrastructure that connects, protects and supports it.

As water supplies have tightened with climate change, we have gradually become aware of the value of water and taken on greater roles in water stewardship and conservation.

There's a lot you can do:

- Use water-efficient appliances and devices inside your home and outdoors.
- Practice water saving habits.
- Protect our groundwater by not littering, picking up after your pets and disposing chemicals properly.
- Get involved by volunteering to clean up a nearby waterway or beach.

Let us all value and engage with water in new ways that ensure our collective wellbeing, sustainability and resilience.

## Sustainability

One-fifth of the US economy would grind to a halt without a reliable and clean source of water.

1/5



## A Greener, More Environmentally Responsible City

In our effort to secure drought-proof water sources, the City of Santa Ana has introduced a new Recycled Water Master Plan. Our current recycled water system is owned and operated by the Orange County Water District (OCWD). Known as the Green Acres Project (GAP), it is limited in its scope and only serves a small portion of the city.

The master plan is a long term planning tool that (1) maps out potential new recycled water users, (2) sets the level of funding required to expand the infrastructure of our current system to bring recycled water deeper into the City, (3) provides a framework for design and construction projects, and (4) guides capital improvement schedules and budgets for all future operations. In fact, it is a critical component used by City staff to pursue grant-funding opportunities. Most importantly, it relieves our dependency on imported water and creates a blueprint for a sustainable future.

### More Beneficial To Residents

Though California is officially out of its more recent drought, another drought is only a matter of time. History shows that climate trends in California are cyclical: typically between two to

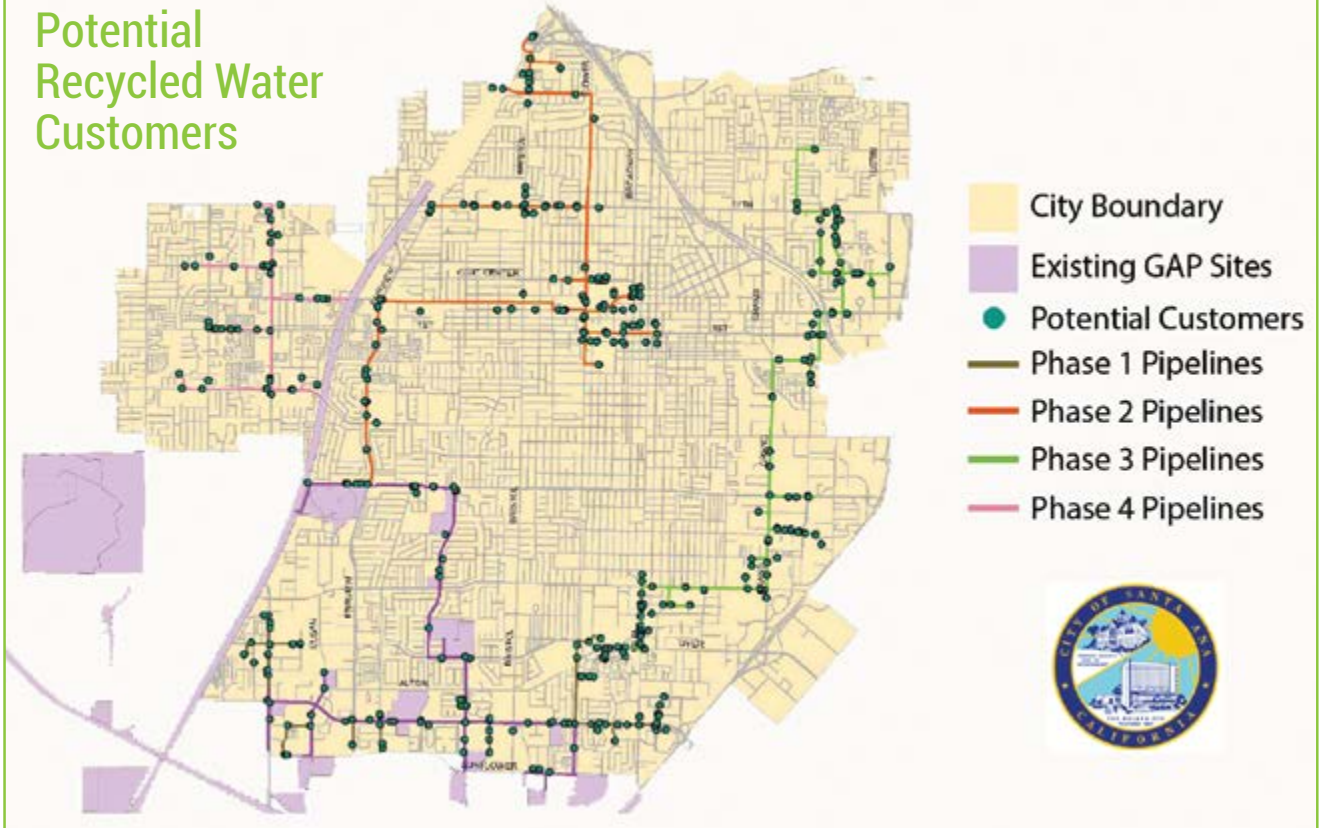
five years of drought, followed by an average of two wet years. Building and operating our own recycled water system will provide the City a water supply that is not subject to water use restrictions typically mandated by the state during times of drought... an inevitable reality we face in the future. There are many other benefits too:

