

# WATER QUALITY REPORT

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CITY OF SANTA MONICA  
WATER RESOURCES DIVISION



For more information visit  
[www.waterquality.smgov.net](http://www.waterquality.smgov.net)

# DEAR RESIDENTS,

As you are aware, last winter's remarkable rainy season and the ample snowpack in the northern part of California left the State as a whole in a position to finally breathe a sigh of relief from the multiple years of drought all Californians had been living with. Although reservoirs are full and rivers are running high, we here in Santa Monica continue to rely on local groundwater sources to provide a majority of our water supply. We expect local groundwater levels to recover, however, the natural process by which this occurs takes time. It may be a few years, along with more wet winters, to return to pre-drought conditions.

Throughout the drought, the Santa Monica response to calls for water use reduction has been outstanding. Nevertheless, conservation is here to stay, and we urge all Santa Monica residents and businesses to keep at it. For more information, please visit [https://www.gov.ca.gov/docs/Fact\\_Sheet\\_-\\_Water\\_Conservation\\_Way\\_of\\_Life.pdf](https://www.gov.ca.gov/docs/Fact_Sheet_-_Water_Conservation_Way_of_Life.pdf)

Thanks to customers like you, the citywide 20% reduction target has been met consistently for the last two years, and we urge everyone to maintain these efforts.. Keep it up, Santa Monica! To learn more, visit [www.smgov.net/water](http://www.smgov.net/water).

The Water Resources Division staff works diligently to ensure the water coming out of your tap is of the highest quality, meeting all federal and state drinking water regulations. Please review this Water Quality Report, and feel free to call us with any questions you may have.

On behalf of the City of Santa Monica Public Works Department and the employees of the Water Resources Division, thank you for allowing us to serve you.



Sincerely,

*Gil Borboa*

Gil Borboa

Water Resources Manager

# WATER QUALITY IS EVERYBODY'S BUSINESS

The goal of our Annual Consumer Confidence Report (CCR) is to inform our residents about the quality of our drinking water, the sources of our water, any monitored contaminants found in drinking water, and whether our system meets state and federal drinking water standards. Our water quality data is submitted to the State Water Resources Control Board, Division of Drinking Water (DDW) on a regular basis in order to monitor our compliance for all regulatory standards and assure high quality drinking water is consistently delivered directly to our customers.

The mission of the City of Santa Monica Water Resources Division is to continue providing clean, safe, and reliable drinking water for our customers now and into the future, at reasonable rates. We are pioneers for the future of water technology and use innovative techniques to ensure the highest standards of water quality.

Last year, as in years past, your tap water met all USEPA and state drinking water health standards. Santa Monica vigilantly safeguards its water supplies and once again, we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard. This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to state standards. We are committed to providing you with information because informed customers are our best allies.

*The City of Santa Monica Water Resources Division values transparency, we hope that you find this report clear and easy to understand. If you have any questions, please call us at **(310) 434-2659** or email [geohvanny.herrera@smgov.net](mailto:geohvanny.herrera@smgov.net).*

*El Departamento de Recursos de Agua de la ciudad de Santa Monica valora una gestión transparente; por consiguiente, esperamos que encuentre este informe claro y fácil de entender. Si usted tiene alguna pregunta, por favor comuníquese al **(310) 434-2659** o vía correo electrónico [geohvanny.herrera@smgov.net](mailto:geohvanny.herrera@smgov.net).*

# SANTA MONICA'S WATER TREATMENT WORKS



The City of Santa Monica (Arcadia) treatment plant has been operating for several years now and has been producing high quality and great tasting water every day.

Over 20 years ago, levels of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA) — *gasoline additives*, were detected in some of our City wells. In response, the City of Santa Monica established an aquifer remediation program, which has successfully reduced these levels of MTBE and TBA to minimum permissible levels. Our continuous efforts to provide high-quality drinking water for the community has lead us to pursue advanced treatment processes to further protect public health.

