

#### A MESSAGE FROM FRED MOUSAVIPOUR



"As Executive Director of the Public Works Agency, my focus is achieving extraordinary results that will improve the safety and quality of life for our community."

Lach year it is my privilege to introduce our Annual Consumer Confidence Report. Its primary purpose is to provide you with information about the quality of your drinking water and the importance of conservation. In this report, we also talk about new developments within the Public Works Agency and projects that are essential to our community's safety, health, and quality of life. Here's a snapshot of some of our more ambitious programs and initiatives, current and future:

#### **Water Conservation**

While the drought in California is officially over, we regard conservation as an important and ongoing initiative. We plan to replace grass with drought tolerant landscaping in our street medians and other public areas to help the city conserve water and reduce maintenance costs while providing aesthetic benefits to the community.

#### Water Infrastructure

We are modernizing one of our oldest pumping stations, which is slated for completion in 2018. We are also revitalizing and improving our main water infrastructure and wastewater including the repair of a major water pipeline called the Orange County Feeder.

#### "Fill It From The Tap" Initiative

The City is launching a new campaign to encourage residents to drink Santa Ana's award winning tap water, save money and reduce their carbon footprint by reducing unrecycled plastic water bottles that end up in our landfills, streams, waterways and ocean.

#### Automated Meter Infrastructure (AMI)

Once funding is secured through a bond, we plan to replace our current water metering system with an automated meter infrastructure called AMI. Smart metering will help the city reduce operational costs and improve service reliability. It will provide real time information on water consumption, better detect leaks, prevent water waste, and save money for residents.

#### **LED Lights**

Within the next twelve months, the city is converting its traditional streetlights to LED lights. Advantages to this new citywide program include improved lighting, especially in underlit areas of the city, dimming capabilities, a number of safety features, and substantial reduction in energy costs. This savings in energy costs would be leveraged to fund the \$13 million capital cost of the program.

#### Safe Mobility Santa Ana

Santa Ana ranks as the fourth most populated city in the nation, and as such, has a high rate of injuries and fatalities involving pedestrians and cyclists.

One of the city's highest priorities is to substantially reduce this rate with a goal of reaching zero fatalities. We plan to achieve this through the city's comprehensive program called Safe Mobility Santa Ana (SMSA), which was adopted by City Council last November. SMSA is primarily based on the principles of "Vision Zero," an initiative that has proved successful across Europe — and is now gaining momentum in major American cities such as New York, San Francisco, and Los Angeles.

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It is designed to slow the speed of vehicles, widen sidewalks, create safe bike lanes, and provide multiple means of mobility. Our team of engineers and grant writers have collaborated closely and were able to secure over \$40 million in outside grants that would be leveraged toward implementing some key features of SMSA.

The Public Works Agency has enjoyed tremendous success in securing outside sources for funding to subsidize our infrastructure budget. Over the last three years, we have secured well over \$80 million in various state and federal grants for conservation, safety and multimodal transportation projects. Our track record and ongoing emphasis on exploring any and all outside grants—which is predicated on our extensive research, master planning, and multi-agency collaboration—will ensure additional funding for our major infrastructure programs in the years to come.

#### Sustainable Mobility and Roadway Transformation (SMaRT-Santa Ana)

A sustainable pavement program will be possible through the implementation of SMaRT. Goals include maintaining an excellent pavement network, protection of over \$72 million in pavement investment, repaving streets that are in poor condition within 3 to 5 years, financial sustainability, implementation of master plans for bicycles and pedestrians, citywide traffic safety improvements, and the repair of sidewalks and expansion of the ADA infrastructure.

#### **City-Wide Fiber Optics Enterprise**

The City is working on a citywide fiber optics enterprise to bring next generation technology and the capability of transferring lots of data quickly. Broadband access may be gained in several ways, and can overcome geographical and financial barriers to connect the community to a wide range of educational, cultural, and recreational opportunities and resources.

Looking to the future is what we do. Our goal is to be proactive, innovative and efficient. But Public Works can't do it alone. We invite your participation by letting us know what we can do better. Together, we can ensure quality of life, well-being and a sustainable future for all Santa Ana residents and businesses.

Sincerely,

Fred Mousavipour

Executive Director Public Works Agency City of Santa Ana

# ABOUT THIS REPORT

#### **Report Sections**

**Water Quality** 



Conservation



Santa Ana News



**Tips and Tools** 



# What is a Consumer Confidence Report (CCR)?

The Consumer Confidence Report (CCR) is an annual water quality report that helps you make informed choices about the water you drink. CCRs are designed to let you know what contaminants, if any, are in your drinking water and any possible health effects. You will also learn about where your water comes from, how it is treated and what it contains.

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 and how that compares with the allowable state and federal limits as well as its likely origin. Only the constituents that are found are listed in the data tables. Bottled water is not covered in this report.

The following questions and answers, numbers 1 through 8, will explain the important elements of the data tables and more.

#### 1. What are the sources of the water Santa Ana delivers?

The City of Santa Ana depends on two sources for the 12.5 billion gallons of water we supply each year: 70 percent is groundwater and 30 percent is imported water purchased from the Metropolitan Water District of Southern California (MWD).

**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 and runoff from the snow pack in the Sierra Nevada Range in Northern California. 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. For more details, see 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.

#### 2. 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 used by Santa Ana.

# 3. 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.

# 4. 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.

# 5. 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.

#### 6. How do constituents get into our water supply?

Drinking water (tap water and bottled water) comes from 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.

# ABOUT THIS REPORT





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# 7. 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 2016. Santa Ana's wells are considered most vulnerable to the following activities **associated** with contaminants detected in the water supply: historic agricultural activities, golf courses,

and application of fertilizers. Our wells are considered most vulnerable to the following activities **not associated** with detected contaminates: 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.

Imported Water—Every five years, MWD is required by 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-2011 Update.

Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/ stormwater runoff, increasing urbanization in the watershed and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation and wastewater. USEPA also requires MWD to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWD completed its SWA in December 2012. You can request a copy of the most recent SWA and Watershed Sanitary Surveys by calling MWD at 213-217-6000.

#### 8. How can I help protect our water source?

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides — they contain hazardous chemicals that can reach your drinking water source.
- · Pick up after your pets.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste — Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

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 the water poses a health risk. You can learn more about contaminants and potential health effects by calling the U.S. Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline at 800-426-4791 or visiting the website at epa.gov/safewater.

In order to ensure that tap water is safe to drink, USEPA 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 website at archive.cdph.ca.gov/pubsforms/Pages/fdbBVWfaq.aspx.

#### For 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. Immunocompromised 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. USEPA/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.





#### YOUR WATER, YOUR HEALTH



#### 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. USEPA/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/infection-sources.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 santaanaccr. com/Flouride\_Factsheet or visit ada.org/ fluoride.aspx

Hexavalent Chromium. In July 2014, California became the first state in the nation to regulate hexavalent chromium, also known as chromium-6. Previously, chromium-6 had been regulated as total chromium, which includes other forms of the mineral. Chromium-6 can be present in water due to natural geologic conditions or from industrial pollution. In Orange County, groundwater often contains trace amounts

of naturally occurring Chromium-6 that are far below the new MCL. See the water quality table in this report for information on Santa Ana's water.

**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 Safe Drinking Water Hotline or at http://www.epa.gov/lead.

Nitrate. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness. Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.





YOUR WATER, YOUR HEALTH

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.

Radon: Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move through the ground and into a home through cracks and holes in the foundation. Radon can build up in high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call the California radon program at 800-745-7236, the USEPA Safe Drinking Water Act Hotline at 800-426-4791 or the National Safety Council Radon Hotline at 800-767-7236.



