



Quality • Value • Reliability • Customer Service

# 2015 Annual Drinking Water Quality Report

# A Message from the Director

I am very pleased to share with you the 2015 Annual Drinking Water Quality Report that shows the high quality of your drinking water.

In fact, San Diego Public Utilities Department is working to ensure that all our customers have safe, reliable and high-quality water for years to come. That's why we are implementing the Pure Water program which will deliver 30 million gallons per day by 2021 and a total of 1/3 of our City's drinking water supply by 2035.

I want to thank you for your efforts to help the City reduce water usage and meet the State mandated water use reductions in 2015. We at the Public Utilities Department are committed to the efficient use of the water that we deliver.

The City is investing in the infrastructure that delivers your water. Many miles of cast iron pipe were installed early in the 20th Century and are past their recommended service life – increasing the risk of main breaks and water loss. To remedy this situation San Diego Public Utilities Department is making the switch to PVC piping and replacing 300 miles of the old cast iron piping throughout the system. So far, the switch is working.

In 2015 the number of water main breaks dropped to 65, the least number of breaks recorded per year since 2004. We are on target to have all cast iron pipes in the system removed by 2023. Currently, projects are underway to replace larger transmission pipes and the smaller distribution pipes, which feed directly to each home and business.

I am confident this report will not only illustrate the quality of our water, but what San Diego Public Utilities is doing to ensure continued sustainability and delivery of this precious resource for the years to come.

Sincerely,  
  
Halla Razak  
Director of Public Utilities

## About This Report

We at the City of San Diego Public Utilities Department are pleased to present you with the annual Drinking Water Quality Report for 2015, also known as the Consumer Confidence Report. The U.S. Environmental Protection Agency and the California Division of Drinking Water require that all water agencies produce an annual report on the previous year informing customers about the quality of their drinking water.

The City of San Diego's annual Drinking Water Quality Report includes details about where your water comes from, what it contains, and how it compares to state standards. In 2015, as in years past, your tap water met all state and federal drinking water health standards (primary standards for treating and monitoring water). The City of San Diego Public Utilities Department vigilantly safeguards our 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. This report provides details of last year's drinking water quality.



## TABLE OF CONTENTS

A Message from the Director	2
Our Water Supply	3
Our Water Treatment Process	4
Diversifying Our Water Supply	5
<b>WHY</b> is Pure Water San Diego Being Implemented	5
<b>WHAT</b> is Pure Water San Diego	5
<b>HOW</b> does Pure Water Program Work	5
<b>WHERE</b> is the Pure Water Program	6
<b>WHEN</b> will the New Facility be Built	6
<b>WHAT</b> are The Steps	6
Follow Us	6
Recycled Water Program	7
Groundwater	7
Rainwater Harvesting	7
Ocean Desalination	7
Emergency Storage Project	8
Renewable Energy & Efficiency Project	8
Water Conservation	9
Do It Yourself	9
Rebates and Incentives	10
No-Cost Surveys	10
WASTENOWATER.ORG	10
A Change for the Better	11
Important Health Information	12
Consumer Confidence Report Tables	13-15

## How to Contact Us

Emergency Hotline.....	619-515-3525
General and Billing Information.....	619-515-3500
Water Quality Lab.....	619-668-3232
Water Quality Lab Email.....	drinkingwaterquality@sandiego.gov
Capital Improvements Projects.....	619-533-4207
City Lakes Recreation.....	619-465-3474
Pure Water Speakers Bureau.....	619-533-6638
Storm Water Pollution Prevention.....	619-235-1000
Water-Waste Hotline.....	619-533-5271
Water-Waste Email.....	water@sandiego.gov

## Information Websites

City of San Diego.....	sandiego.gov/water/
San Diego County Water Authority.....	sdcwa.org/
Metropolitan Water District.....	mwdh2o.org/
CA Division of Drinking Water.....	waterboards.ca.gov
Think Blue.....	thinkblue.org
U.S. EPA.....	http://water.epa.gov/drink/index.cfm
American Water Works Association.....	awwa.org
Watering Calculator.....	http://apps.sandiego.gov/landcal/
Be Water Wise (MWD).....	bewaterwise.com/

## Check Us Out



# Our Water Supply

## WHY IS THERE ANYTHING IN MY WATER?

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 from 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 storm water 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 storm water runoff, and residential uses.

• **Organic chemical contaminants**, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency 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 FDA and the California Department of Public Health regulations establish limits for contaminants in bottled water that provide the same protection for public health.

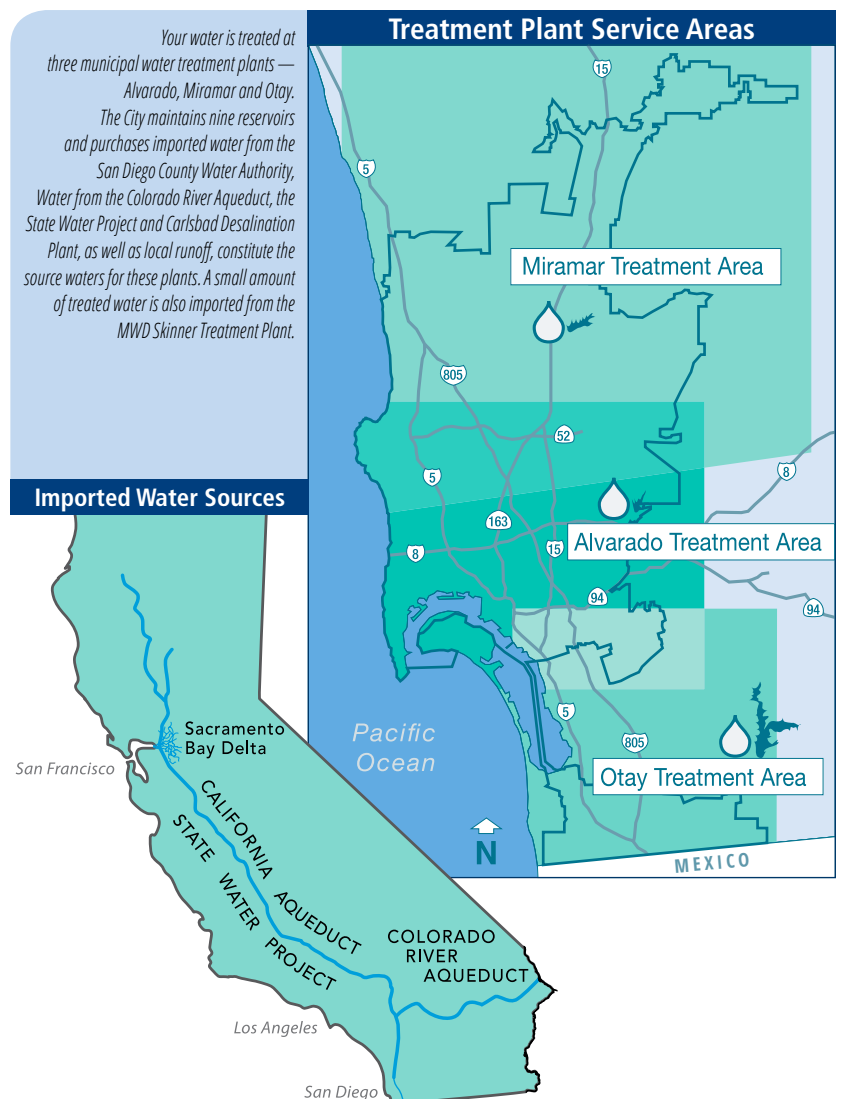
## OUR IMPORTED WATER SUPPLY AND THE IMPACT ON WATER QUALITY

The City of San Diego imports an average of 85 percent of its water supply. This imported water is provided by the San Diego County Water Authority, which not only purchases water from the Metropolitan Water District of Southern California but provides desalinated ocean water from its Carlsbad Desalination Plant in Carlsbad, CA. Ultimately, our imported water is a blend of Colorado River water and State Water Project water (see map). Throughout the year, the blend changes.