The primary component of this treatment process is the Granular Activated Carbon (GAC) filtration system, which removes MTBE, and TBA in the groundwater at the Charnock Well Field. Further, the GAC filtration system is sampled on a weekly basis and our samples have always come back below the Maximum Contaminant Level (MCL) of 5 parts per billion (ppb) or none detected. To help put these numbers in context, one part per billion is like 1 second in 31.7 years, 1 teaspoon in 1.3 million gallons, and 1 drop in 13,563 gallons. Some of our measurements are also shown as milligrams per liter (mg/L), which is equivalent to one part per million. One part per million is like 1 second in 11.6 days, 1 teaspoon in 1,302 gallons, or 1 drop in 13.6 gallons.

The contaminated water from the Charnock Well Field is then blended with uncontaminated water from other local wells, and delivered to the City's main (Arcadia) treatment facility in



West Los Angeles where it undergoes a five-step process to eliminate/reduce any remaining contaminants; thus, achieving drinking water quality.

A major component of the treatment facility is the Reverse Osmosis (RO) softening system. Softening is the process of removing scale-forming calcium and magnesium from hard water. Reverse Osmosis (RO) is a method of softening that separates the scale-forming minerals by forcing hard water through membranes with very small pores sized from 0.0001 - 0.001um. In addition to RO, other final adjustments are made to the water, including processes such as fluoridation and disinfection.

Our water process is subject to a rigorous testing process that includes weekly, monthly, quarterly, semi-annual, annual and triennial monitoring to ensure compliance with U.S. Environmental Protection Agency (U.S. EPA) and California Water Resources Control Board – Division of Drinking Water (DDW) regulations. The complete treatment process is further outlined on the following pages.

Currently, 75% of the City's water supply, which originates as groundwater in and around Santa Monica, is treated within the facilities of the Charnock Well Field and the Arcadia treatment plant. The remaining 25% of water is purchased from the Metropolitan Water District (MWD). The source of this water is the California State Aqueduct and the Colorado River. MWD water is blended with our local water, then distributed to our residents.

Thanks to the City's Water Conservation programs, citizen involvement, technological improvements, and on-going plans to increase water capacity, the City of Santa Monica is closer to achieving the goal of water self-reliance by 2020. For more information about the treatment facilities, please call the water treatment staff at (310) 434-2672.

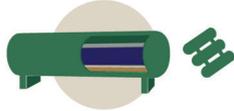


## SANTA MONICA WATER TREATMENT PROCESS



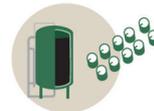
### CHARNOCK WELL FIELD Charnock Wells

Groundwater contaminated with the gasoline additive MTBE is pumped up from 400 feet below ground surface.



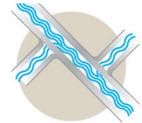
### Greensand Filtration

The well water is filtered through greensand media to remove iron and manganese which would foul the carbon filters.



### GAC Filtration

The MTBE is removed by filtering through Granular Activated Carbon (GAC) filters.