- It reduces our reliance on higher cost imported water, which is currently at twenty-four percent of the thirty million gallons we deliver each day.
- It reduces demand on our groundwater basin and preserves this potable water supply for other uses.
- It allows the City to maintain green medians, parks and sports fields for the community.
- There is no fiscal or environmental impact associated with the master plan.

The first stage of this plan—requiring an initial investment of \$6.22 million—is a positive step towards our goal of 448 potential recycled water customers consuming about 3,032 acre-feet of recycled water annually and building a greener, more environmentally responsible city.



### Potential Recycled Water Customers



# Your Dollars Working For You

One of our top priorities is to ensure high quality water, a more resilient water system and long-term sustainability for all residents and businesses.

Securing alternative water sources, improving our infrastructure and implementing new services comes at a cost. However, as your Public Works Agency, we continually strive to better leverage City resources, improve efficiencies, and reduce overall construction costs and time to maximize your dollars.

Our Capital Improvement Program (CIP) projects exemplify our stewardship of Santa Ana's infrastructure. Through these projects, we are modernizing and improving the reliability of our water system while pursuing new local alternative sources of supply including new groundwater sources.

## Water Systems

Integral to the delivery of clean and safe water is the maintenance of our existing network of pipelines. We replace over three to five miles of compromised pipeline each year, identifying and prioritizing the replacement of older pipes that have failed in the past. We also carefully assess the health and functionality of pipelines connected to facilities that provide vital services to our community, such as hospitals, schools and public spaces.

Equally critical is the improvement on the City's existing wells and pumps. The twenty wells, which currently serve the community, were built between the sixties and early eighties and are reaching the tail end of their fifty-year life expectancy.

Accordingly, we are rehabilitating Wells 32 and 29; replacing our two oldest wells with new ones: Walnut and Santiago; and completing the renovation of our Walnut Pumping Station, Santa Ana's first "green" building. These projects will ensure groundwater is pumped and delivered through our pipelines to your tap with reliability.