# OUR COMMITMENT TO QUALITY, SERVICE, AND VALUE



At the City of Santa Ana, protecting our residents' health and safety is our highest priority. But as your local water provider, we deliver more than just safe drinking water. We deliver quality, service and value.

QUALITY. As always, we are committed to delivering the highest quality drinking water to all our residents. We have rigorous safeguards in place to make sure that our tap water meets or surpasses all health standards, and we are pleased to announce that in 2016 our compliance with state and federal drinking water regulations remains exemplary. And that's not all. Year after year, we have earned international recognition for our award winning tap water.

SERVICE. The City of Santa Ana is an award-winning agency known for its reliability, efficiency, quality and "green approach." Beyond providing a clean, reliable water supply whenever you need it, we also work diligently to ensure that supplies are adequate to meet demand, even as we endure the worst drought in California history. Last year, we launched a community outreach program called "Every Drop Counts" to help residents conserve water. This program won the 2017 Resource Efficiency & Community Service Award by the California Municipal

Utilities Association (CMUA). The best public utilities in California compete for this highly coveted award each year, and Santa Ana's campaign was selected among all other utilities in its size category as the most innovative and effective community program designed to save water resources. "Every Drop Counts" made a significant difference in awareness and residents took the conservation message to heart. It resulted in reduced community water consumption by 17%, exceeding the city's target and coming in below the state average in residential per-capita water use.

VALUE. The costs of providing water and treatment continue to increase, but we are working to ensure that our water stays affordable. We do this by investing in infrastructure that is built to last and using technology to improve our delivery system. We do all it takes to deliver a clean, reliable water supply right to your home, for less than a cent per gallon. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, environmental compliance, sustainability and community education while continuing to serve the needs of all our water users.



# OUR COMMITMENT TO QUALITY SERVICE, AND VALUE

#### **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

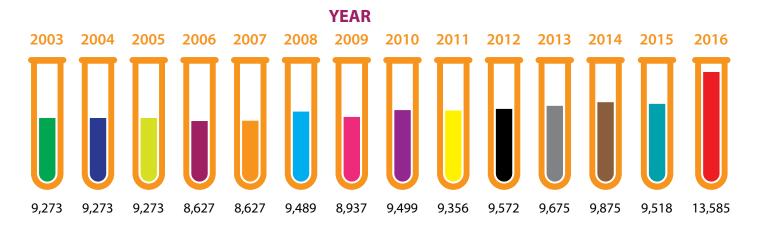


# 2016 WATER QUALITY TABLE



# 2016 WATER QUALITY TABLE

# Number of samples **CO lected**



The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Santa Ana conducts extensive monitoring to ensure that your water meets all water quality standards. In 2016, we collected numerous samples for contaminants at various

sampling points in your water system; all of which were below state and federal maximum allowable levels. The results of our monitoring are reported in the following data tables.





#### **GLOSSARY**

Refer to this glossary to understand the terms and abbreviations 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 USEPA

#### **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

**CFU** = Colony-Forming Units

MFL = Million Fibers per Liter

NA = Not Applicable

NC = Not Collected

ND = Not Detected

NL = Notification Level

NR = Not Required

NS = No Standard





#### Measurements

Water is sampled and tested consistently throughout the year to ensure the best possible quality. Contaminants are measured in:

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

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

**Parts per trillion** (ppt) or nanograms per liter (ng/L)

**Parts per quadrillion** (ppq) or picograms per liter

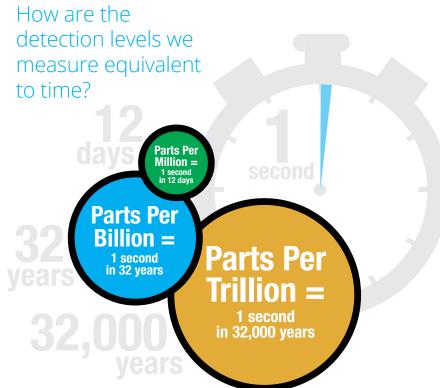
**PicoCuries per liter** (pCi/L) —A measurement of radioactivity in water.

Millirems per year (mrem/year)—A measurement of radiation absorbed by the body.

Micromhos per centimeter (umho/cm)

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.

#### **2016 WATER QUALITY TABLE**

#### How to read this table

- Starting with a Substance, read across.
- 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).
- 4 Average Amount is the average level measured for the substance (less is better).

- **6** Range of Detections is the highest and lowest amounts measured.
- A **No** under **MCL** Violation indicates government requirements were met.
- Typical Sources in Drinking Water tells where the substance usually originates.

[Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government.]

#### 2016 CITY OF SANTA ANA DISTRIBUTION SYSTEM WATER QUALITY

Constituent	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Sources in Drinking Water			
DISINFECTANT RESIDUAL AND DISINFECTION BY-PRODUCTS								
Chlorine Residual (ppm)	(4 / 4)	0.85	ND - 2.66	No	Disinfectant Added for Treatment			
Total Trihalomethanes (ppb) <sup>1</sup>	80	37	1 - 51.2	No	Byproducts of Chlorine Disinfection			
Haloacetic Acids (ppb) <sup>1</sup>	60	10	ND - 23.9	No	Byproducts of Chlorine Disinfection			
AESTHETIC QUALITY								
Odor (threshold odor number)	3*	1	1	No	Naturally-occuring organic materials			

<sup>&</sup>lt; = Detected but average is less than the reporting limit.</p>

<sup>\*</sup>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

#### LEAD AND COPPER ACTION LEVELS AT RESIDENTIAL TAPS 90th Percentile Sites Exceeding AL / AL Violation? **Public Action Level** Constituent **Typical Sources in Drinking Water Health Goal** (AL) Value Number of Sites Internal corrosion of household water plumbing Lead (ppb) 3 15 0.2 ND 0 / 80 Nο systems; discharges from industrial manufacturers; erosion of natural deposits Internal corrosion of household water plumbing 0.3 0.17 0 / 80 Copper (ppm) 3 1.3 systems; discharges from industrial manufacturers; Nο erosion of natural deposits

#### UNREGULATED CONSTITUENTS REQUIRING MONITORING IN THE DISTRIBUTION SYSTEM

Constituent	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
Chlorate (ppb)	800	n/a	49.8	37.5 - 85.8	2014
Chromium, Hexavalent (ppb) **	MCL = 10	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)	n/a	n/a	4.38	3.8 - 5.2	2014
Strontium, Total (ppb)	n/a	n/a	715	547 - 959	2014
Vanadium, Total (ppb)	50	n/a	2.45	2.3 - 2.8	2014



<sup>\*\*</sup> Hexavalent chromium was included as part of the unregulated chemicals requiring monitoring.\*\*\* 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.