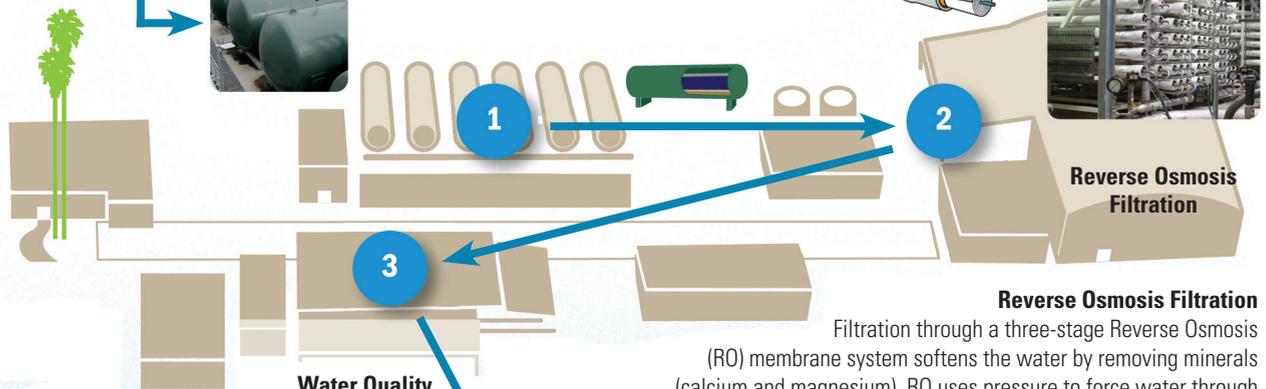
### Pump to Treatment Plant

The filtered water is combined with the flow of other wells and pumped to the Santa Monica Water Treatment Plant.

## SANTA MONICA WATER TREATMENT PLANT

### Pretreatment

To protect the sensitive Reverse Osmosis (RO) filters, the combined well flow is filtered again through greensand and cartridge filters to remove more iron, manganese and any remaining sediment.



### Reverse Osmosis Filtration

### Reverse Osmosis Filtration

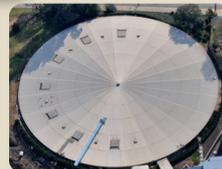
Filtration through a three-stage Reverse Osmosis (RO) membrane system softens the water by removing minerals (calcium and magnesium). RO uses pressure to force water through membranes with pores so small the minerals can't pass through.

### Water Quality Adjustments

The mineral content is adjusted to the desired softness. The pH is adjusted, fluoride is added and the water undergoes final disinfection with chloramine.

### Aeration and Storage

The final step, aeration, uses the existing air stripping technology in the five million gallon reservoir to remove any remaining volatile groundwater contaminants such as trichloroethene (TCE).



### Final Delivery

Santa Monica residents and businesses receive water for everyday use. Water conservation by end users is key to ensuring water reliability and sustainability.





# ENSURING THE SAFETY OF SANTA MONICA'S WATER SUPPLY

Regardless of the source, all water goes through extensive analyses before it reaches your tap. The City of Santa Monica Water Resources Division takes many steps to ensure high water quality including managing reservoirs, treating the water, operating a complex distribution system, maintaining facilities and addressing customer concerns. In laboratories and in the field, the City of Santa Monica Water Resources Division samples and tests your water extensively to ensure it is safe to drink.

We look for more than 100 substances including microorganisms, pesticides, herbicides, asbestos, lead, copper, petroleum products and by-products of industrial and water treatment processes. More than 10,000 laboratory tests are conducted each year to ensure the safety of your drinking water supply by qualified chemists and dedicated technicians. The City of Santa Monica's Public Works/Water Resources Division expends considerable resources keeping its water treatment system up to date and performing properly.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

## SOURCES OF 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 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 by-products 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (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. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

*\* You can help protect the purity of source water by helping control what goes into the storm drain and water table: Reduce use of hazardous products, clean up after pets, recycle used motor oil, and sweep walks and alleys instead of hosing.*

*Call (310) 458-8532 to report storm drain pollution and (310) 458-2255 for information on alternatives to toxic cleaning products and pesticides.*

# OUR TREATED WATER

For over a decade Santa Monica had to rely on imported water sources for more than 85% of our supply due to the contamination found at Charnock Well Field. With the restoration of the Well Field and opening of an enhanced water treatment facility in 2010, along with continued water conservation, we have reduced the demand for imported water to 25% of our needs. Additionally, more projects and conservation measures are being planned with the goal of eliminating the need to import water by 2020.

The imported water we consume is purchased from the Metropolitan Water District of Southern California (MWD). MWD provides supplemental water to about 300 cities and unincorporated areas in Southern California. MWD imports water from two separate sources. Colorado River water is delivered from Lake Havasu through a 242-mile-long aqueduct. This water originates as snowmelt from mountainous regions of Utah, Wyoming and Colorado. MWD also distributes State Project water from the Sacramento-San Joaquin Delta and delivers it to Southern California through the 441-mile-long California Aqueduct. Water from the aqueducts is filtered at MWD's six modern treatment plants, using chloramine for disinfection.