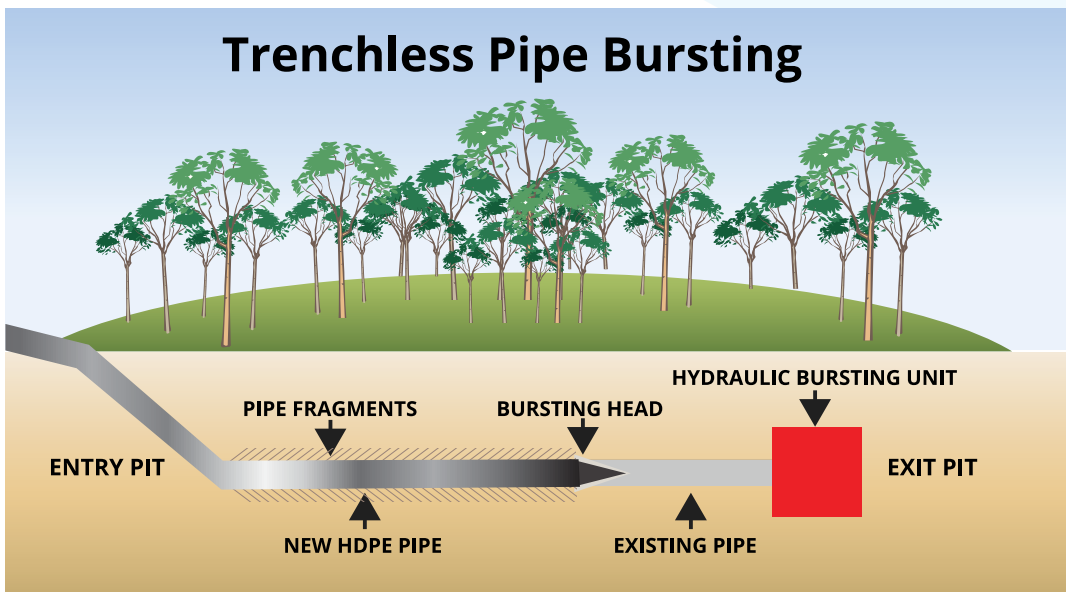
## Sewer Systems

In addition to improving our existing water systems, the City is also exploring innovative approaches to replace our older sewer lines. Pipe Bursting is one alternative method to replace buried pipelines without the need to excavate a trench. Using high tech machinery, this method expands the existing pipeline allowing for a new pipe to be laid down through the existing one. Once the new pipe has been set in place, the old pipe "bursts" and is removed. This new method is not only safer than trenching and replacing old sewer lines traditionally, it is cheaper and bears less impact on traffic.

## Automated Meter Infrastructure (AMI)

Finally, after receiving the necessary \$4 million in funding from the State of California, the City has implemented its first phase in our new Automated Meter Infrastructure (AMI) program and is beginning the process of replacing existing meters. AMI allows for real time water meter reads. These readings are not only more accurate, but allow the customers we serve to monitor their meter for leaks and water usage... a key way the City can better serve our community's commitment to greater sustainability and responsible environmental practices.

## Sustainability





# Hey You! Yeah...you

Hi, the name's WATER.

I am the fabric of everything that you are and yet, if you don't pay attention, you may not really see me.  
But if you look closely, really look deep down inside—you'll see I'm there.

Some people think I'm boring, bland...even tasteless. And yes, I might not be bubbly and sweet—but I'm always crystal clear. And I just have so much to offer!

When you wake up in the morning to take a shower and brush your teeth—I'm there. Enjoying that tasty plate of spaghetti? Guess who boiled the pasta?  
Who keeps your clothes shiny and clean? I do.

And have you ever enjoyed jumping into a pool on a really, really hot day? That's me! But I do so much more than that. I grow the food that everyone eats. I help make most of the products you use. I can even power the lights in your house!

Most importantly, I sustain the plants that clean the air that you breathe. All life of all shapes and sizes first began millions of years ago...in me!

I'm pretty awesome, if you think about it. Sadly, over 50% of kids forget about me and how important it is to drink at least eight glasses of me every single day. And at least 25% may not even drink me at all. Does that sound like you? If so, grab a glass and join the party!

So, this is just a friendly, little reminder that I'm here for YOU!  
And that, without me, life just wouldn't be the same.

Your friend,

*Water*

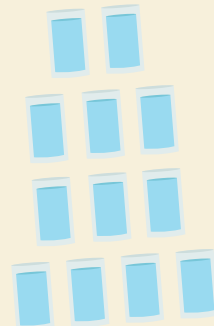


## WATER IS YOU



You are made up of how much water?  
(circle which one)