#### 2016 CITY OF SANTA ANA GROUNDWATER QUALITY

Constituent	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Sources in Drinking Water		
Radiologicals									
Uranium (pCi/l)	20	0.43	2.78	ND - 4.98	No	2014	Erosion of Natural Deposits		
Organic Constituents									
1, 1 - Dichloroethene (ppb)	6	10	< 0.5	ND - 0.7	No	2016	Discharge from Industrial Chemical Factories		
Inorganic Constituents									
Arsenic (ppb)	10	0.004	< 2	2.3	No	2016	Erosion of Natural Deposits		
Barium (ppm)	1	2	< 0.1	ND - 0.151	No	2016	Erosion of Natural Deposits		
Fluoride (ppm) <sup>4</sup>	2	1	0.33	0.18 - 0.51	No	2016	Erosion of Natural Deposits		
Hexavalent Chromium (ppb)	10	0.02	< 1	ND - 2.1	No	2016	Erosion of Natural Deposits: Industrial Discharg		
Nitrate (ppm as N)	10	10	2.19	0.4 - 7.71	No	2016	Runoff and Leaching from Fertilizer Use; Leaching from Septic Tanks and Sewage; Erosion of Natural Deposits		
Nitrate + Nitrite (ppm as N)	10	10	2.19	0.4 - 7.72	No	2016	Runoff and Leaching from Fertilizer Use; Leaching from Septic Tanks and Sewage; Erosion of Natural Deposits		
Perchlorate (ppb)	6	1	< 4	ND - 0.2	No	2016	Discharge from Industrial Operations		
Secondary Standards									
Chloride (ppm)	500*	n/a	53.2	20.4 - 115	No	2016	Erosion of Natural Deposits		
Specific Conductance (umho/cm)	1,600*	n/a	680	439 - 1,120	No	2016	Substance that forms lons when in water		
Sulfate (ppm)	500*	n/a	91.4	47.7 - 140	No	2016	Erosion of Natural Deposits		
Total Dissolved Solids (ppm)	1,000*	n/a	413	256 - 664	No	2016	Erosion of Natural Deposits		
Turbidity (ntu)	5*	n/a	< 0.1	ND - 0.2	No	2016	Soil Runoff		
Unregulated Constituents									
Alkalinity, total as CaCO3 (ppm)	Not Regulated	n/a	172	144 - 243	n/a	2016	Erosion of Natural Deposits		
Bicarbonate (ppm HC03)	Not Regulated	n/a	210	176 - 296	n/a	2016	Erosion of Natural Deposits		
Boron (ppm)	NL=1	n/a	< 0.1	ND - 0.21	n/a	2016	Erosion of Natural Deposits		
Calcium (ppm)	Not Regulated	n/a	75.9	35.9 - 130	n/a	2016	Erosion of Natural Deposits		
Hardness, total (grains/gallon)	Not Regulated	n/a	14.7	6.98 - 25	n/a	2016	Erosion of Natural Deposits		
Hardness, total (ppm as CaCO3)	Not Regulated	n/a	250	119 - 427	n/a	2016	Erosion of Natural Deposits		
Magnesium (ppm)	Not Regulated	n/a	14.7	7.1 - 27.2	n/a	2016	Erosion of Natural Deposits		
pH (pH units)	Not Regulated	n/a	7.8	7.5 - 8	n/a	2016	Acidity Hydrogen Ions		
Potassium (ppm)	Not Regulated	n/a	2.2	1.3 - 3.4	n/a	2016	Erosion of Natural Deposits		
Sodium (ppm)	Not Regulated	n/a	46.6	35.5 - 66.7	n/a	2016	Erosion of Natural Deposits		

#### UNREGULATED CONSTITUENTS REQUIRING MONITORING

Constituent	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date			
1,4-Dioxane (ppb)	1	n/a	0.14	ND - 0.24	2014			
Chlorate (ppb)	800	n/a	63.3	21.1 - 249	2014			
Chromium, Hexavalent (ppb) **	MCL = 10	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)	n/a	n/a	4.92	2.6 - 11.1	2014			
Strontium, Total (ppb)	n/a	n/a	529	244 - 766	2014			
Vanadium, Total (ppb)	50	n/a	2.69	1.4 - 5.2	2014			

<sup>&</sup>lt; = Average is less than the detection limit for reporting purposes.
\* Constituent is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

<sup>\*\*</sup> Hexavalent chromium was included as part of the unregulated chemicals requiring monitoring.
\*\*\* 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.

#### 2016 METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA TREATED SURFACE WATER

Constituent	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation ?	Typical Sources in Drinking Water		
Radiologicals - Tested in 2014								
Alpha Radiation (pCi/L)	15	(0)	ND	ND - 4	No	Erosion of Natural Deposits		
Beta Radiation (pCi/L)	50	(0)	5	4 - 6	No	Decay of Man-made or Natural Deposits		
Uranium (pCi/l)	20	0.43	3	2 - 3	No	Erosion of Natural Deposits		
Inorganic Constituents - Tested in 2016								
Aluminum (ppm)	1	0.6	0.168	0.12 - 0.24	No	Treatment Process Residue, Natural Deposits		
Arsenic (ppb)	10	0.004	2.3	2.3	No	Production Wastes, Natural Deposits		
Barium (ppm)	1	2	0.138	0.138	No	Refinery Discharge, Erosion of Natural Deposits		
Fluoride (ppm) treatment-related		e 0.6 - 1.2 ppm vel 0.7 ppm	0.7	0.6 - 0.9	No	Water Additive for Dental Health		
Secondary Standards - Tested in 2016								
Aluminum (ppb)	200*	600	168	120 - 240	No	Treatment Process Residue, Natural Deposits		
Chloride (ppm)	500*	n/a	103	101 - 103	No	Runoff or Leaching from Natural Deposits		
Color (color units)	15*	n/a	1	1	No	Naturally-occurring Organic Materials		
Odor (threshold odor number)	3*	n/a	3	3	No	Naturally-occurring Organic Materials		
Specific Conductance (umho/cm)	1,600*	n/a	1,040	1,030 - 1,040	No	Substances that Form Ions in Water		
Sulfate (ppm)	500*	n/a	260	257 - 262	No	Runoff or Leaching from Natural Deposits		
Total Dissolved Solids (ppm)	1,000*	n/a	654	650 - 658	No	Runoff or Leaching from Natural Deposits		
Unregulated Constituents -	Tested in 2016							
Alkalinity, total as CaCO3 (ppm)	Not Regulated	n/a	120	115 - 124	n/a	Runoff or Leaching from Natural Deposits		
Boron (ppm)	NL=1	n/a	0.15	0.15	n/a	Runoff or Leaching from Natural Deposits		
Calcium (ppm)	Not Regulated	n/a	76	75 - 76	n/a	Runoff or Leaching from Natural Deposits		
Hardness, total as CaCO3 (ppm)	Not Regulated	n/a	296	292 - 300	n/a	Runoff or Leaching from Natural Deposits		
Hardness, total (grains/gallon)	Not Regulated	n/a	17	17 - 18	n/a	Runoff or Leaching from Natural Deposits		
Magnesium (ppm)	Not Regulated	n/a	27	26 - 27	n/a	Runoff or Leaching from Natural Deposits		
pH (pH units)	Not Regulated	n/a	8.1	8.1	n/a	Hydrogen Ion Concentration		
Potassium (ppm)	Not Regulated	n/a	5.1	5 - 5.1	n/a	Runoff or Leaching from Natural Deposits		
Sodium (ppm)	Not Regulated	n/a	103	99 - 107	n/a	Runoff or Leaching from Natural Deposits		
Total Organic Carbon (ppm)	П	n/a	2.5	2.1 - 2.6	n/a	Various Natural and Man-made Sources		
*Contaminant is regulated by a se	*Contaminant is regulated by a secondary standard							
Turbidity - combined filter e Metropolitan Water District Diemer F		Treatment Technique	Turbidity M	easurements	TT Violation?	Typical Sources in Drinking Water		
1) Highest single turbidity measureme 2) Percentage of samples less than 0.3		0.3 NTU 95%		.07 00%	No No	Soil Runoff Soil Runoff		

UNREGULATED CONSTITUENTS REQUIRING MONITORING								
Constituent	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date			
Chlorate (ppb)	800	n/a	53.3	38.1 - 67.6	2013			
Chromium, Hexavalent (ppb) **	MCL = 10	0.02	0.07	0.03 - 0.12	2013			
Chromium, Total (ppb) ***	MCL = 50	MCLG = 100	< 0.2	ND - 0.5	2014			
Molybdenum, Total (ppb)	n/a	n/a	4.8	4.5 - 5.3	2014			
Strontium, Total (ppb)	n/a	n/a	938	854 - 1,070	2014			
Vanadium, Total (ppb)	50	n/a	2.8	2.3 - 3	2014			

Hexavalent chromium is regulated with an MCL of 10 ppb but was not detected, based on the detection limit for purposes of reporting of 1 ppb. Hexavalent chromium was included as part of the unregulated constituents requiring monitoring.
 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.