In March and June 2012, MWD completed a source water assessment of its Colorado and State Project supplies. Colorado River and State Project supplies are considered to be most vulnerable to contamination resulting from recreation, urban/storm water runoff, increasing urbanization in the watershed, and wastewater. A copy of the assessment can be obtained by contacting MWD at (213) 217-6850.



## ABOUT THE TABLES

Santa Monica's water supply undergoes constant, rigorous testing by treatment plant operators and chemists at our Water Quality Laboratory. Permission and oversight to operate a community water system is granted annually by the California Division of Drinking Water (DDW) and the U.S. Environmental Protection Agency (EPA). Santa Monica has a perfect compliance record in regard to water quality.

The next few pages summarize results from tests through past year that we are required to perform to satisfy federal and state regulations for our local well water as well as the water we import. However, testing the water coming out of the treatment plant is not enough. We also test the water at 100 locations throughout water delivery systems of the city each month to ensure the quality of delivered water.

The results are presented in two sections: Primary Drinking Water Quality Results and Secondary Drinking Water Quality Results. The primary results are for the tests we perform for contaminants that may affect the public's health. These contaminants include hazardous chemicals, metals, bacteria, and radioactivity. Santa Monica's water is below the allowed Maximum Contaminant Levels (MCL) for all contaminants in drinking water.

The secondary results are for the tests we perform for parameters that may affect the aesthetics of the water such as taste, appearance, and odor. These parameters include turbidity, minerals, and pH among others. Again, Santa Monica's water meets all regulatory requirements for these parameters.

For questions regarding water quality, call the City of Santa Monica Water Quality Laboratory staff at (310) 434-2672.