Several forces negatively impact the quality of water from the Colorado River and State Water Project. The Colorado River winds through thousands of miles of unprotected watershed containing towns, farms, old mining sites and industrial sites.

Water from the State Water Project is also subject to potential contaminants such as pesticides and herbicides. This water source also has a higher organic carbon and bromide level than the Colorado River water. As organic carbon and bromide levels increase, the potential for creating higher levels of disinfection by-products exists. The City continually alters its treatment process to adjust for changing water supplies.

The City of San Diego regularly monitors the quality of our water to ensure all drinking water quality standards are met.





# Our Water Treatment Process

The City's Public Utilities Department provides high-quality drinking water by utilizing proven technology, updated facilities, and state-certified operators. Water is treated at the City's three treatment plants using several processes, with each process providing additional water quality improvements. Using several treatment processes provides multiple barriers for added safety.

Our treatment plants employ a combination of time-tested conventional water treatment processes and innovative disinfection strategies to produce high-quality drinking water. Conventional water treatment consists of coagulation, flocculation, sedimentation, and sand/multi-media filtration; this cost-effective, proven method of treatment is used throughout the modern world. Our advanced disinfection technologies have been implemented to reduce disinfection byproducts and produce better tasting water.



## THE WATER TREATMENT PROCESSES WE USE ARE:

**Watershed protection:** San Diego receives water from local rain collected in City reservoirs and from imported water. Imported water comprises 85 percent of our water and travels hundreds of miles before reaching our water treatment plants. Protecting the watersheds prevents contamination of our water supply and is the most cost effective process in water treatment. Extensive measures are being taken to prevent contamination of our local and imported water. So when you see “No Swimming” or “No Dumping” near water supplies we hope you understand this is for the protection of your drinking water. The 2015 Watershed Sanitary Survey, which contains information on the City's watersheds, is available at: [sandiego.gov/water/quality/environment/sanitarysurvey.shtml](http://sandiego.gov/water/quality/environment/sanitarysurvey.shtml)

**Coagulation:** This is the chemical process of rapidly mixing coagulants to the water coming into the water treatment plant (source water). Many of the particles in the source water have negative charges causing them to repel each other, much like two magnets when the negative ends are put together. Coagulation changes the negative charges to neutral.

**Flocculation:** Coagulated water is slowly mixed causing the neutral particles to collide. When the collisions occur the particles clump together forming floc. As the floc is formed, particles in the water are trapped within the floc. The floc now looks like snowflakes suspended in the water.

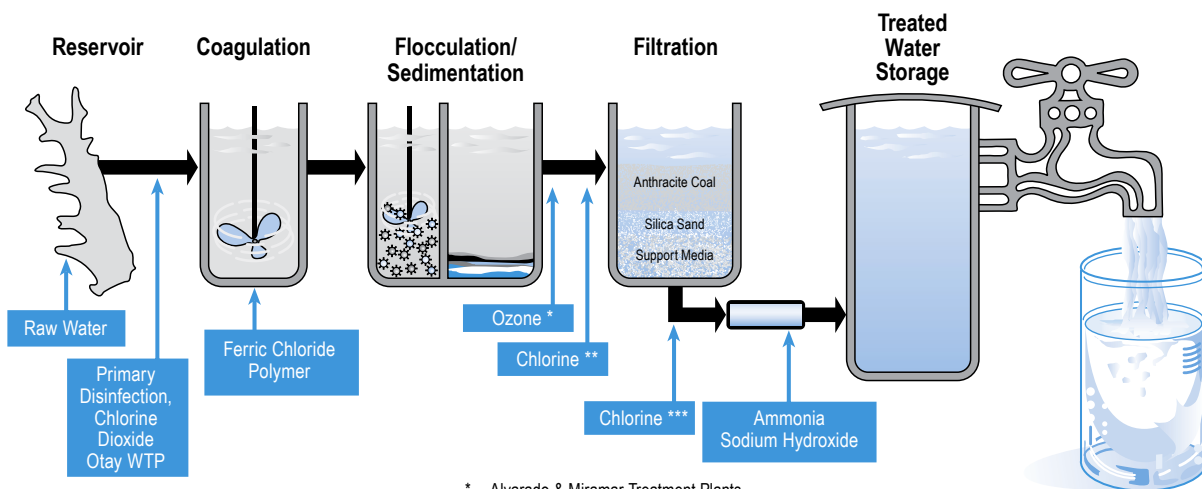
**Sedimentation:** The floc particles are heavier than water. Mixing is stopped and the water is allowed to slowly flow through the sedimentation basins. The floc settles to the bottom and is removed. The clear water is collected from the top of the sedimentation basins and sent to the filters.

**Filtration:** Water is passed through deep filtration beds to produce water that is crystal clear. Extremely small particles are removed during this process. San Diego's water treatment plants produce water with turbidities (cloudiness) significantly better than drinking water standards.

**Disinfection, Primary:** Drinking water is further treated to remove or inactivate viruses, bacteria, and other pathogenic organisms. Disinfection is accomplished in a variety of methods. The Alvarado and Miramar Water Treatment Plants use ozone as the primary disinfectant. The Otay Water Treatment Plant uses chlorine dioxide as the primary disinfectant. These are advanced disinfection processes and have the advantage of providing higher quality water with better taste.

**Disinfection, Secondary:** Chloramines are created by adding chlorine and ammonia to the water as the last step in the treatment process. Chloramines help prevent microbial contamination from occurring in the water distribution system.

**Corrosion Control:** The corrosivity of the water is controlled by adjusting the pH.



\* Alvarado & Miramar Treatment Plants

\*\* Miramar Water Treatment Plant

\*\*\* Otay & Alvarado Treatment Plants

## Diversifying Our Water Supply

The City of San Diego has been reliably delivering quality water to customers for more than 100 years and has developed one of the most complex and sophisticated water systems in the world. However, San Diego is not blessed with an abundant local water supply. With an average annual rainfall of 10 inches on the coast, San Diego has invested in infrastructure to capture local rainfall and to import the majority of its water, approximately 85 percent, primarily from the Colorado River and the State Water Project in the Sacramento-San Joaquin Bay Delta.

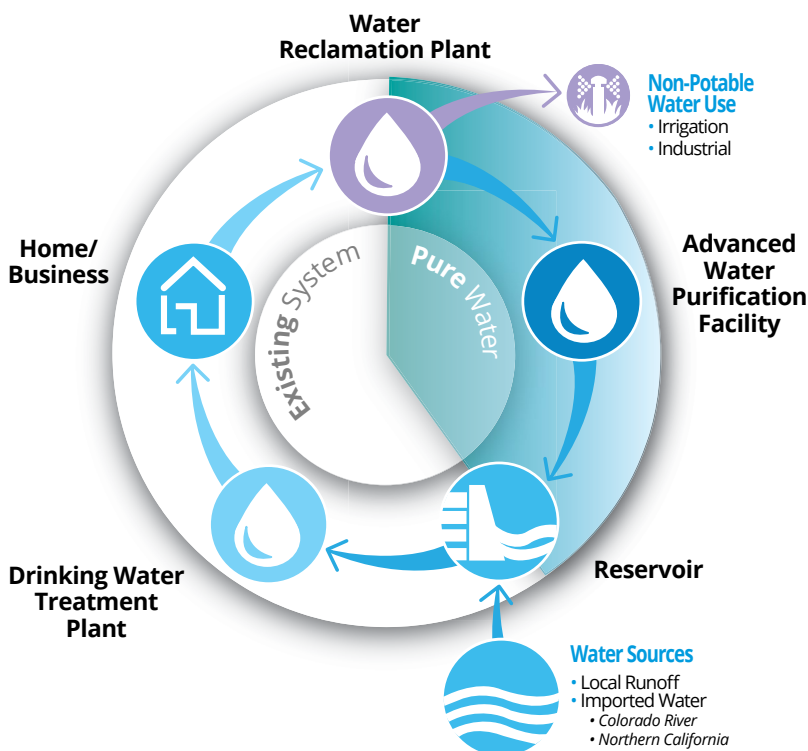
Today, as San Diego grapples with ongoing drought, rising imported water costs and population growth, water supply reliability and sustainability challenges remain. The present situation underscores the importance of local strategic planning for short-, mid- and long-term water supplies.