#### **NOTES**

- 1. Trihalomethanes and Haloacetic Acids: 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. Color and turbidity were not detected in 2016.
- 2. Coliform: The state required raw water coliform monitoring for all treatment plants beginning March 2008. 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.
- 3. Lead and Copper. In 2015, eighty residences were tested for lead and copper at-the-tap. Lead was not detected in any of the samples. Copper was detected in 66 samples, none of which exceeded the AL for copper. A regulatory action level is the concentration of a constituent, which, if exceeded, triggers treatment or other requirements that a water system must follow.

- **4. Fluoride.** Data for the naturally-occurring fluoride were taken before the fluoridation treatment began. Fluoridation treatment of water supplies at all five MWD treatment plants started sequentially from October 29, 2007 to December 3, 2007. MWD was in compliance with all provisions of the State's Fluoridation System Requirements.
- **5. Combined Filter Effluent Turbidity** (NTU). Is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. It is monitored in our imported water source. Low turbidity in MWD treated water is a good indicator of effective filtration.
- 6. Combined Filter Effluent Turbidity (%). The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95 percent of the measurements taken each month and shall not exceed 1 NTU at any time. The averages and ranges of turbidity shown in the Secondary Standards were based on the treatment plant effluent.



# MONITORING REQUIREMENTS NOT MET FOR THE CITY OF SANTA ANA

There are many monitoring requirements imposed on every public water system. Our water system staff failed to adequately meet these requirements on one occasion this past year; and therefore, the City of Santa Ana's water system was in violation of these regulations.

It is important to note that this was not a violation caused by having contaminants exceed allowable levels; rather, it was a violation caused by failing to conduct triggered source monitoring pursuant to Title 22 California Code of Regulations, Section 64430.

Even though this failure was not an emergency, as our customers, you have the right to know what happened, what we did to correct the situation, and what you should do. This notice is intended to provide you with this information. Please be sure to share this information with anyone who drinks Santa Ana water.

#### What happened?

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards.

On September 13, 2016, a routine sample tested positive for Total Coliform and a notification was sent to the City the following day.

We failed to deliver to the laboratory the required triggered source monitoring samples collected from the wells in a timely manner. This resulted in the samples being rendered invalid because they were not sampled and analyzed within the required time frame as required by the regulation.

#### What is being done?

We have provided additional training to our staff so there is no misunderstanding about the proper time frame and amount of samples required and when. Additional checks have been established to ensure compliance. We have performed and continue to perform all of the water system monitoring required under Title 22 to ensure the water provided to our customers is in full compliance with all regulations.

#### What should I do?

There is nothing you need to do at this time. The table below lists the contaminant we did not properly test for during the last year, how many samples we were required to take, how many samples were actually taken, and the date on which follow-up samples should have been taken.

#### Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- Schools: Must notify school employees, students, and parents (if the students are minors).
- Residential Rental Property Owners or Managers (including nursing homes and care facilities): Must notify tenants.
- Business Property Owners, Managers, or Operators: Must notify employees of businesses located on the property.

For more information, please contact Water Resources at 714-647-3320 or write to: City of Santa Ana, 220 South Daisy Avenue, Santa Ana, CA 92703.

Contaminant	Number of	Number of	When Follow-up	When Follow-Up
	Samples	Samples	Samples Should	Samples Were
	Required	Taken	Have Been Taken	Taken
Total Coliform	16 groundwater well samples each time there is a triggered event	16 groundwater well samples	September 15, 2016	September 22, 2016



# CALIFORNIA'S DROUGHT IS OVER!

You may have heard that Governor Jerry Brown declared an end to California's historic five-year drought last April. The record rain has helped build up our reservoirs, and the snowpack across the Sierra Nevada was between 150% and 175% above normal. These conditions have brought relief to most of California, taking us out of a state of emergency. However, there are long term impacts from the drought that will require more than one wet season to resolve. Reducing water use remains as important as ever as we work to replenish our depleted groundwater supply and prepare for likely future droughts. (Read about the water cycle and why groundwater reserves are so important.)

#### Permanent Water Use Restrictions

What does this mean to Santa Ana? The City of Santa Ana has eased restrictions, but encourages residents to continue conserving. Remaining in place are the city's permanent water use restrictions, which prohibit wasteful practices:

#### **Requirements For Everyone**

- Outdoor watering is restricted to evenings between the hours of 6 pm and 9 am.
- Leaks must be repaired within 72 hours of notification by the City.
- No washing down sidewalks or driveways.
- No excessive water flow or runoff that causes water to flow onto an adjoining sidewalk, driveway, street, alley, gutter or ditch.
- No washing vehicles with a hose, unless the hose is fitted with a shut-off nozzle.

- No operating a fountain or decorative water feature, unless the water is part of a recirculating system.
- No outdoor watering during and 48 hours following measurable rainfall.
- Newly constructed homes must use drought tolerant plants in landscapes.

#### Additional Requirements For Businesses

- Restaurants and other food service establishments can only serve water to customers on request.
- Hotels and Motels must provide guests with the option of not having towels and linens laundered daily.

To help hotels and restaurants comply with these requirements, we created a program that provides tent cards free of charge. To order your free materials, complete this order form and fax it to 714-647-3345. Please allow up to 15 business days to receive your order.

Questions? Please call our water conservation hotline at 714-647-3500 or email conservewater@santa-ana.org.

Together we can do our part to conserve and minimize the hardship of potential water shortages in the future. For tips on how to conserve water, click here.

### 3 Ways to Report Water Wasting

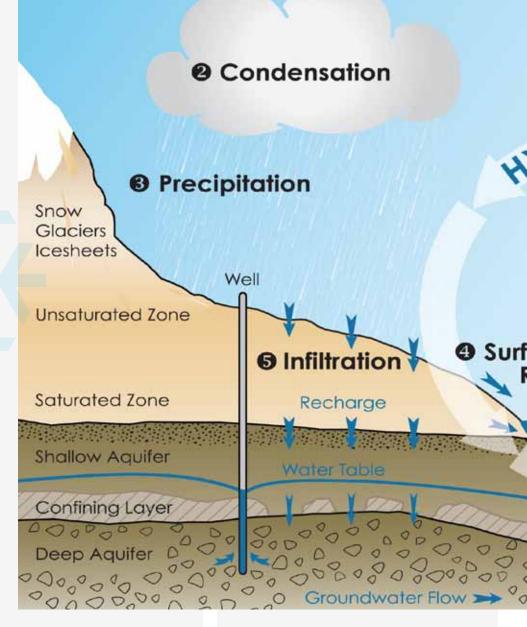
- 1. Call the Water Hotline: **714-647-3500**
- 2. Use the "mySantaAna" smart phone app
- Send an email to: conservewater@ santa-ana.org



# THE WATER CYCLE

GROUNDWATER RESERVES ARE IMPORTANT

Snowpack is important because it provides about 30 percent of the water Californians use after it melts and flows into rivers and reservoirs.



While the state of emergency is officially over in most of California, the effects of the drought will take years to recover. Why? Unlike surface water (rivers, lakes and reservoirs), which can recover during a heavy rain season, groundwater sources recover far slower, often taking years or decades to be replenished.