# Summary of Results for Primary Drinking Water Standards for 2016

Parameter	PHG/ [MCLG]/ {MRDLG}	State MCL/ {MRDL}	LOCAL WELL WATER Arcadia Plant		SM WELL #1(a)		IMPORTED SURFACE WATER Weymouth Plant		IMPORTED SURFACE WATER Jensen Plant		Dates Sampled if other than 2016(b)	Meets Std	MAJOR SOURCES IN DRINKING WATER
			Average	Range	Average	Range	Average	Range	Average	Range			
<b>PRIMARY DRINKING WATER STANDARDS (MANDATORY HEALTH-RELATED STANDARDS)</b>													
<b>Clarity</b>													
Maximum Turbidity (NTU)	NS	95% < 0.3	N/A	N/A	N/A	N/A	0.03	100% ≤ 0.3	0.05	100% ≤ 0.3		Y	Soil runoff
<b>Microbiological</b>													
Total Coliform Bacteria (% positive samples/month)	[0]	5%	City-wide Maximum:				0 Positive Samples					Y	Naturally present in the environment
Fecal Coliform/E. Coli	[0]	(c)	City-wide Maximum:				0 Positive Samples					Y	Human and animal fecal waste
<b>Organic Chemical</b>													
Methyl tert-Butyl Ether (MTBE) (ppb)	13	13(5*)	ND	ND	ND	ND	ND	ND	ND	ND		Y	Leaking underground storage tanks
Trichloroethylene (ppb)	1.7	5	0.4	ND - 0.7	ND	ND	ND	ND	ND	ND		Y	Discharge from metal degreasing sites
<b>Disinfection</b>													
<b>Byproducts &amp; Residuals</b>													
Total Trihalomethanes (ppb)	NS	80	City-wide LRAA: 28.6				Range: 3.2 - 39.9					Y	By-product of drinking water chlorination
Haloacetic Acids (ppb)	NS	60	City-wide LRAA: 7				Range: ND - 14.3					Y	By-product of drinking water chlorination
Total Chlorine/Chloramines (ppm)	{4}	{4}	City-wide Average: 1.1				Range: ND - 2.5					Y	Drinking water disinfectant added for treatment
Bromate (ppb)	0.1	10	N/A	N/A	N/A	N/A	N/A	N/A	7.4	4.4 - 13		Y	By-product of drinking water ozonation
<b>Inorganic Chemicals</b>													
Aluminum (ppm)	0.6	1 (0.2*)	ND	ND	ND	ND	0.16	0.08 - 0.22	0.10	ND - 0.13	2015	Y	Erosion of natural deposits; used in water treatment process
Arsenic (ppb)	0.004	10	ND	ND	1.0	1.0	ND	ND	3.1	3.1	2015	Y	Erosion of natural deposits
Barium (ppm)	2	1	0.02	0.02	0.05	0.05	0.14	0.14	ND	ND	2015	Y	Discharge from oil and metal industries; Erosion of natural deposits
Chromium (ppb)	[100]	50	0.3	0.3 - 0.4	1.7	1.6 - 1.7	ND	ND	ND	ND	2015	Y	Discharge from steel and pulp mills; natural deposits erosion
Chromium 6 (ppb)	0.02	10	0.2	0.2	1.6	1.6	ND	ND	ND	ND	2015	Y	Naturally occurring; industrial waste discharge
Copper (d) (ppm)	0.3	AL=1.3 (1.0*)	City-wide, 90th percentile: 0.20				0 sites out of 32 exceeded the AL					Y	Corrosion of household plumbing systems
Fluoride After Treatment (ppm)	1	2	Control Range: 0.6 - 1.2				Citywide Range: 0.3 - 1.0					Y	Water additive for dental health
Lead (d) (ppb)	0.2	AL=15	City-wide, 90th percentile: 3.0				0 sites out of 32 exceeded the AL					Y	Corrosion of household plumbing systems
Nitrate (as N) (ppm)	10	10	1.0	0.9 - 1.1	3.8	3.4 - 4.4	ND	ND	0.8	0.6 - 0.9		Y	Runoff from fertilizer use; leaching from sewage;
Perchlorate (ppb)	1	6	ND	ND	ND	ND	ND	ND	ND	ND		Y	Industrial waste discharge
<b>Radionuclides</b>													
Alpha emitters (pCi/l)	[0]	15	ND	ND	ND	ND	ND	ND - 4	3	ND - 5	2014	Y	Erosion of natural deposits
Beta/photon emitters (pCi/l)	[0]	50	N/A	N/A	N/A	N/A	5	4 - 6	ND	ND - 5	2014	Y	Decay of natural and man-made deposits
Combined Radium (pCi/l)	[0]	5	ND	ND	ND	ND	ND	ND	ND	ND		Y	Erosion of natural deposits
Uranium (pCi/l)	0.43	20	2.5	2.3 -2.9	0.7	0.7	3	2 - 3	2	2 - 3		Y	Erosion of natural deposits

## KEY TO ABBREVIATIONS

**Primary Drinking Water Standards** = MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**PHG** = Public Health Goal, 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.

**MCLG** = Maximum Contaminant Level Goal, The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

**MCL** = Maximum Contaminant Level, 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.

**MRDLG** = Maximum Residual Disinfectant Level Goal, 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.

**MRDL** = Maximum Residual Disinfectant Level, 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.

**LRAA** = Locational Running Annual Average. The running annual average is based on monitoring location.

**AL** = Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

**N/A** = Not Applicable

**NS** = No Standard

**ND** = Monitored for but Not Detected

**NTU** = Nephelometric Turbidity Units - used to measure cloudiness of drinking water.

**RAL** = Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**TT** = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

**Variances and Exemptions:** State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

**ppb** = parts per billion, or micrograms per liter (µg/l)

**ppm** = parts per million, or milligrams per liter (mg/l)

**pCi/l** = picocuries per liter

\* = secondary standard

(a) = SM Well#1 is pumped into a transmission line, is blended with Imported Surface Water and enters the system at 19th St. & Idaho Ave.

(b) = The City is not required to test for every parameter each year. If indicated, data is from a previous year.

(c) = Two consecutive Total Coliform-positive samples, one of which contains Fecal Coliform/E. Coli constitutes an acute MCL violation. No violations occurred for 2016.