## Why is Pure Water San Diego Being Implemented?



San Diego relies on importing 85 percent of its water supply from the Colorado River and Northern California Bay Delta. The cost of this imported water has tripled in the last 15 years and continues to rise. With limited control over its water supply, the City of San Diego is more vulnerable to droughts, climate change and natural disasters.



## What is Pure Water San Diego?

Pure Water San Diego is a phased, multi-year program that will provide one-third of San Diego's water supply locally by 2035. The Pure Water Program:

- Uses proven technology to clean recycled water to produce safe, high-quality drinking water
- Provides a reliable, sustainable, water supply
- Offers a cost-effective investment for San Diego's water needs

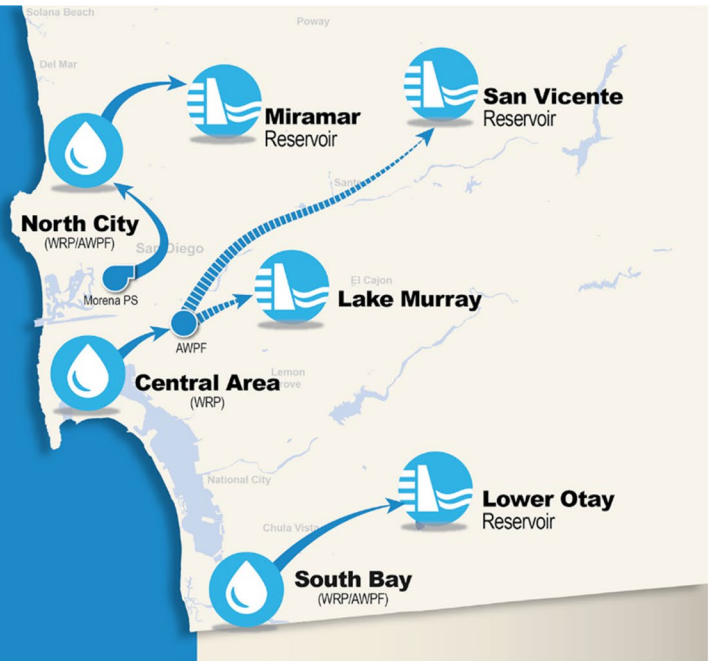
## How does the Pure Water Program Work?

With San Diego's existing water system, only 8 percent of the wastewater leaving homes and businesses is recycled; the rest is treated and discharged into the ocean. The Pure Water Program transforms the City's water system into a complete water cycle that maximizes our use of the world's most precious resource—water.

## Where is the Pure Water Program?

The Pure Water facilities will be located throughout the City of San Diego and are grouped into three geographical areas to facilitate implementation: North City, Central Area and South Bay (shown on map).

Construction on the Phase 1 North City projects will start in 2019.



## When will the New Facilities be built?

Phase 1	30 mgd by 2021	North City
	Output	Location
Phase 2	Additional 53 mgd by 2035	Central Area South Bay (as needed)
Total: 83 mgd		

## What are the Steps of the Water Purification Process?



Membrane Filtration



Reverse Osmosis



UV/Advanced Oxidation

Since June 2011, the City has produced 1 million gallons of purified water every day at its demonstration Advanced Water Purification Facility.

More than 28,000 water quality tests have confirmed the water is safe and meets all federal and state drinking water standards.

Local **residents**, community **groups**, environmental **organizations** and local **businesses** support the **Pure Water Program**. Do you **support Pure Water**? Like us, follow us:



YouTube



## Want to Know More?

Visit [www.PureWaterSD.org](http://www.PureWaterSD.org) to sign up for a free tour of the Advanced Water Purification Facility or request a presentation for your organization.

**SD** Pure Water  
San Diego





## RECYCLED WATER PROGRAM

To help meet future water demands while reducing our dependence on imported water, the City of San Diego built the North City Water Reclamation Plant and the South Bay Water Reclamation Plant. These plants treat wastewater to a level that is approved for irrigation, manufacturing and other non-drinking (non-potable) purposes. The North City Plant has the capability to treat 30 million gallons a day and the South Bay Plant can treat 15 million gallons a day. Recycled water gives San Diego a dependable, year round, locally controlled water resource. The City will continue to serve customers along the City's recycled water distribution system, with approximately 660 connections in place in 2016. For more information, visit [sandiego.gov/water/recycled](http://sandiego.gov/water/recycled).



## GROUNDWATER

The City continues to explore the feasibility of using local groundwater basins for augmenting water supply and providing water storage. Currently, the City is generating 500 acre-feet of water, enough to sustain 2,000 houses for a year, from existing wells in East County. The City is partnering with the Sweetwater Authority on a groundwater desalination facility expansion that provides up to 2,600 acre feet of water to San Diego per year by 2018. The City is also actively exploring other areas of the region, coordinating with the U.S. Geological Survey and the U.S. Bureau of Reclamation. For more information, visit [sandiego.gov/water/gen-info/watersupply.shtml](http://sandiego.gov/water/gen-info/watersupply.shtml)



## RAINWATER HARVESTING

Capturing rain from your roof is an easy way to conserve water and help prevent pollution by reducing the amount of runoff entering our storm drain system. The City initiated a rainwater harvesting program as a tool to raise public awareness of water issues, promote customer responsibility, and reduce imported water use. For more information, visit [sandiego.gov/water/conservation/rebates/rainbarrel.shtml](http://sandiego.gov/water/conservation/rebates/rainbarrel.shtml)



## OCEAN DESALINATION

As the largest member agency of the San Diego County Water Authority, the City receives water from the Carlsbad Desalination Project, which includes the largest, most technologically advanced and energy efficient seawater desalination plant in the Western Hemisphere.

The \$1 billion San Diego County Water Authority project is currently producing drinking water for the San Diego region in fall 2015, providing a major new drought-resistant water supply that meets about seven percent of the county's water demands and accounts for one-third of all water locally generated in San Diego County. For more information, visit [sdcwa.org](http://sdcwa.org).





## Emergency Storage Project

The City of San Diego is working closely with the San Diego County Water Authority's Emergency Storage Project. A system of reservoirs, interconnected pipelines and pumping stations, this project is designed to make water available to the San Diego region in the event of an interruption in imported water deliveries. It will also allow the City to better capture rain water runoff in our reservoirs.

As part of this project, the Water Authority raised the height of the dam of the City's San Vicente Reservoir. San Vicente Dam originally stood at 220 feet and could store up to 90,000 acre-feet of water. The dam raise project increased the height of the dam by 117 feet – the tallest dam raise in the United States and the tallest of its type in the world. The raised dam will store up to an additional 152,000 acre-feet of water, more than doubling the capacity of the original reservoir.

On-site preparations began in 2009. The new dam reached its full height in late 2012, and new instrumentation and outlet facilities were completed in summer 2014. Further work to construct a new pipeline and restore the site will continue through 2016.