What are groundwater sources and why does it take so long to replenish them? To answer this question, it's important you understand our earth's water cycle, also known as the hydrologic cycle.

It describes how water evaporates from the surface of the earth, rises into the atmosphere, cools and condenses into rain or snow in clouds, and falls again to the surface as precipitation. The water falling on land collects in rivers and lakes, soil, and porous layers of rock (aquifers), and much of it flows back into the oceans, where it will once more evaporate.

You can refer to the illustration above to read more about the five processes that make up this cycle:

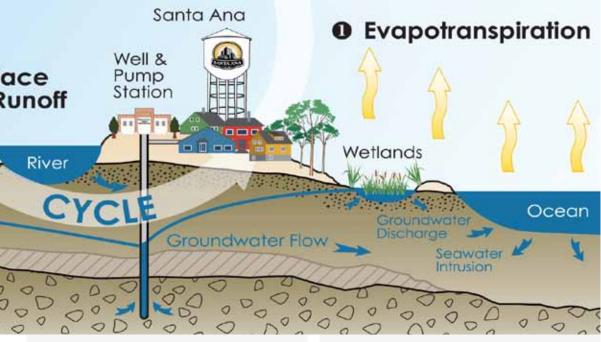
- **Evapotranspiration:** Surface water that accumulates in lakes, ponds and oceans is heated by the sun and evaporates, returning moisture to the atmosphere, while plants return water to the atmosphere by transpiration.
- **2** Condensation: As water vapor cools, it condenses to form clouds, which can result in precipitation.
- **3** Precipitation: Clouds lose their water as rain or snow through precipitation, which falls to the earth's surface.



# Santa Ana Well & Evapotranspiration

# THE WATER CYCLE WHY

WHY GROUNDWATER RESERVES ARE IMPORTANT



Groundwater, which is found in aquifers below the surface of the earth, is one of our country's most important natural resources. 70 percent of the drinking water that Santa Ana supplies to residents comes from groundwater.

4 Runoff: Precipitation is either absorbed into the ground or flows overland as runoff into streams, lakes and the ocean. Runoff can also come from snow packs that thaw and melt in the spring.

**1 Infiltration:** Some water moves downward or infiltrates through cracks and pores in soil and rocks until it reaches the water table where it becomes groundwater and replenishes the aquifer. The infiltration is measured as inches of water-soaked by the soil per hour. Groundwater is pure and drinkable.

The water cycle provides a reliable supply of water by annually replenishing or recharging surface and groundwater sources. The winter storms certainly benefited some Southern California reservoirs like Castaic Lake, which rose to about 96% of capacity, and Diamond Valley, which more than doubled its capacity from about a year ago.

However, heavy rainfall doesn't necessarily translate into more water for aquifers. With shorter, intense rainfall like our last winter storms, there is less of an opportunity for water to infiltrate into the ground. Rather, it runs off fast into rivers and out to sea. Our groundwater supply is far from recovered, and many of Southern California's groundwater reserves are severely depleted.

As such, all Californians are encouraged to make water conservation a way of life by not wasting this precious resource. In doing so, we will help build up our reserves and meet future demands.



#### **ADOPTING GOOD POLICIES**

#### **Drinking From The Tap**

he City of Santa Ana has a long history of environmental stewardship and commitment to the health and quality of life of its community. Recently, city council adopted a resolution that underscores this commitment by improving access to healthy beverage options and encouraging the use of tap water at all public facilities, venues, and community events.

The City adopted this resolution, recognizing that drinking tap water over bottled water is proven to be more affordable, safer, and better for the environment. You can read about how tap water can save you money and the environment here.

You'll be seeing the Water Resources Division at more community events distributing Santa Ana's award winning tap water. At these community events, with few exceptions, outside vendors will be prohibited from selling bottled water while residents will be encouraged to bring reusable bottles of water or other healthy beverages.



Fill it





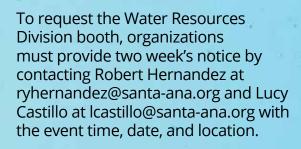


**Enjoy** 





FACT: Did you know that sugar-sweetened beverages are among the main culprits contributing to the current obesity epidemic in America? That's why drinking water is a healthier beverage choice and it's also been medically proven to increase your overall health.



One of the latest scams hitting residents all over the Southland are burglary suspects posing as utility workers to gain access to homes. They may say they're checking on an electrical shortage or a water or gas leak. Some may tell you your account is past due and payment is required immediately to avoid disconnection. And others may claim to be selling products or services from the utility company.

There are several facts you should keep in mind. First, most visits by utility workers are regularly scheduled or requested by you the customer. Second, you will be notified several times in writing before any services would be disconnected. Third, no utility employee would demand cash, a check or credit card for payment of services or ever ask to use your telephone. And last, never reveal your credit card or personal identification to anyone, especially over the phone.

You can protect yourself and your family by following these steps:

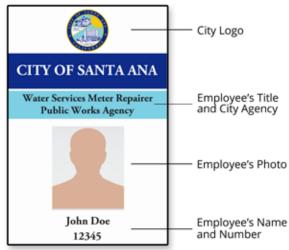
- Be suspicious if someone shows up without an appointment asking to check appliances or wiring, or suggesting other electrical, gas and water problems in your home or on your property.
- 2. Be leery of distractive actions or moves, like pretending to answer the phone or creating a sense of urgency to rush into your home.
- 3. Ask questions about the nature of the work and why the problem is inside the house or in the yard.
- 4. Verify the following before allowing anyone entry:
  - Check the person is wearing a uniform with a company logo and is driving a company vehicle.
  - Insist they show you a photo identification (ID) and make sure that the person on the ID matches the one at the door. If you are not shown proper identification, shut your door and immediately call 911.
  - Confirm employment and the work to be done by calling the utility's main office.

- 5. If you feel uneasy about verifying, request that they come back after you have made some calls.
- 6. Be cautious and report any suspicious behavior or scams to the Santa Ana Police Department.

By working together to alert the community, we can reduce the number of these incidents in our community and make Santa Ana a safer place to live.

#### SCAM ALERT BEWARE OF FAKE UTILITY WORKERS

#### **Verify Identification!**



#### **Important Numbers to Call**

#### To Verify Employment:

SoCalGas:

800-427-2200

(or **800-342-4545** in Spanish)

Southern California Edison:

**800-990-7788** (for business customers) or **800-655-4555** (for residential customers)

City of Santa Ana-Personnel Service: **714-647-5340** (Monday through Friday 8 am – 5 pm)

#### To Report Scams:

Santa Ana Police Department:

714-834-4222

#### **Emergencies:**

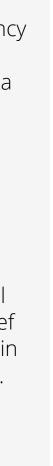
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#### PWA PROJECTS: CURRENT & FUTURE

The Public Works Agency is continually making improvements to Santa Ana's infrastructure.
Looking ahead to the future, we focus on innovation while ensuring the highest standards of safety and reliability, raising the quality of life for all residents. Here's a brief look at those projects in progress and planned.







#### Santa Ana Begins Construction On Its First "Green" Water Pump Station

#### PWA PROJECTS: CURRENT & FUTURE



Besides replacing aged sections of the city's pipeline, the new Walnut Station (shown in this rendering) is the most significant rehab project in the city's water infrastructure, a \$2.5 million investment that was partially funded by a federal grant.

Santa Ana's Public Works Agency (PWA) is all about innovation, exceptional engineering performance, reliability, and energy efficiency. There's no better example of this commitment than the renovation of Santa Ana's oldest pump station located at Flower and 1st streets.

This outdated facility, built in 1953, has been leveled to the ground to make way for a new state-of-the-art facility that will operate with the latest technology and efficiency standards.