(d) = The MCL has been replaced with a treatment technique requiring agencies to optimize corrosion control. Results given are from first draw, at-the-tap monitoring performed every three years.

FOR ADDITIONAL WATER QUALITY QUESTIONS, CONTACT  
JACK MIYAMOTO, LEAD CHEMIST AT (310) 434-2672

# Summary of Results for Secondary Drinking Water Standards for 2016

Parameter	PHG/ [MCLG]	State MCL	LOCAL WELL WATER Arcadia Plant		SM WELL #1(a)		IMPORTED SURFACE WATER Weymouth Plant		IMPORTED SURFACE WATER Jensen Plant		Dates Sampled if other than 2016(b)	Meets Std	MAJOR SOURCES IN DRINKING WATER
			Average	Range	Average	Range	Average	Range	Average	Range			
<b>SECONDARY DRINKING WATER STANDARDS (AESTHETIC STANDARDS)</b>													
<b>Chemical Parameters</b>													
Chloride (ppm)	NS	500	50	44 - 53	109	106 - 113	103	103	93	89 - 97		Y	Runoff/leaching from natural deposits; industrial wastes
Color (units)	NS	15	<5	<5	<5	<5	1	1	2	1 - 2		Y	Naturally-occurring organic materials
Iron (ppb)	NS	300	23	12.4 - 47.1	6.4	3.4 - 10.3	ND	ND	ND	ND		Y	Leaching from natural deposits; industrial wastes
Manganese (ppb)	NS	50	ND	ND - 2.3	8.5	6.9 - 7.7	ND	ND	ND	ND		Y	Leaching from natural deposits
Odor- Threshold (units)	NS	3	<1	<1	<1	<1	2(c)	2(c)	3(c)	3(c)		Y	Naturally-occurring organic materials; chlorine
Specific Conductance (µmho/cm)	NS	1600	547	532 - 583	1304	1276 - 1331	1035	1020 - 1050	687	652 - 721		Y	Substances that form ions when in water; seawater influence
Sulfate (ppm)	NS	500	86	77.9 - 91.5	258	254 - 265	258	256 - 259	95	86 - 104		Y	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	NS	1000	335	323 - 367	906	872 - 940	655	650 - 659	400	377 - 423		Y	Runoff/leaching from natural deposits
Turbidity (NTU)	—	5	0.12	0.07 - 0.19	0.33	0.1 - 1.02	ND	ND	ND	ND		Y	Soil runoff

<b>UNREGULATED CHEMICALS REQUIRING MONITORING</b>													
Chlorate (ppb)	NS	NL=800	280	180 - 390	540	510 - 570	60	26 - 60	39	26 - 60	2015		
Chlorodifluoromethane (ppb)	NS	NS	ND	ND	0.6	0.6	N/A	N/A	N/A	N/A	2015		
Molybdenum (ppb)	NS	NS	2.8	2.4 - 3.2	2.1	2.0 - 2.1	N/A	N/A	N/A	N/A	2015		
Strontium (ppb)	NS	NS	280	200 - 370	630	620 - 630	N/A	N/A	N/A	N/A	2015		
Vanadium (ppb)	NS	NL=50	0.8	0.6 - 1.0	2.4	2.3 - 2.4	ND	ND	7.7	7.7	2015		