The design and construction of the dam raise has been closely monitored by the California Department of Water Resources, Division of Safety of Dams, to ensure the new dam is built to the highest safety standards.

For more information, visit the San Diego County Water Authority's web site at [sdcwa.org/san-vicente-dam-raise](http://sdcwa.org/san-vicente-dam-raise)



## Renewable Energy & Efficiency Program

The City of San Diego is committed to sustainability and the efficient use of resources and has a very dynamic Renewable Energy and Efficiency Program within the Public Utilities Department. Together with its private partners, the Department's facilities generate more renewable energy than any other San Diego Gas & Electric customer. This impressive standing contributes to the Department's environmental stewardship, provides some energy independence, helps reduce operating costs and ultimately helps keep rates lower for customers.

In fact, some of the Public Utilities facilities produce enough energy to operate the facilities and still sell excess energy back to SDG&E to generate revenue. The City's excess energy production helps supply energy to such important institutions as the Marine Corps Air Station (MCAS) Miramar and the University of California, San Diego. Public Utilities Department facilities, with private partners, utilize a number of energy sources to generate energy, including digester gas, landfill gas, bio methane, hydroelectric, solar and fuel cells.

This commitment to sustainability has not gone unnoticed. In 2013, the City of San Diego was recognized with the SDG&E Energy Showcase Award for Local Government, due in part to the efforts of the Public Utilities Department to create renewable energy. The California Center for Sustainable Energy awarded the Public Utilities Department their 2010 Energy All-Star Award for Outstanding Organization. In 2006, the City of San Diego was recognized by the U.S. EPA for utilizing more renewable energy than any other public agency in the United States. The Public



Utilities Department utilized 96 percent of that energy to offset the purchase of non-renewable energy. In 1998, the San Diego Taxpayers Association honored the Metro Biosolids Center's privatized landfill gas-fired cogeneration facility with its Golden Watchdog Award.

For more detailed information on the Public Utilities Renewable Energy and Efficiency Program, visit [sandiego.gov/publicutilities](http://sandiego.gov/publicutilities).



## Water Conservation

Valuing the water that we use is part of what it means to live in San Diego. No matter the drought conditions or reduction goals that are mandated, simple and smart water conservation is something that everyone in the City of San Diego is asked to do. Certain permanent mandatory restrictions apply year-round, whether the City is in a drought or not.

These restrictions are designed to promote water conservation as a permanent way of life in San Diego.

- Please avoid excessive irrigation on your property and fix any leaks that may occur throughout your irrigation system.
- Please repair or stop all water leaks upon discovery or within 72 hours of notification by the City of San Diego.
- Avoid using a running hose to wash down hardscapes (sidewalks, driveways, patios or other hard surface areas) for any reason.
- Please do not overfill swimming pools or spas.
- All decorative and cascading water fountains must use a recirculating pump.
- Residents who are washing vehicles (automobiles, trucks, trailers, boats, RVs) must implement procedures to conserve water and prevent excessive runoff, such as:
  - washing vehicles at a commercial car wash;
  - washing vehicles on a lawn or pervious surface or directing water flow to a lawn or pervious area;
  - damming wash water for collection and disposal to a pervious area or to the sanitary sewer;
  - using a hose with an automatic shutoff nozzle;
  - and/or using a handheld water container.
- Restaurants and other food establishments shall only serve and refill water for patrons upon request.
- Guests in hotels, motels and other commercial lodging establishments will be provided the option of not laundering towels and linens daily.



Report water waste by calling (619) 533-5271 or email [waterwaste@sandiego.gov](mailto:waterwaste@sandiego.gov)

For other questions or concerns, call (619) 515-3516 or email [customer care@sandiego.gov](mailto:customer care@sandiego.gov)

## Do It Yourself

There are many ways you can maintain your water conservation efforts around your home.

- Check your garden hose connection to ensure it is tight and the nozzle itself is not broken or leaking.  
If there is a puddle or a muddy spot under your garden hose a leaky nozzle is most likely the cause.
- Check your toilet to see if it “runs” between flushes.  
A running toilet is caused when there’s a leak between the tank and the toilet bowl.
- Use your water meter as a leak detector.  
Your water meter is generally located near the curb in front of your home. However, the meter may also be located in an alley way behind your property. Take a look at the meter and write down the total you see on the dial. Next, turn off every faucet in and around your home as tight as you can (make sure washing machines and dishwashers are turned off). Wait at least 15 minutes then check your meter again. If the numbers have changed, you’ve got a leak.
- Make sure every faucet and fixture is water efficient.  
Take stock. Are there aerators on every faucet throughout the house? Are there low-flow heads on every shower? Are the toilets water efficient (less than two gallons per flush)?  
Does the washing machine adjust water levels for each load (small, medium and large)?  
Does the dishwasher have an efficiency setting to help conserve water? Having answers to these questions will help you know how much more you can conserve and will be important information to share with the water survey staff member during your appointment.
- Learn more about your garden.



The majority of residential water waste results from over watering landscapes. You may be surprised how well your garden will do with less water. Give it a try by choosing one flower bed, a part of your lawn or some other small space for less irrigation. You will see the results soon and can make adjustments for the rest of your yard. Each of these recommendations will give you a head start in conserving water into the future.



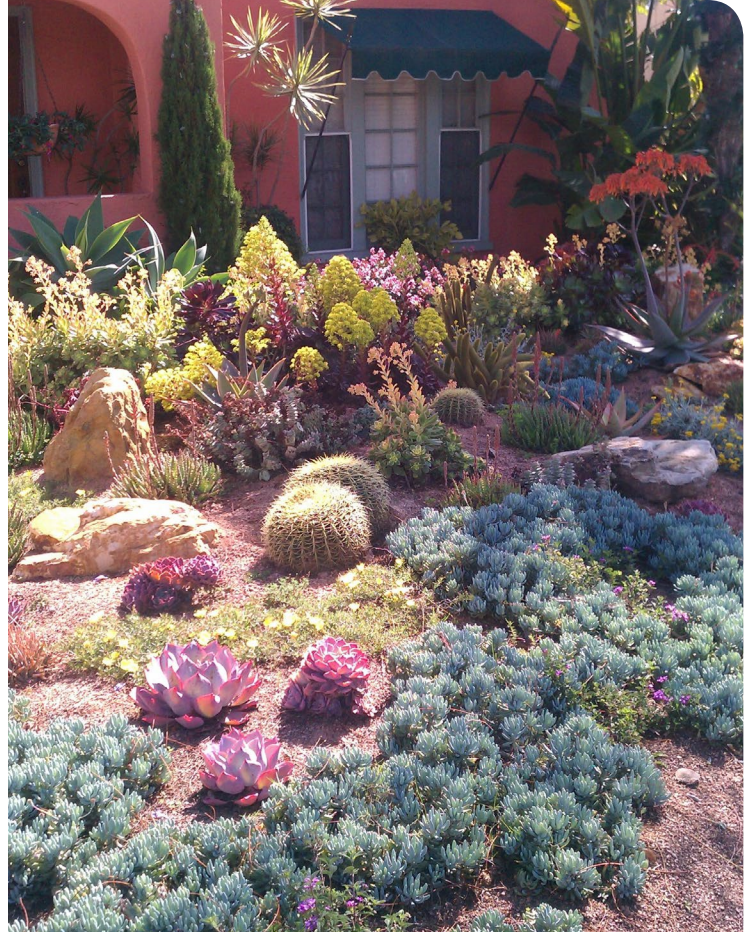


## REBATES AND INCENTIVES

Customers may qualify for various water conservation rebates and incentives, both locally and regionally, provided funding is available. One of the most popular rebates is for grass replacement. Removing traditional grass lawns and replacing them with drought tolerant landscaping is one of the most effective ways to reduce your overall water usage. Rebates are available through the City of San Diego when funding is available, as well as other agencies such as the Metropolitan Water District of Southern California. Visit **wastenowater.org** for information on the City's program, as well as links to other programs.