20% 40% 60% 80%

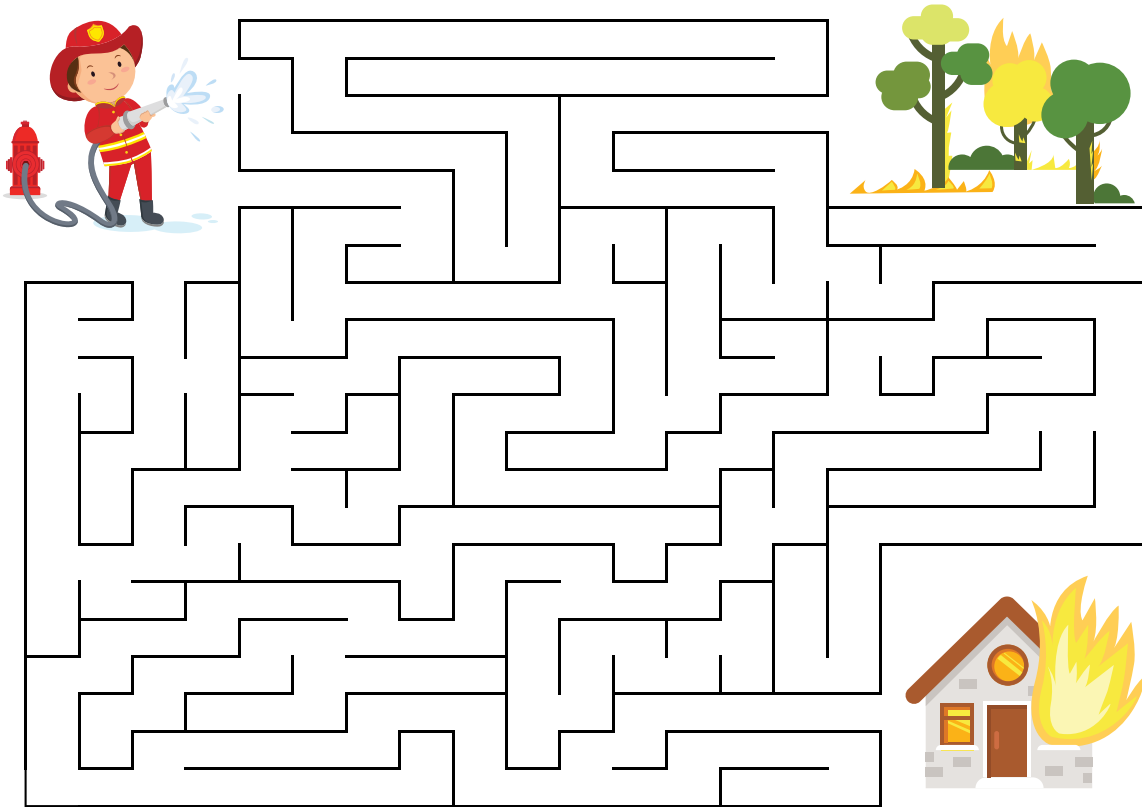


How many glasses of water should you drink each day?  
(circle the number of glasses)



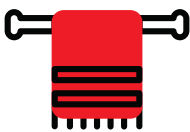
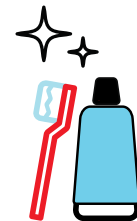
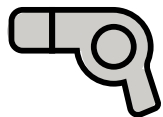
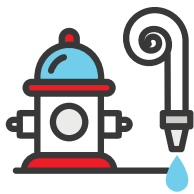
# Water Saves Trees & Lives

Help the fireman find the right way to the fires.



## Water is Important

(Circle all the pictures that use water.)



## Santa Ana Congratulates Winners of the 2019 Youth Water Poster Contest!

We congratulate this year's winners of our 2019 Youth Water Poster Contest. Each year, participation in the contest grows, where teachers and students throughout the City of Santa Ana work together on a creative project while learning various water-related themes such as water quality and conservation. This year's theme **"Protecting Our Watershed"** asked students to use their imagination and creativity to illustrate how pollutants enter into our waterways and ways they can protect our local watershed. They learned about the Water Cycle and how it refills our watershed, providing a reliable supply of water to us.

In addition to receiving a special certificate from Santa Ana City Council, the Water Resources Division awarded winners with trophies and prizes, ranging from gift certificates to Nintendo Switches and iPads. Students weren't the only winners. A special drawing for a \$200 gift certificate from Art Supply Warehouse was held for teachers who actively encouraged student participation in the contest. We thank the Santa Ana Unified School District, which, for the past four years, has supported our annual contest and helped make this important educational initiative a success!