<b>ADDITIONAL PARAMETERS</b>													
Alkalinity (ppm)	NS	NS	123	118 - 132	329	331 - 325	118	113 - 214	94	92 - 95			
Boron (ppb)	NS	NL=1000	130	130	190	190	150	150	270	270			
Calcium (ppm)	NS	NS	42	40 - 47	123	119 - 128	77	75 - 79	33	30 - 36			
Hardness (as CaCO3) (ppm)	NS	NS	176	163 - 194	564	552 - 579	300	296 - 306	129	126 - 132			
Magnesium (ppm)	NS	NS	17	16 - 17	61	61	26	25 - 27	12	12			
pH (units)	NS	NS	8.3	8.2 - 8.4	7.2	7.2 - 7.3	8.1	8.1	8.3	8.2 - 8.3			
Potassium (ppm)	NS	NS	1.3	1.1 - 1.4	3.5	3.5	5.1	5.0 - 5.1	3.1	2.9 - 3.2			
Radon (pCi/l)	NS	NS	ND	ND	400	400	ND	ND	ND	ND			
Sodium (ppm)	NS	NS	48	46 - 49	88	88	105	104 - 106	89	84 - 94			
1, 4-Dioxane (ppb)	NS	NL=1	1.3	1.1 - 1.5	ND	ND	N/A	N/A	N/A	N/A			
N-Nitrosodimethylamine (NDMA) (ppt)	3	NL=10	N/A	N/A	N/A	N/A	ND	ND	5.1	ND - 2.7			
tert-Butyl Alcohol (TBA) (ppb)	NS	NL=12	ND	ND	N/A	N/A	ND	ND	ND	ND			

FOR ADDITIONAL WATER QUALITY QUESTIONS, CONTACT JACK MIYAMOTO, LEAD CHEMIST AT (310) 434-2672

## KEY TO ABBREVIATIONS

**Secondary Drinking Water Standard** = An MCL that applies to any contaminant in drinking water that adversely affects the taste, odor, or appearance of the water.

**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.

**MCLG** = Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

**MCL** = Maximum Contaminant Level, 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.

**NL** = Notification Level, or the concentration of a contaminant that the California Department of Public Health has determined does not pose not a significant health risk, but warrants notification.

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

**MRDL** = Maximum Residual Disinfectant Level: 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.

**MRDLG** = Maximum Residual Disinfectant Level Goal: 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.

**RAL** = Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**TT** = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

**Variations and Exemptions:** State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

**N/A** = Not Applicable

**NS** = No Standard

**ND** = Monitored for, but Not Detected

**NTU** = Nephelometric Turbidity Units - used to measure cloudiness of drinking water.

**ppb** = parts per billion, or micrograms per liter (ug/l)

**ppm** = parts per million, or milligrams per liter (mg/l)

**ppt** = parts per trillion, or nanograms per liter (ng/l)

**umho/cm** = micromhos per centimeter

< = less than

(a) = SM Well#1 is pumped into a transmission line, is blended with Imported Surface Water and enters the system at 19th St. & Idaho Ave.

(b) = We are not required to test for each parameter every year. If indicated, data is from a previous year.

(c) = MWD has developed a flavor-profile analysis method that can more accurately identify odor occurrences.



## FACTS ABOUT RADON

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to 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. You should pursue radon removal for 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 are not too costly.

For additional information, call your state radon program (1-800-745-7236), the USEPA Safe Drinking Water Act Hotline (1-800-426-4791), or the National Safety Council Radon Hotline (1-800-767-7236).

## SOURCE WATER VULNERABILITY ASSESSMENTS

Between 2000 and 2012, the California Division of Drinking Water (DDW) completed Source Water Vulnerability Assessments for all of the City's water wells. The assessments are required for all water utilities nationwide and serve to evaluate the vulnerability of water sources used for drinking water to "possible contaminating activities," which include a wide range of everyday activities in addition to those commonly associated with contamination.

Based on the vulnerability assessments, Santa Monica Wells #3 and #4 located mid-city, Arcadia Wells #4 and #5, and Charnock Wells #13, #16, #18, #19 and #20, located in West L.A. are considered most vulnerable to commercial, industrial, residential, and municipal activities.

Santa Monica Well #1, located on the north side of the city, Wells #3 and #4, and the Arcadia Wells are considered most vulnerable by their proximity to sewer collection systems, although monthly analyses have detected no related contamination.

For more information, or to see a copy of the report, contact the Water Resources Division at (310) 434-2672.



# ANSWERS TO THE MOST COMMONLY ASKED QUESTIONS ABOUT YOUR TAP WATER

## ***What affects the taste of my water?***

The taste of drinking water is affected by its mineral content as well as the presence of chloramine, which is used to protect against potential bacterial contamination. Sometimes plumbing can cause a metallic flavor, especially if the water has been sitting in the pipes for many hours.