## NO-COST RESIDENTIAL AND COMMERCIAL WATER SURVEYS

Public Utilities' Water Conservation Program offers free residential and commercial water surveys to City of San Diego water customers who pay their water bills to the City of San Diego. Through this program, a City staff member visits your home or business and helps to pinpoint water-saving options, including possible leaks and other water waste. The surveys are offered free-of-charge to eligible single family and multi-family (up to eight units) water customers. Participants can receive water-saving equipment and information, including low-flow shower heads, faucet aerators and other free items. The representative will also evaluate your landscape and irrigation systems. Since this program emphasizes customer education, it is important the tenant/occupant be present at the time of the survey.



## WASTENOWATER.ORG

Within the City's Public Utilities Department website for conservation, **wastenowater.org**, is the central point for the City's water conservation resources, links to other agencies that may be offering incentives and rebates, as well as fact sheets and educational materials. Other important information includes details on the current water-use restrictions and enforcement activities.

In addition, the Public Utilities website has valuable information, at **sandiego.gov/public utilities**. On this webpage you can find information, such as how to read your meter, and how to read your water bill and information on both water and sewer rates.





# A CHANGE FOR THE BETTER . . .

## BEGINS WITH YOU.

### PREVENT POLLUTION

One of the best ways to prevent the flow of pollution into our local waterways is to prevent water from leaving your property as you perform daily activities. By eliminating over-irrigation and sweeping instead of cleaning hard surfaces with water, you can prevent urban runoff and avoid discharging pollutants into our local waterways.

### AROUND YOUR HOME

Sweep up trash, dirt, and debris and dispose of home construction waste in the trash. Reduce bacteria in our waterways by picking up litter from around your yard and neighborhood and carry bags to pick up after your pet.

### IN YOUR YARD

Yard waste has the potential to carry hazardous landscaping chemicals like pesticides, herbicides and fertilizers into the storm drain system. It also generates a large amount of bacteria if left to decompose in curbs, catch basins and local waterways.

Sweep up yard waste instead of hosing it away and keep curb gutters free of leaves and grass clippings. Replace lawns with native plants to conserve water and reduce the need for landscape chemicals. Stop irrigation runoff by adjusting sprinklers and reducing watering times.

During the rainy season, redirect rain gutter downspouts to landscaped areas where the water can be absorbed and replenish groundwater. Or, connect your downspout to a rain barrel to store the water for later use.

### FROM YOUR CAR

Your car can be a source of automotive pollutants such as motor oil, anti-freeze, transmission fluids, and heavy metals. It is important to check your vehicle regularly for fluid leaks and keep it serviced. Use a funnel to prevent spills and keep rags and absorbents within reach. Use drip pans, drop cloths, or containers to collect fluids when making repairs or collecting leaks. Wash your car on your lawn or direct wash water to a landscaped surface to avoid releasing automotive pollution into our waterways.

*Make a pledge to implement the above practices daily. Think Blue appreciates everything you do to help protect our local waterways.*

## KEEP POLLUTANTS OUT OF STORM DRAINS

Many people think that when water flows into a storm drain it is treated, but the storm drain system and the sanitary sewer system are not connected. Everything that enters storm drains flows untreated directly into our creeks, rivers, bays, beaches and ultimately the ocean. Storm water often contains pollutants, including chemicals, trash, and automobile fluids, all of which pollute our beaches and harm fish and wildlife.

To Report Storm Water Pollution in San Diego, call the Think Blue Hotline (619) 235-1000.



## Important Health Information

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. 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 (1-800-426-4791). During calendar year 2015, the water supply to each of the City's water treatment plants was monitored for *Cryptosporidium* and *Giardia* and neither was detected.

Drinking water, including bottled water, may reasonably be expected to contain 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 (USEPA) Safe Drinking Water Hotline (1-800-426-4791). For detailed information on drinking water regulations, visit the Division of Drinking Water (DDW) website at [waterboards.ca.gov/drinking\\_water](http://waterboards.ca.gov/drinking_water)

## HOW TO READ THE TABLES

The tables on the following pages list parameters which DDW requires the City to monitor, which may be associated with primary [health], secondary [aesthetic], or no established standards. These tables summarize monitoring from January – December 2015, with minor exceptions where some 2014 data is included (see LRAA definition below). The tables list all parameters that were detected at or above DDW's Detection Limit for Purposes of Reporting (DLR).

### DEFINITION OF TERMS

**Action Level (AL):** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

**Location-based Running Annual Average (LRAA):** The average of the most recent four quarters of monitoring performed at a distinct location in the distribution system. LRAAs are calculated quarterly using twelve months of data and may include values obtained in 2014.

**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 or 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 health risk. MCLGs are set by the U.S. EPA.

**Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below, which there is no known or expected health risk. MRDLGs are set by the U.S. EPA.

**Notification Level (NL):** Health-based advisory levels established by DDW for chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below, which there is no known or expected health risk. PHGs are set by the California EPA.

**Primary Drinking Water Standard (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

### ABBREVIATIONS

**A:** absent

**CA SMCL:** California secondary maximum contaminant level

**CSD MDL (City of San Diego Water Quality Lab method detection limit):** lowest quantifiable concentration of a measured analyte detectable by the lab

**CU:** color units

**DDW:** State Water Resources Control Board Division of Drinking Water Programs

**DLR:** detection limit for reporting

**gr/Gal:** grains per gallon

**ml:** milliliter

**MWD:** Metropolitan Water District of Southern California

**n/a:** not applicable

**ND:** not detected (less than DLR, where applicable)

**NTU:** nephelometric turbidity units

**OU:** odor units

**pCi/L:** picocuries per liter (a measure of radiation)

**ppb:** parts per billion or micrograms per liter ( $\mu\text{g/L}$ ) – [1 ppb = 0.001 ppm]

**ppm:** parts per million or milligrams per liter ( $\text{mg/L}$ ) – [1 ppm = 1,000 ppb]

**TT (treatment technique):** a required process intended to reduce the level of a contaminant in drinking water

**$\mu\text{S/CM}$ :** micro-siemens/centimeter

**<** less than

**>** greater than



## ENVIRONMENTAL MONITORING AND TECHNICAL SERVICES

### CONSUMER CONFIDENCE REPORT DATA - 2015

#### PRIMARY STANDARDS (MANDATORY HEALTH RELATED STANDARDS)

CHEMICAL PARAMETERS	UNITS	MCL	PHG (MCLG)	DDW DLR	CITY OF SAN DIEGO TREATMENT PLANTS						MWD SKINNER TREATMENT PLANT		MAJOR SOURCES IN DRINKING WATER
					ALVARADO		MIRAMAR		OTAY		AVERAGE	RANGE	
					AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE			
Fluoride (naturally occurring)	ppm	2	1	0.1	0.3	0.2 - 0.4	0.3	0.2 - 0.3	0.3	0.2 - 0.5	0.3	0.2 - 0.4	Erosion of natural deposits
Fluoride (treatment-related)	ppm	2	1	0.1	0.5	0.4 - 0.7	0.6	0.4 - 0.8	0.5	0.3 - 0.6	0.7	0.5 - 0.9	Water additive that promotes strong teeth
Barium	ppm	1	2	0.1	0.12	0.10-0.13	0.12	0.12 - 0.13	0.10	ND - 0.12	0.12	n/a	Erosion of natural deposits
Note: Optimal Fluoride Level as established by the US Dept. of Health and Human Services and California Waterboards Division of Drinking Water = 0.7 ppm.													