What are some of the improved features? The new Walnut Pump Station will capture rainwater, recycle run-off water, and use more efficient controls such as variable-frequency drives (VFDs) to reduce the amount of energy needed to pump the same amount of water.

In addition to being certified for its water and energy efficiency, it was awarded a silver rating by Envision, a third-party rating system used to evaluate and rate the community, environmental and economic benefits of construction projects.

Santa Ana residents can rest assure there will be no interruption of service as the City has other resources in its water system that will cover the gap during construction.

Once completed in May 2018, this project will improve the reliability of the Santa Ana's water system and help ensure the City can handle emergencies such as fires.

#### What is a pump station?

A pump station pumps water into the city's pipeline system from an underground storage reservoir.

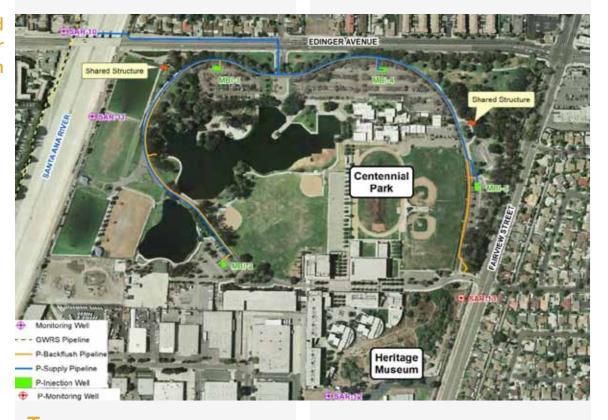


#### PWA PROJECTS: CURRENT & FUTURE

Mid Basin Injection (MBI) Well Project at Centennial Park Geotechnical and survey work as well as the project design has been completed. The four new injection wells are expected to be operational by the end of 2019, providing up to 12 million gallons per day of additional groundwater "recharge" capacity to the Orange County Groundwater Basin.

What is "Groundwater Recharge" and why is it needed?

Protecting and Replenishing Our Groundwater Basin



he Orange County Water District has embarked on an ambitious project in and around Centennial Park that will help protect and replenish Orange County's groundwater basin.

The MBI project involves drilling and building four new injection wells at Centennial Park as well as a monitoring well at Heritage Museum. In addition, the project includes:

- The construction of a water supply line and a backflush pipeline
- The construction of a new restroom/utility building and a rebuilt restroom/office utility building
- Repaving of the Centennial Park parking lot and other enhancements

The majority (70%) of the water Santa Ana supplies to residents is extracted from fresh water aquifers beneath the ground. The City operates 20 wells to pump this groundwater to the surface and into its main water system. When the level of the groundwater becomes too low, there is risk of seawater moving into the fresh water aquifers and water production costs rise since it takes more energy to pump water from greater depths.

The MBI program will raise the groundwater levels surrounding Centennial Park by directly injecting recycled water from OCWD's GWR System into the principal aquifer.

Another benefit is that the MBI program will conserve water for the City of Santa Ana since the backflush water from the injection wells will be used to replenish water for Centennial Park's lakes

TIP: Learn more about where and how we get our tap water here.



# Preparing For The Future: Santa Ana Pursues Smarter Ways To Improve Its Infrastructure

Unlike old water meters that require manual readings, AMI uses wireless smart meters that can talk to a central computer system via radio frequency (RF) transmission. This would save the City thousands of dollars each month for employees to walk from meter to meter to collect and record water usage data. It would also allow the City to address issues more quickly and effectively for customers:

- Accurate meter readings
- Improved billing
- · Early leak and defective meter detection
- Better data allowing staff to plan, construct and optimize the water distribution system
- Ability to measure and target new water conservation plans.

Apart from these benefits, AMI poses no risk to public health and will not affect the operation of other electronic devices. It uses data encryption, keeping customer information secure and private. And lastly, upgrading to an AMI system would be made at no additional costs to customers. What could be better?

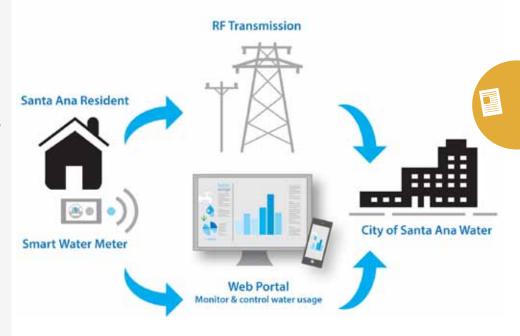
For more information about AMI and what it means to you, click here to download the fact sheet.

# PWA PROJECTS: CURRENT

& FUTURE

The City of Santa Ana is currently evaluating a more efficient system to read water meters called Automated Meter Infrastructure (AMI) and it is designed to reduce operation costs and improve service reliability.

#### **Smart Metering: AMI**



#### **PWA PROJECTS: CURRENT** & FUTURE

**Orange County** Feeder Pipeline Repair: Meeting Your Needs Far Into The Future



At each access site along Bristol Street, new steel pipe segments with manhole outlets are being installed to improve access to the feeder pipeline for future maintenance.

> f you are a resident of Santa Ana, most likely you've seen the construction project along a two-mile stretch of Bristol Street. The Metropolitan Water District of Southern California (MWD) began the project in late January to repair a major water pipeline called the Orange County Feeder. This 41-mile-long pipeline, which runs through the City of Santa Ana, moves treated water from the Weymouth Water Treatment Plant in the City of La Verne to numerous communities in Los Angeles and Orange counties.

Installed in the 1940s, the enamel lining of the pipeline is nearing its service life and needs to be replaced so MWD can continue to provide a reliable water supply to the communities it serves. The renovation project will also significantly improve access to the pipeline for maintenance.



#### **PWA PROJECTS:**

# CURRENT & FUTURE



Damaged pipe segments are being repaired, joints are being welded and cement mortar is being applied to the pipe's interior wall.

The City of Santa Ana has worked closely with MWD for two years to plan for and minimize the impact of this construction project. This includes outreach to the community, studying traffic patterns, and developing a comprehensive traffic control plan to keep transit flowing. But it's not just traffic that needs to flow.

"Keeping our water flowing 24 hours a day, 7 days a week directly impacts quality of life for our community," explains Water Resources Manager Nabil Saba, "which is why this project is so important. The work being done today will ensure the water we deliver is reliable and will meet the needs of residents far into the future."

The project is slated for completion in July 2017, when the street median on Bristol will be restored to its original condition. For more information about the Orange County Feeder Pipeline project, please call Salvador Vazquez of the Metropolitan Water District of Southern California at 213-217-6752.



# AN INTERVIEW WITH SANTA ANA COUNCIL MEMBER VICENTE SARMIENTO



#### **Vicente Sarmiento** is no stranger to Santa Ana.

Councilmember Vicente Sarmiento and his family have lived in and around Santa Ana since 1965. He attended John Muir Elementary, Sierra Elementary, and Willard Intermediate Schools Councilmember Sarmiento now lives in a 1929 historic home in the Saddleback View neighborhood, three blocks from where he grew up. Among his many accomplishments, Councilmember Sarmiento was reappointed by the Santa Ana City Council to serve on the Orange County Water District (OCWD) Board in December 2016. He previously served as a OCWD Board Member from January 2013 to February 2015.

We met with him one afternoon to ask about his role with the OCWD, how it benefits the community of Santa Ana, and what residents could do to help preserve our water resources.

#### What is the Orange County Water District?

The Orange County Water District (OCWD) was formed in 1933 to protect the region's 270-mile groundwater basin, which is Orange County's largest source of drinking water. I am proud to be serving on the OCWD's board of directors, which plays an important role in overseeing the extensive planning and investments required to address our short- and long-term water supply challenges.