### 2019 WINNERS

#### Ages 5-8:

**Alexa Victoria Flores**, 8, grand prize winner  
**Jacqueline Rico Perez**, 8, finalist  
**Anushree Sitaula**, 7, finalist

#### Ages 9-12

**Britney Echeverria**, 12, grand prize winner  
**Jannel Bello**, 10, finalist  
**Gianna Garcia**, 10, finalist

#### Ages 13-14:

**Laisha Echeqoyen**, 13, grand prize winner  
**Gianna Patino**, 13, finalist  
**Katie Tran**, 13, finalist

#### Ages 15-18

**Cielo Echeqoyen**, 15, grand prize winner  
**Jenis Ramon**, 16, finalist  
**Monica Rodriguez**, 16, finalist

**Call for entries for the 2020 Youth Water Poster Contest begins this fall. This year's theme is "Imagine A Day Without Water."**



### GRAND PRIZE WINNERS

#### AGES 5-8



Alexa Victoria Flores, 8

#### AGES 9-12



Britney Echeverria, 12

#### AGES 13-14



Laisha Echeqoyen, 13

#### AGES 15-18



Cielo Echeqoyen, 15

### FINALISTS



Anushree Sitaula, 7



Jannel Bello, 10



Katie Tran, 13



Monica Rodriguez, 16



Jacqueline Rico Perez, 8



Gianna Garcia, 10



Gianna Patino, 13



Jenis Ramon, 16

## 2020 Youth Water Poster Contest Launches This Fall

### Theme For Upcoming Contest is “Imagine A Day Without Water”

In reading this Santa Ana KIDS section, you've learned how important water is in your daily life. Now imagine a day without water. How would your day be different? Could you take a shower or brush your teeth to get ready for school? Could you fill up your sports bottle with water or drink from the school water fountain? Toilets wouldn't flush. And with no water to use in cooking, you're most likely eating canned or pre-packaged food or dinner.

It doesn't take much to imagine how your life would change without water. In time, you wouldn't have clean clothes to wear and, with no more water to help produce electricity, there would be no electricity to power the lights, the refrigerator and all the other appliances in your home.

**Imagine A Day Without Water** is the theme of our next Youth Water Poster Contest to launch this fall. Students will be asked to illustrate their day without water and what this would mean to their community.

Look out for the contest guidelines and worksheets that should be available to you through your local school in September. Be sure to ask your teacher about the contest so you have time to participate and enter your poster before the December 2, 2019 deadline!

**Don't miss the opportunity to let your creativity shine! For more information about the contest, email [conservewater@santa-ana.org](mailto:conservewater@santa-ana.org) or call 714-647-3500.**



## A Creative Advocate For Students

As a first generation college graduate, Steven Ramirez wanted to inspire his students to pursue their dreams. An art teacher at Century High School, Steven advocates for his students, especially those with special needs or who face difficult circumstances. “I try my best to not only help my students but to also teach them to advocate for themselves and ask for help to address their individual issues,” he says.

After working 15 years in the publishing field, he decided to pursue teaching and has never looked back. What he enjoys most is the creativity and interaction with his students. Participating in the annual Youth Water Poster Contest gives him a worthy project that he says adds value to his students' experience, connecting their work with the broader community. “Sometimes students do not connect the worth of their artwork until they enter a contest,” he adds.

His enthusiasm for the Annual Youth Water Poster Contest has paid off. For the past four years, his students have participated and have consistently placed as finalists or grand prize winners. One year, his students had a clean sweep with three of them winning!



*Steven (far right) with students who volunteered to curate SAUSD's annual Artspiration at the Bowers Museum.*

## Santa Ana Launches New Community Outreach Campaign This Fall: Imagine A Day Without Water

Throughout this year's Water Quality Report, you've read about the scarcity of clean, safe water in different parts of our world and its impact on our global community. We also highlight the value of water in our everyday lives and how many of us take our access to potable water for granted every time we go to the faucet and our water flows.

To drive awareness of the value of this precious resource and the importance of investing in water and wastewater systems, the City of Santa Ana is launching a campaign this fall called "Imagine A Day Without Water."

October 23, 2019 is "Imagine A Day Without Water" and local governments and agencies throughout the nation will be bringing awareness to this important issue.