Note: Optimal Fluoride Level as established by the US Dept. of Health and Human Services and California Waterboards Division of Drinking Water = 0.7 ppm.

#### Fluoride and Barium:

California state law requires water agencies with more than 10,000 water service connections to supplement naturally-occurring fluoride in their drinking water. In the spring of 2011, the City of San Diego's water treatment plants began this state-mandated fluoridation. For more information, visit [sandiego.gov/water/quality/fluoridation.shtml](http://sandiego.gov/water/quality/fluoridation.shtml).

The table above shows that, in 2015, San Diego's source waters contained naturally-occurring fluoride between 0.2 and 0.5 ppm. State regulations require fluoride in treated water to be maintained at an optimum dose of 0.7 ppm. Our water system treats your water by adding fluoride to the naturally occurring level to help prevent dental caries in consumers. Monitoring conducted in 2015 showed fluoride levels in treated water ranging from

0.3 to 0.9 ppm, with average values of 0.5 to 0.7 ppm. Information about fluoridation, oral health and current issues is available from [waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](http://waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml).

Barium is the 14th most abundant element in the Earth's crust. The most likely source in San Diego's drinking water is the erosion of natural deposits during water's journey along the Colorado River. The low-level presence of barium in drinking water is fairly common; the amounts found in San Diego's drinking water are about 20 times lower than the Public Health Goal established by the State of California Office of Environmental Health Hazard Assessment (OEHA).

RADIOACTIVE PARAMETERS	UNITS	MCL	PHG (MCLG)	DDW DLR	CITY OF SAN DIEGO TREATMENT PLANTS						MWD SKINNER TREATMENT PLANT		MAJOR SOURCES IN DRINKING WATER
					ALVARADO		MIRAMAR		OTAY		AVERAGE	RANGE	
					AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE			
Gross Alpha Particle Activity	pCi/L	15	(0)	3	4.4	n/a	ND	n/a	6.4	n/a	ND	ND - 5	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50*	(0)	4	ND	n/a	ND	n/a	ND	n/a	5	5 - 5	Decay of natural and manmade deposits
Uranium	pCi/L	20	0.43	1	2.8	n/a	2.4^	n/a	1.8^	n/a	2	1 - 2	Erosion of natural deposits
* DDW considers 50 pCi/L to be the level of concern for beta particles. ^Monitoring required every three years. Most recent monitoring 2014.													

\* DDW considers 50 pCi/L to be the level of concern for beta particles.

^Monitoring required every three years. Most recent monitoring 2014.

#### Radioactive Parameters:

As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material. Radioactive contaminants can be naturally-occurring or be the result of oil and gas production or mining activities. The results in this report are presented in units of pCi/L,

or picocuries per liter; this represents an amount of radiation. Our results are significantly below the MCL for all radioactive parameters.

MICROBIOLOGICAL	UNITS	MCL	PHG (MCLG)	DDW DLR	CITY OF SAN DIEGO DISTRIBUTION SYSTEM		MAJOR SOURCES IN DRINKING WATER
					AVERAGE	RANGE*	
Total Coliform Bacteria	/100ml	< 5% Positive	(0)	n/a	0.2%	0 - 0.5%	Naturally present in the environment

\*Based on Monthly Percentages of Positive Total Coliform samples

#### Microbiological Parameters:

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful bacteria may be present. DDW regulations require the City to test a minimum of 85 samples per week from throughout our distribution system for Total Coliform and E.coli, and to report the results, including the percentage of total Coliform positive samples in a given month. To meet this requirement, in 2015 the City of San Diego collected and analyzed 6796 samples from the distribution system (an average of over 130 per week) for Total Coliform and E. coli. The MCL is 5.0%; this means that if more than 5.0% of the samples

collected each month are total coliform positive, a violation of the MCL has occurred. The regulations are written as a percentage of monthly samples because multiple variables can cause a positive result, including localized contamination at the tap. In 2015 the City did not exceed the monthly MCL for total coliform bacteria; in fact this has never occurred in San Diego since this rule was established. Our maximum value in 2015 was 0.5% of monthly samples. When any sample tests positive, three repeat samples are collected and the cause of the positive result is investigated.

TURBIDITY	UNITS	MCL	PHG (MCLG)		CITY OF SAN DIEGO TREATMENT PLANTS			MWD SKINNER TREATMENT PLANT	MAJOR SOURCES IN DRINKING WATER
					ALVARADO	MIRAMAR	OTAY		
Turbidity	NTU	TT = 1 NTU	n/a	----	Max Level Found = 0.17	Max Level Found = 0.09	Max Level Found = 0.13	Max Level Found = 0.10	Soil runoff
Turbidity	NTU	TT = 95% of samples ≤ 0.3 NTU	n/a	----	100% of samples ≤ 0.3	100% of samples ≤ 0.3	100% of samples ≤ 0.3	100% of samples ≤ 0.3	Soil runoff

#### Turbidity:

Turbidity is a measure of the cloudiness of the water and is a good indicator of the effectiveness of our plant filtration systems. San Diego's three water treatment plants monitor for turbidity every 15 minutes to ensure consistent, high-quality water is produced for our customers. Our consistently very low turbidity results have led to our treatment plants receiving awards for performance. For example, Otay Water Treatment Plant (WTP) has

been awarded the Director's Award for eight consecutive years from the American Water Works Association (AWWA) Partnership for Safe Water (PSW) Program; the Miramar WTP has received the Director's Award for four years and the President's Award for three consecutive years from the PSW; and our award-winning Alvarado Treatment Plant participates in the PSW program.

**CONTINUED: PRIMARY STANDARDS (MANDATORY HEALTH RELATED STANDARDS)**

LEAD AND COPPER STUDY	UNITS	ACTION LEVEL	PHG (MCLG)	DDW DLR	SAMPLES TAKEN FROM CUSTOMER TAPS				MAJOR SOURCES IN DRINKING WATER
					90th PERCENTILE CONCENTRATION	SAMPLING SITES	NUMBER EXCEEDING AL	VIOLATION	
Copper	ppm	1.3	0.3	0.05	0.49	54	1	NO	Internal corrosion of household plumbing systems
Lead	ppb	15	0.2	5	ND	54	1	NO	Internal corrosion of household plumbing systems

Note: Monitoring mandated every three years. Most recent monitoring conducted in 2014.  
In addition to the EPA Lead and Copper study, the City of San Diego analyzed 83 samples from our drinking water treatment plants in 2015. All results were below the DLR.

**Lead and Copper:**

Lead and copper are at Non Detectable levels in the drinking water we produce, but can enter drinking water through plumbing materials used in homes or businesses. Exposure to lead and copper may cause health problems ranging from stomach distress to brain damage. In 1991, the EPA published the Lead and Copper Rule, which along with corrosion control and other practices requires us to monitor lead and copper concentrations at customer taps. The purpose of the study is to assess the potential of our drinking water to leach lead and copper from the plumbing that exists in homes and businesses. If lead concentrations at customer taps exceed an action level of 15 ppb or copper concentrations exceed an action level of 1.3 ppm in more than 10% of taps sampled, we would be required to inform the public and undertake a number of additional actions to ensure comprehensive corrosion control.

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 San Diego 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 can 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 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>.

Lead and Copper Rule monitoring must be conducted every three years. In 2014 57 customers provided samples from their taps to the City of San Diego for lead and copper analysis. The results of these tests are presented here; for each parameter, one of the fifty-seven sites had a result above the Action Level. Because less than 10 percent of our results were above the Action Levels for lead and copper, our water is considered non-corrosive, and no additional actions are required. Our next system-wide study will be conducted in 2017.