### As a board member, what do you believe is the most important function of the OCWD?

The main function of the OCWD is to manage and protect the groundwater basin by (1) capturing surface water and recharging the groundwater basin to replenish the aquifer, (2) monitoring the quantity and quality of the groundwater to protect it from contamination, and (3)

purifying treated wastewater and reusing it for irrigation and potable water supply. The OCWD is continually finding ways to improve the efficiencies in our recycling systems and recharge activities to reduce costs and make water consumption more affordable for residents.

#### How does your involvement with the OCWD benefit Santa Ana?

As a board member representing the Santa Ana community, I keep the city's best interests in mind when making important decisions that impact costs and availability of water for our residents. I also make decisions on projects that directly benefit Santa Ana, like the Mid-Basin Injection Project. This project supplements and elevates the level of Santa Ana's groundwater, which in turn reduces our energy costs to pump the water for residents to use.

Much of the state has experienced its wettest 3-6 month period on record. What are the immediate and long-term effects of this rainy season and does this mean we are no longer in a drought?

The extraordinary rainfall and snowpack has certainly boosted reservoir levels and we're seeing vast improvement in water supply conditions throughout much of the state, particularly in Northern California. While this has started replenishing local groundwater basins, our reserves are still far lower than they were at the beginning of the drought. It takes time to replenish groundwater to a level that will meet future demand.

Therefore, this record wet season emphasized the importance of improving how we capture precious rainfall and runoff. We plan to expand stormwater capture projects to decrease the amount of runoff lost to the Pacific Ocean via streams, rivers and storm drains. This captured stormwater can then be used to recharge our water basin for future use and lower our reliance on higher cost imported water.

Weather is cyclical and so are droughts. "Is the drought over?" is the wrong question. We should be asking "are we managing our water resources in a sustainable manner for the long term?" We say yes, through efficient groundwater remediation, better stormwater capture, and continued water conservation. The conservation practices we learned during the drought can, and should, stay with us all.

Santa Ana's residents have proven to be the most efficient water users in Orange County. What more can they do to prevent future water shortages?

I am proud of what we have been able to achieve as a community. Our conservation efforts have enabled us to meet the water use reduction targets mandated by the State of California. But as I mentioned earlier, we must continue to make water conservation a part of our daily lives. Water is precious, let's not waste it.

### How does Santa Ana's water fees compare to other cities in Orange County?

Our water fees are in the midrange compared to all other cities and water districts in the county. We are focused on reducing the increase of wholesale water pricing and improving our efficiencies to keep water affordable for Santa Ana residents. In addition to water usage and servicing, your dollars also pay to help maintain and upgrade the city's aging water and sewer infrastructure so it keeps running reliably and efficiently.

# Other cities boast grassy 'green' medians, while Santa Ana's are brown. Why don't we rely on reclaimed water to irrigate our medians?

We receive recycled water through the OCWD's recycled water distribution system, which consists of two separate pump stations, two reservoirs and approximate 37 miles of pipelines. OCWD's current infrastructure, which doesn't extend north of Edinger Avenue, can only support a limited amount of recycled water used to irrigate our parks. However, we are looking at opportunities and funding to expand the pipeline and bring recycled water into other areas of Santa Ana in the future.

# AN INTERVIEW WITH SANTA ANA COUNCIL MEMBER VICENTE SARMIENTO



# 2017 POSTER CONTEST WINNERS HONORED BY CITY COUNCIL



Winners show how water conservation is "Up To Us"

Mayor Miguel A. Pulido and the entire Santa Ana City Council celebrated the winners of the 2017 Water Conservation Poster Contest at a special awards ceremony last February. The ceremony was held during the council's monthly meeting in the City Council Chambers.

"We congratulate the 12 outstanding young artists who won this year's contest for their creative accomplishments," said Councilman Vicente Sarmiento who presented a certificate to each winner. "And we thank the Santa Ana School District and our judges for their participation in making this year's contest a resounding success."

It was noted that more than 400 entries from 24 participating schools were submitted this year. The contest was launched in 2015 by Santa Ana's Water Resources Division to promote creativity, educate youth about water conservation, and offer an opportunity for families to explore ways they can cut back water use in their daily lives.

There is no other community that understands water conservation better than Santa Ana. Last year, we exceeded our target reduction and cut our water use by 17 percent!" said Santa Ana's Water Resources Manager Nabil Saba. "With awareness and effort, we proved what can happen when a community comes together to use water efficiently."

Saba explained this community effort was central to the theme of this year's contest: It's Up To Us Santa Ana.

Following the City Council's awards ceremony, the 12 winners and their families were treated to a reception where they were presented with their prizes ranging from iPads to Nintendo 3DS to gift certificates.

# 2017 POSTER CONTEST WINNERS HONORED BY CITY COUNCIL





Laisha Echegoyen, 11

2017 Water Conservation Poster Contest Winning Entries























## WASTE NOT,

### Do you want more information about water conservation?

Download our indoor and outdoor tip sheets.

Check out rebates available to Santa Ana residents.

Water use restrictions have eased now that we no longer face emergency drought conditions. But we must remain mindful not to waste water. Think about the wisdom of the old proverb "waste not, want not." If we don't waste water—something essential to our everyday lives—then we won't lack (want) it. We'll be protecting our water supply for generations to come. Remember, it's up to each of us. If we all do our part to change our water use habits, we could save billions of gallons of water and preserve our future reserves.

Below are the **10** easiest ways you can conserve water both inside your home and outdoors.

#### **Indoor Tips**

- Stop Running Water. Turn off the water when you're brushing your teeth and shaving. Doing so will save up to 2.5 gallons per minute.
- 2. **Limit your Showers to 5 Minutes.** Spend only 5 minutes in the shower and save up to 25 gallons each time.
- 3. **Fix The Drips.** Repair your leaks immediately and save up to 20 gallons a day. Remember, Santa Ana's permanent water use restrictions states leaks must be repaired within 72 hours of notification by the City.
- 4. **Wash Full Loads Only.** Washing only full loads of laundry and dishes can save 15-50 gallons per load.
- 5. Buy Efficient Appliances. Buy water saving devices like high-efficiency toilets and clothes washers, and save many gallons per day. Some of these clothes washers are eligible for rebates!









#### **Outdoor Tips**

- 1. **Don't Over-Water.** Consider watering 3 days instead of 5 days. You'll save more than 500 gallons a week!
- 2. Choose the Right Time. You should only be watering outdoors between the hours of 6 p.m. and 9 a.m. according to Santa Ana's permanent water use restrictions. This reduces evaporation and can save 25 gallons each day you water.
- 3. **Use a Broom, Not a Hose.** Put down the hose and pick up a broom when you want to clean your driveway and sidewalks, and save 150 gallons each time.
- 4. **Maintain Your System.** Check your sprinkler system for leaks, overspray and broken sprinkler heads and save up to 500 gallons a month.
- 5. **Control What You Need.** Install a smart sprinkler controller that is weather based and save 40 gallons a day.





#### SoCAL WATER\$MART **REBATES**

#### Rebate **FAQs**



- Apply online for your rebate. You may do this by visiting the Apply Online page.
- 2 Within 60 days of your online submission, send in the following:
  - Copy of the online application confirmation page.
  - Copy of a recent water bill.
  - Copy of your receipt showing the product was paid for in full. It must also include brand, model, and individual price.
- 3 Mail, fax, or email your documentation to:

SoCal Water\$mart Rebate Program 3800 Watt Avenue, Suite 105 Sacramento, CA 95821

I made a qualified purchase more than a year ago, but have not submitted my rebate application. Can I still receive a rebate?