Our community outreach campaign will include various components including:

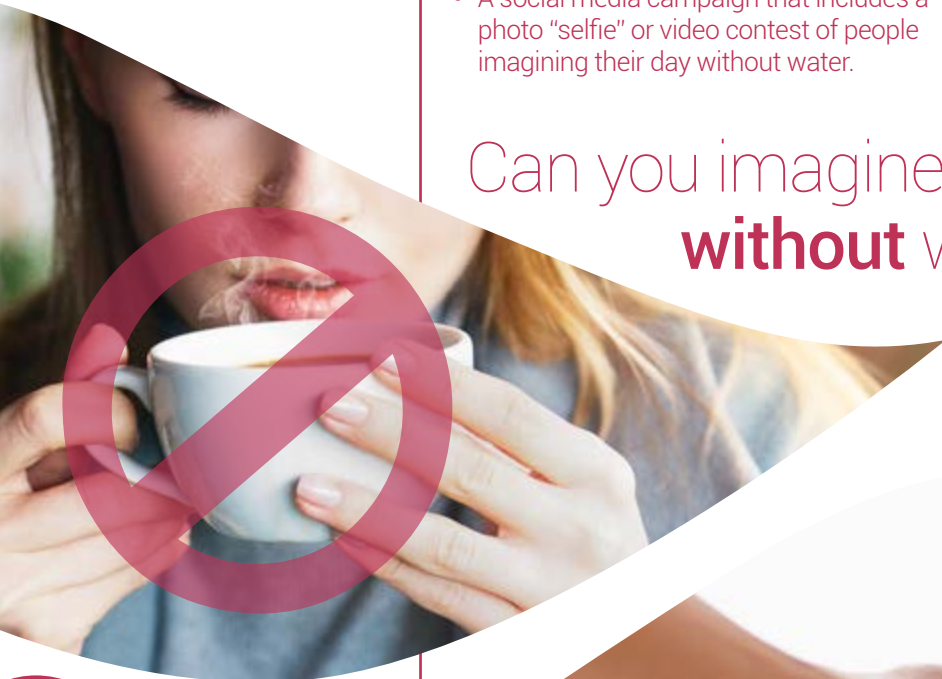
- A Resolution, adopted by the City Council.
- An "online pledge" for residents and businesses.
- A social media campaign that includes a photo "selfie" or video contest of people imagining their day without water.

You will see our Water Resources Division staff at community events with an "Imagine A Day Without Water" expo, where they will be passing out flyers, helping people take their online pledge, and promoting the social media contest while passing out free giveaways.

You can do your part to value our water and help maintain safe and reliable water sources for generations to come. Be sure to take your pledge this fall and participate in our campaign for a chance to win prizes!

You will be joining the professionals at Santa Ana's Public Works Agency who are proud to protect our community's health, economy and way of life by keeping clean, safe water flowing to you...24 hours a day, 365 days a year!

Can you imagine your day  
**without** water?



## David Carbajal: Keeping Your Water Flowing

From day one, David Carbajal aspired to become Supervisor of Water Maintenance for the City of Santa Ana Water Resources Division. He had worked for various large construction contractors building and retrofitting bridges before joining the Santa Ana Public Works Agency twenty-one years ago. When a position opened up in the Water Resources Division a year later, he jumped at the opportunity and has never looked back.

Today, David supervises a crew of 10 people who are responsible for maintaining and repairing water mains and water service pipelines as well as the 5,010 fire hydrants located throughout Santa Ana.

Two teams spend six months each year to ensure all fire hydrants meet a Class 1 Rating: flushing hydrants to test the volume and pressure and remove sediment and rust; operating and servicing the hydrants' gate valves and caps; and maintaining clearance around the hydrants for visibility and accessibility.

Throughout the year, another team is dedicated to maintaining the city's 5,954 underground gate valves, which are used to shut off water in the event of a water main break.

When the Water Resources Division identifies an area experiencing abnormally high instances of water main failures—a “hot spot”—David's crew will also replace sections of the main water pipeline to ensure reliability and uninterrupted service for residents.