**DETECTED DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUAL AND DISINFECTION BY-PRODUCT PRECURSORS**

	UNITS	MCL	PHG (MCLG)	DDW DLR	CITY OF SAN DIEGO TREATMENT PLANTS						MWD SKINNER TREATMENT PLANT		MAJOR SOURCES IN DRINKING WATER
					ALVARADO		MIRAMAR		OTAY		AVERAGE	RANGE	
					AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE			
Bromate*	ppb	10	0.1	5 /1***	ND	ND - ND	ND	ND - ND	n/a	n/a	4.3****	1.1 - 9.9	By - product of drinking water disinfection
Chlorate**	ppb	NL=800 PPB		20	n/a	n/a	n/a	n/a	114	63.6 - 239	97	91-147	By - product of drinking water disinfection
Chlorite**	ppm	1	0.05	0.02	n/a	n/a	n/a	n/a	0.15	0.04 - 0.51	n/a	n/a	By - product of drinking water disinfection
Total Organic Carbon [TOC]	ppm	TT	n/a	0.3	2.3	1.8 - 3.0	2.4	2.1 - 3.0	2.6	1.7 - 5.9	2.3****	2.0 - 2.6	Various natural and manmade sources

\*Required for Alvarado, Miramar, and Skinner \*\*Required for Otay \*\*\* City of San Diego DLR = 5, Skinner DLR = 1 \*\*\*\*Highest Running Annual Average

	UNITS	MCL [MRDL]	PHG [MRDLG]	DLR	CITY OF SAN DIEGO DISTRIBUTION SYSTEM			MAJOR SOURCES IN DRINKING WATER
Disinfectant Residual [Chloramines as Cl <sub>2</sub> ]	ppm	[4] <sup>A</sup>	[4]	----	Distribution system average <sup>2</sup> = 2.0	Range <sup>2</sup> = ND - 3.5	----	Drinking water disinfectant added for treatment
Chlorite <sup>1</sup>	ppm	1	0.05	0.02	Distribution system average <sup>2</sup> = 0.12	Range <sup>2</sup> = ND - 0.39	----	By - product of drinking water disinfection
Haloacetic acids [HAA5]	ppb	60 <sup>B</sup>	n/a	----	Maximum LRAA = 15	Range <sup>2</sup> = 1.1 - 18.7	Violation - NO	By - product of drinking water disinfection
Total Trihalomethanes [THMs]	ppb	80 <sup>B</sup>	n/a	----	Maximum LRAA = 43	Range <sup>2</sup> = 11.9 - 68.2	Violation - NO	By - product of drinking water chlorination

<sup>1</sup> Chlorite monitoring required only in the Southern section of the distribution system.

<sup>2</sup> Range and average are based upon individual 2015 sample results.

<sup>A</sup> Compliance is determined by the distribution system average.

<sup>B</sup> Total Trihalomethane and HAA5 compliance is based on quarterly Locational Running Annual Averages (LRAA)

All drinking water must be disinfected to ensure that any potentially dangerous microbes are neutralized. There are a variety of disinfection strategies used throughout the United States. San Diego utilizes some of the more advanced disinfection technologies available. Our Miramar and Alvarado treatment plants use ozone for disinfection, in addition to chloramines. Ozone produces fewer disinfection byproducts than chlorine or chloramines alone and thus is considered a superior disinfection method. However, all disinfectant strategies have the potential to create a byproduct. When ozone is used, bromate is monitored as a potential disinfection byproduct. Our Otay Treatment Plant uses chlorine dioxide for disinfection, in addition to chloramines. When chlorine dioxide is used, chlorite is monitored as a potential disinfection byproduct in both the plant effluent and the distribution system. All of our results for bromate and chlorite are below the DLR established by DDW for our analytical method. Total Organic Carbon (TOC) has no health effects. It is monitored because it provides an assessment for the potential to form disinfection byproducts.

In order to prevent growth of potentially dangerous microbes as drinking water travels from our treatment plant through the distribution system to your home or business, a disinfectant residual must be maintained. In

San Diego, chloramines are used as the residual disinfectant. We perform frequent and comprehensive monitoring to ensure that disinfectant levels remain in the proper range throughout our large distribution system. In 2015 we analyzed 6964 samples for chloramines throughout the distribution system; the average residual was 2.0 ppm and the maximum was 3.5 ppm. The Maximum Residual Disinfectant Level (MRDL) is 4.0 ppm.

Another category of disinfection byproducts that the EPA and DDW regulate are Trihalomethanes (THMs) and Haloacetic Acids (HAAs). In 2012 San Diego began monitoring under EPA's Stage 2 Disinfection Byproduct (DBP) rule. Compliance with the MCL under the Stage 2 rule is based on the running annual average at each location in the distribution system, rather than the system-wide running annual average previously used. The MCL for THM LRAA is 80 ppb, and the MCL for HAA LRAA is 60 ppb. San Diego has had no violations of the Stage 2 DBP MCLs to date. In 2015 our highest LRAA for Total Trihalomethanes was 43 ppb, and the range of individual measurements was 11.9 to 68.2 ppb. For Haloacetic Acids, our highest LRAA was 15 ppb, and the range of individual measurements was 1.1 to 18.7 ppb.



**DETECTED REGULATED CCR PARAMETERS WITH SECONDARY MCLs**

	UNITS	CA SMCL	CSD MDL (DLR)	CITY OF SAN DIEGO TREATMENT PLANTS						MWD SKINNER TREATMENT PLANT		MAJOR SOURCES IN DRINKING WATER
				ALVARADO		MIRAMAR		OTAY		AVERAGE	RANGE	
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE			
Chloride	ppm	500	0.5	103	94.8 - 113	99.2	90.3 - 105	112	89.3 - 164	104	102 - 105	Runoff/leaching from natural deposits; seawater influence
Color	CU	15	1	ND	ND - ND	ND	ND - ND	ND	ND - 1	1	n/a	Naturally-occurring organic materials
Odor - Threshold	OU	3	(1)	ND	ND - 2	ND	ND - 1	1	1 - 1	2	n/a	Naturally-occurring organic materials
Specific Conductance	µS/cm	1,600	n/a	993	637 - 1150	985	744 - 1150	1010	888 - 1170	1020	1000 - 1050	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	(0.5)	232	190 - 262	232	198 - 264	219	129 - 270	243	237- 249	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	10	620	544 - 669	618	560 - 651	621	531 - 662	647	639 - 655	Runoff/leaching from natural deposits

Primary standards (MCLs) are developed for the purpose of protecting the public from possible health risks associated with long-term exposure to contaminants. In general, no health hazard is reasonably expected to occur when levels are below a Primary MCL. Secondary standards (Secondary MCLs) are set to protect the odor, taste, and appearance of drinking water. If present at or above the Secondary MCL, these parameters may cause the water to appear cloudy

or colored, or to have a different or unusual taste or odor. These parameters are not considered to present a risk to human health at or above Secondary MCL levels. Levels of Chloride, Specific Conductance, and Total Dissolved Solids were (on average) slightly higher in 2015 than 2014; this is due to a higher proportion of Colorado River water in our imported water blend compared to State Project water.