No. You can only apply for a rebate on items that are currently available within 3 months from the date of purchase.

#### How can I find out the status of a rebate I've submitted?

You may inquire about the status of your rebate via telephone at 888-376-3314 or email. Please note that you should allow 2-4 weeks for rebate processing after submitting an application. You will receive



an email advising you of the status once the application has been processed.

#### Is my rebate taxable?

If your rebate amount is \$600 or more you will receive a 1099 form to comply with Internal Revenue Service requirements. Whether your rebate is taxable or not may depend on several variables. We recommend contacting your tax professional.

#### Can the rebate check be less than the estimated rebate amount provided to me online?

Yes. If the actual cost of the device (excluding tax and installation) is less than the rebate amount being offered, your rebate may cap at the purchase amount. For example, if the rebate offered is \$40 for a premium high efficiency toilet, but your purchase cost before tax and installation is \$30, you may receive a rebate for \$30 only.

#### Is there a limit on how many rebates I can receive?

If you have ever received a SoCal Water\$mart rebate for the same type of device, you are not eligible to receive another rebate. For example, previous applications for toilets will bar you from receiving another rebate for any additional toilets. You may, however, apply for multiple items on a single application, such as a clothes washer and toilets.

I have already claimed a rebate for a water saving device, but it has been a long time. Can I apply again when I purchase a new model of the same product I already got a rebate for?

No, customers may not apply for a rebate for the same product at the same address a second time.







#### SoCal WATER\$MART REBATES

#### Why do you need a copy of my water bill?

We use a copy of your water bill to verify your name, account number, service address and the type of service listed. We must see active water service to approve your rebate. SoCal Water\$mart does NOT evaluate usage, so additional pages related to usage are not required.

#### I am a tenant/landlord, and my name does not appear on the water bill. How can I apply?

We can accept a non-matching bill in cases where the tenant is applying with the landlord's water bill, or the landlord is applying with the tenant's water bill. Either way, we need a written explanation, and written permission by the account holder to pay the tenant/landlord.

### I have just signed up for water service and I do not have a current water bill. Can I still receive a rebate?

If you have not yet received your first bill, you may visit Santa Ana's Finance Department at 20 Civic Center Plaza, First Floor City Hall, and request a proof of service letter. We can accept a proof of service letter in lieu of a water bill if it has all of the required information that we need on the water bill.

#### I live in an apartment complex and do not receive a water bill. Can I still apply?

Yes. If you live in an apartment, condominium, townhome or any mobile home park, you may still apply for a residential rebate for your unit. You may notify us of your situation by doing the following:

 Apply online for your rebate. Leave the application field for account number on the application blank.  After submitting your application, write a note on your paperwork indicating why you do not have a water bill, and submit the information required. We will confirm active water service for you directly through the water agency.

### The model for the item I purchased is not on your qualified products list. Can I still get a rebate?

No. Only products that meet the stated eligibility criteria qualify for a rebate. Many products have similar model numbers, but only the exact models on the list will qualify. We recommend that you visit the qualifying products lists prior to applying to confirm eligibility.

#### Do products purchased through a thirdparty website such as eBay or Amazon qualify for rebates?

Products purchased through Amazon or eBay may qualify, if it can be confirmed that the product is being sold new. You must include a paid invoice that clearly states the product is new, otherwise it will not be eligible for a rebate.

### Can I receive a rebate if I purchase qualified products through a contractor?

Yes. If a contractor purchases the device(s) for you, they must provide you with a paid receipt or invoice for the purchase for you to submit your application for a rebate.

#### SoCal WATER\$MART REBATES

Rebates Available to Santa Ana Residents

#### **High-Efficiency Clothes Washers**

High-efficiency clothes washers use 55 percent less water than standard clothes washers. Less water means less energy needed for water heating, lowering your energy bill too. Rebates start at \$85 per washer.



**Apply for rebate:** socalwatersmart.com/?page\_id=2969 **Read FAQs:** socalwatersmart.com/?page\_id=3270

#### **Premium High-Efficiency Toilets**

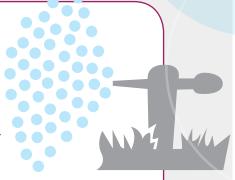
Premium high-efficiency toilets use 20 percent less water and flush the same amount of waste just as, if not more, effectively. Rebates start at \$85 per toilet.



**Apply for rebate:** socalwatersmart.com/?page\_id=2971 **Read FAQs**: socalwatersmart.com/?page\_id=3273

### Rotating Sprinkler Nozzles

Multi-trajectory, rotating streams apply water more slowly and uniformly to your landscape, encouraging healthy plant growth. Rebates start at \$2 per nozzle.



**Apply for rebate:** socalwatersmart.com/?page\_id=2975 **Read FAQs**: socalwatersmart.com/?page\_id=3275



#### Soil Moisture Sensor System



A soil moisture sensor measures soil moisture content in the active root zone on your property. Rebates start at \$80 or \$35 per system.

Apply for rebate:

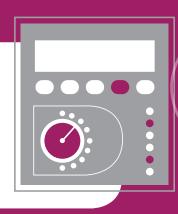
socalwatersmart.com/?page\_id=2977

#### SoCal WATER\$MART **REBATES**

#### Weather Based Irrigation Controller

Allows for more accurate, customized irrigation by automatically adjusting the schedule and amount of water in response to changing weather conditions. Rebates start at \$80 or \$35 per controller.

**Apply for rebate:** socalwatersmart.com/?page\_id=2979



#### **Rain Barrels**



Collecting and re-using rainwater from lawns and gardens minimizes the amount of water flowing into your storm drains, sewer systems and local waterways.

Rebates start at \$75 per barrel.

#### Apply for rebate:

socalwatersmart.com/?page\_id=2973

#### Download tip sheet:

socalwatersmart.com/images/PDFs/scws\_rainbarrels.pdf

#### **IMPORTANT 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)

#### **Public Works**

**General Maintenance and Repairs** 714-647-3380

Sanitation 714-647-3309

**Shopping Cart Removal** 714-667-2780

**Street Lights** 714-647-3505

**Street Sweeping** 714-647-3309

Trees 714-647-3330

**Weed Abatement** 714-647-3309



#### **(V)**

# IMPORTANT TELEPHONE NUMBERS

#### **Water Resources**

Sewer/Storm Drain Maintenance 714-647-3380

Water Administration 714-647-3320

Water & Sewer Permits 714-647-5026

Water Customer Service and Billing 714-647-5454

Water Engineering 714-647-3320

Water Maintenance & Construction 714-647-3346

Water Production 714-647-3382

Water Quality & Conservation 714-647-3320

Water Service & Main Location 714-647-3320

#### **Refuse Collection**

New Trash Cart/Order Dumpster 714-558-7761

Recycle Used Car Oil & Filter 714-558-7761

#### **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

#### **Other Helpful Numbers**

Bus Information 714-636-7433

Noise Complaints 714-834-4211

Overcrowding **714-667-2780** 

Poison Center 800-876-4766



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

220 South Daisy Avenue

Bldg A, Santa Ana, California 92703

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

web: santaanaccr.org

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Chi tiết này thật quan trọng. Xin nhờ người dịch cho quý vị.

Daimntawv tshaj tawm no muaj lus tseemceeb txog koj cov dej haus. Tshab txhais nws, los yog tham nrog tej tug neeg uas totaub txog nws.

此份有关你的食水报告,内有重要资料和讯息,请找他人为你翻译及解释清楚。

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

QUESTIONS
ABOUT
YOUR
WATER
QUALITY
REPORT?