“What I enjoy most about my position is my ability to implement changes that save time and money while improve safety for my crew,” he says. In addition to upgrading equipment, David promotes advanced training for his crew. “It's great to be supported by our Water Resources Manager, Nabil Saba, and my senior supervisor, Mike Murrietta, who value training and are committed to ensuring the Santa Ana Water Resources Division is the best in the state.”

The next time you see David and his crew in the neighborhood, remember their critical role in keeping your water flowing and community safe.



Working for such a highly regarded City Division isn't the only thing David enjoys. He likes to spend his time golfing, fishing, camping in the Western Sierras, and grilling during the summers with his family.

## Useful Telephone Numbers

### Building Inspection Request Line

714-667-2738

City Manager  
714-647-5200

Fire Department  
714-573-6000  
(call 911 for emergencies)

Mayor and City Council  
714-647-6900

Parks & Recreation  
714-571-4200

Planning & Building, Planning Division  
(Environmental Review, Historic Preservation  
& New Development)  
714-667-2700

Police Department  
714-245-8665  
(call 911 for emergencies)

Public Library  
714-647-5250

Public Works Emergency Repairs  
(after hours)  
714-834-4211

Public Works Information  
714-647-5690

### Maintenance Services

Curb & Sidewalks  
714-647-3380

Graffiti Removal  
877-786-7824

Graffiti Task Force  
714-245-8769 (Police Department)

### Water Resources

Sewer/Storm Drain Maintenance  
714-647-3380

Water Administration  
714-647-3320

Water & Sewer Permits  
714-647-3320

Water Customer Service and Billing  
714-647-5454

Water Engineering  
714-647-3320

Water Maintenance & Construction  
714-647-3346

Water Production  
714-647-3320

Water Quality & Conservation  
714-647-3500

Water Service & Main Location  
714-647-3320

### Traffic and Transportation

Signal Repairs - 8 a.m.-5 p.m. (Weekdays)  
714-647-5620

Signal Repairs - Police Department  
(Evenings/Weekends)  
714-834-4211

Street Work Permits  
714-647-5039

Traffic Operations  
714-647-5619



## Refuse Collection

New Trash Cart/Order Dumpster  
714-558-7761

Recycle Used Car Oil & Filter  
714-558-7761

## Public Works

General Maintenance and Repairs  
714-647-3380

Sanitation  
714-647-3380

Shopping Cart Removal  
714-667-2780

Street Lights  
714-647-5074

Street Sweeping  
714-647-3380

Trees  
714-647-3380

Weed Abatement  
714-647-3380

## Other Helpful Numbers

Bus Information  
714-636-7433

Noise Complaints  
714-834-4211

Overcrowding  
714-667-2780

Poison Center  
800-876-4766

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You can request a copy of the most recent summary of the Watershed Sanitary Surveys and the Source Water Assessment by calling MWD at 213-217-6000.

For a copy of the complete assessments for Santa Ana's distribution system and groundwater, call the Santa Ana Water Resources Division at 714-647-3320. If you have questions about your water quality, contact:

**City of Santa Ana, Water Resources Division**

**Nabil Saba P.E.**, Water Resources Manager

**Cesar Barrera P.E.**, Principal Civil Engineer

**Robert Hernandez**, Water Services Quality Supervisor

220 South Daisy Avenue, Bldg A

Santa Ana, California 92703

phone: 714-647-3320 | fax: 714-647-3345

web: [santaanaccr.org](http://santaanaccr.org)

# The Value of **Water**



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[www.santaanaccr.org](http://www.santaanaccr.org)

Este informe contiene información importante sobre su agua potable. Favor de comunicarse con la División de Recursos Hídricos de la ciudad de Santa Ana al 714-647-3320 para obtener asistencia en español.

Báo cáo này chứa thông tin quan trọng về nước uống. Vui lòng liên hệ với Thành phố Santa Ana, Phòng Tài nguyên Nước theo số 714-647-3320 để được hỗ trợ bằng tiếng Việt

이 보고서는 당신의 식수에 관한 중요한 정보를 포함하고 있습니다. 한국어로 된 도움을 원하시면 City of Santa Ana, Water Resources Division 에서 714-647-3320 로 문의 하시기 바랍니다.