**OTHER PARAMETERS THAT MAY BE OF INTEREST**

	UNITS	MCL	PHG (MCLG)	CSD MDL	CITY OF SAN DIEGO TREATMENT PLANTS						MWD SKINNER TREATMENT PLANT	
					ALVARADO		MIRAMAR		OTAY			
					AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE
Sodium	ppm	n/a	n/a	20	94.4	83.1 - 102	93.8	82.5 - 102	98.1	81.0 - 126	100	96 - 103
Total Hardness	ppm	n/a	n/a	10	288	251 - 323	292	271 - 324	287	253 - 306	299	290 - 307
Total Hardness	gr/Gal	n/a	n/a	0.6	16.8	14.6 - 18.8	17.0	15.8 - 18.9	16.7	14.8 - 17.9	17.4	16.9 - 17.9
Alkalinity - Total as CaCO <sub>3</sub>	ppm	n/a	n/a	10	123	115 - 132	126	118 - 155	127	111 - 171	128	125 - 130
pH	pH	n/a	n/a	n/a	8.07	7.70 - 8.37	8.10	7.09 - 8.69	8.23	7.77 - 8.59	8.1	8.1 - 8.2
Ammonia as Nitrogen	ppm	n/a	n/a	0.03	0.85	0.52 - 1.49	0.77	0.35 - 1.54	0.88	0.59 - 1.42	n/a	n/a

Although sodium and hardness do not have MCLs, they are of interest to many consumers who are concerned about sodium intake and may believe that the hardness of the water could affect their health. Therefore, monitoring is required by DDW and results are presented in this Annual Water Quality Report.

Sodium refers to the salt present in the water and is generally naturally-occurring. Hardness is the sum of polyvalent cations present in the water, which is essentially the sum of magnesium and calcium. These cations are usually naturally occurring.

**DETECTED UNREGULATED PARAMETERS REQUIRING MONITORING**

	UNITS	NOTIFI- CATION LEVEL	DDW DLR	CITY OF SAN DIEGO TREATMENT PLANTS						MWD SKINNER TREATMENT PLANT		MAJOR SOURCES IN DRINKING WATER
				ALVARADO		MIRAMAR		OTAY				
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	
Boron	ppm	1	0.1	0.14	0.13 - 0.17	0.14	0.13 - 0.15	0.14	0.12 - 0.17	0.13	n/a	
UCMR3 PARAMETERS	UNITS		UCMR3 MRL	CITY OF SAN DIEGO TREATMENT PLANTS						CITY OF SAN DIEGO DISTRIBUTION SYSTEM		MAJOR SOURCES IN DRINKING WATER
				ALVARADO		MIRAMAR		OTAY				
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	
Bromochloromethane	ppb	----	0.06	ND	ND - ND	ND	ND - ND	ND	ND - 0.07	n/a	n/a	Fire extinguishers; pesticide solvent
Chlorodifluoromethane (HCFC-22)	ppb	----	0.08	ND	ND - 0.16	ND	ND - ND	ND	ND - ND	n/a	n/a	Refrigerant
Chlorate	ppb	----	20	ND	ND - ND	ND	ND - 25	165	140 - 200	81	0 - 160	By - product of drinking water disinfection
Chromium-6	ppb	----	0.03	0.09	0.08 - 0.11	0.16	0.03 - 0.36	0.04	ND - 0.09	0.06	ND - 0.11	Naturally - occurring metal; steel; chrome plating
Molybdenum	ppb	----	1	3.6	3.2 - 4.0	3.9	3.4 - 4.2	3.0	2.8 - 3.3	3.7	2.7 - 4.7	Naturally - occurring element; in ores and plants
Strontium	ppb	----	0.3	630	550 - 710	843	750 - 920	548	500 - 660	749	490 - 940	Naturally - occurring element
Vanadium	ppb	----	0.2	ND	ND - 0.25	ND	ND - 0.26	ND	ND - ND	0.29	ND - 0.84	Naturally - occurring metal; used as a catalyst

As part of the 1996 Safe Drinking Water Act (SDWA) amendments, every five years EPA selects from the Contaminant Candidate List (CCL) up to 30 unregulated contaminants to be monitored by public water systems as part of the Unregulated Contaminant Monitoring Rule (UCMR) program. The CCL is a list of contaminants that are not regulated by the National Primary Drinking Water Regulations, but are known or anticipated to occur in public water systems, and may warrant regulation under the Safe Drinking Water Act. The results of UCMR studies provide a basis for future regulatory actions to protect public health.

Under the most recent cycle of the Unregulated Contaminant Monitoring Rule (UCMR 3), many parameters were studied at levels that are significantly below those in prior UCMR cycles. Importantly, UCMR3 Minimum Reporting Levels (MRLs) were established based on the evolving capabilities of available analytical methodology, not based on a level established as significant or harmful. In short, UCMR examines what is in the drinking water, but additional health information is needed to know whether these contaminants pose a health risk.

Results of UCMR3 measurements should be interpreted with this in mind. The detection of a UCMR3 parameter above the MRL does not represent cause for concern, in and of itself. Rather, the results should be judged considering available health effects information, which for unregulated contaminants is often still under development or being refined.

San Diego's drinking water was tested by an EPA-approved contract laboratory in the last two quarters of 2013 and first two quarters of 2014 for 28 unregulated contaminants. Of these 28 parameters, the seven listed in the "UCMR3 PARAMETERS" section of this table were detected. The MRLs set for the UCMR studies are based on the lowest level that can be detected using the chosen analytical method. For example, Chromium-6 was detected at levels in the range from <0.03 ppb to 0.36 ppb. DDW recently lowered the MCL for Chromium-6 to 10 ppb. The levels detected in San Diego's water are typically 100 times less than this new MCL.



The City of  
**SAN DIEGO**

The information in this report will also be translatable in multiple languages on our website at [sandiego.gov](http://sandiego.gov).

This report contains important information about your drinking water.  
Translate it, or speak with someone who understands it.

**Spanish**

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

**Arabic**

”هذا التقرير يحتوي على معلومات مهمة تتعلق بمياه الشفة (أو الشرب).  
ترجم التقرير, أو تكلم مع شخص يستطيع أن يفهم التقرير.“

**Chinese (Traditional)**

此份有關你的食水報告,內有重要資料和訊息,請找  
他人為你翻譯及解釋清楚。

**Chinese (Simplified)**

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。

**Farsi**

اهل اطلاعات مهمی راجع به آب آشامیدنی است. اگر نمیتوانید این اطلاعات را ب زبان انگلیسی  
این اطلاعات را بخوانید لطفاً کسی که میتواند برای بگوید بد تا مطالب را برای شما به فارسی ترجمه کند.

**French**

Cé rapport contient des information importantes concernant votre eau potable.  
Veuillez traduire, ou parlez avec quelqu'un qui peut le comprendre.

**Hmong**

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.

**Japanese**

この情報は重要です。  
翻訳を依頼してください。

**Korean**

이 안내는 매우 중요합니다.  
본인을 위해 번역인을 사용하십시오.

**Laotian**

ລາຍງານນີ້ມີຂໍ້ມູນສຳຄັນກ່ຽວກັບນ້ຳປະປາຂອງທ່ານ. ຈົ່ງໃຫ້ຄົນອື່ນຮູ້ຄວາມໃຫ້ທ່ານ,  
ຫລືໃຫ້ປຶກສາກັບຄົນໃດຄົນໜຶ່ງທີ່ຮູ້ເວົ້າໃຈລ້ຽງ.

**Russian**

Этот отчет содержит важную информацию о вашей питьевой воды. Переведите  
его или поговорите с тем, кто это понимает.

**Swahili**

Shauri hii niya kufahamisha uzuri wa maji ya kunyua.  
Shauri nilazima egeuzwe kwa yoyote hajui Kiingereza.

**Tagalog**

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

**Vietnamese**

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

This information is available in alternative formats upon request.

**Report Issued By:** City of San Diego Public Utilities Department (June 2016)

**Produced By:** City of San Diego Publishing Services Department

**Project Manager:** Anthony Santacrose | **Graphic Designer:** Pamela Cabanillas