## ***What type of disinfectant is in my water?***

A low level of chloramine disinfectant is added to your tap water to protect you from waterborne pathogens. Chloramine is formed when a small amount of ammonia is added to chlorinated water. This type of disinfectant is very stable and also reduces the formation of disinfection by-products in your water. These by-products are an unintended consequence of the disinfection process, but are far below the allowable limit in Santa Monica water. We carefully monitor the amount of the chloramine disinfectant to protect the safety of your water.

## ***Who is most vulnerable to contaminants in drinking water?***

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 people, 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).



## ***How hard is my water?***

The water delivered to our customers has an average hardness of 183 ppm. To convert to grains per gallon, divide the hardness in ppm by 17.1. The average hardness in our water is 10.7 grains per gallon.

## ***Is the City's water fluoridated?***

The City of Santa Monica is required by state law to add fluoride to drinking water to help prevent dental decay in consumers. Current regulations require fluoride levels in the treated water be maintained between 0.6 to 1.2 ppm with an optimum dose of 0.7 ppm. Our monitoring showed that fluoride levels in the treated water distribution system averaged 0.78 ppm.

According to the American Dental Association and CDC, it is safe to use optimally fluoridated water for preparing infant formula. If an infant is primarily fed infant formula prepared with fluoridated water, there may be an increased chance for mild enamel fluorosis, but enamel fluorosis does not affect the health of the infant or the health of the infant's teeth. To lessen this chance, deionized, purified, distilled or demineralized bottled water can be used. If you have additional questions about fluoride, contact your health provider.

Additional information can be found at the State Board [www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml) or the CDC [www.cdc.gov/fluoridation](http://www.cdc.gov/fluoridation) website.



### ***What about lead from my plumbing?***

The lead contamination that has made the news in Flint, Michigan is highly unlikely in Santa Monica as there are no lead service connections here and the quality of our source water is much different than Flint's. Additionally, our corrosion control processes are in compliance by state drinking water regulators. Testing of a pool of "high risk" homes that were plumbed before the ban on lead in solder took place has occurred every three years since 1992 and has continually indicated there is little tendency of our water to leach lead out of plumbing. The next round of testing is scheduled for 2019.

If your home plumbing contains lead, there is a limited potential for lead to leach into your water. Fortunately, the minerals in our water help to protect against pipe corrosion, greatly reducing the potential of lead entering the water. These minerals form a film called "scale" that prevents water from coming into direct contact with home plumbing. The most common place to find lead in household plumbing is in chrome-plated brass faucets and fixtures. California enacted stricter regulations for plumbing fixtures in 2010 further reducing the potential for lead leaching from household plumbing.

If present, however, 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 Monica Water Resources Division 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 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. To get your water tested, please call the Water Quality office at (310) 434-2672. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA Safe Drinking Water Hotline at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

### ***Where can I get more information about water contaminants?***

Please visit our website [www.water.smgov.net](http://www.water.smgov.net) or call (310) 434-2672. You may also call the USEPA's Safe Drinking Water Hotline to discuss local drinking water quality, drinking water standards, contaminants, and potential health effects at 1-800-426-4791.

### ***Do I really need to buy a water filter or home treatment system?***

The decision to buy a water filter or home treatment system is a matter of personal preference. Our water meets or exceeds rigid state and federal health standards. If you decide to buy a filter or system, be a smart shopper and do some homework. Any treatment device you buy should be registered with the National Sanitation Foundation (NSF).



***Contact NSF toll free  
at (877) 867-3435  
or visit [www.nsf.org](http://www.nsf.org)***

### ***What about bottled water?***

Again, the decision is yours. You may find that keeping a pitcher of tap water in your refrigerator is a low-cost, water-thrifty alternative to buying more expensive bottled water, and it's far better for the environment. Even when the bottle is reused or recycled, the petrochemicals used in creating the bottle and the transportation of the water has a significant impact on the environment — *and your wallet.*

# WATER CONSERVATION GOAL

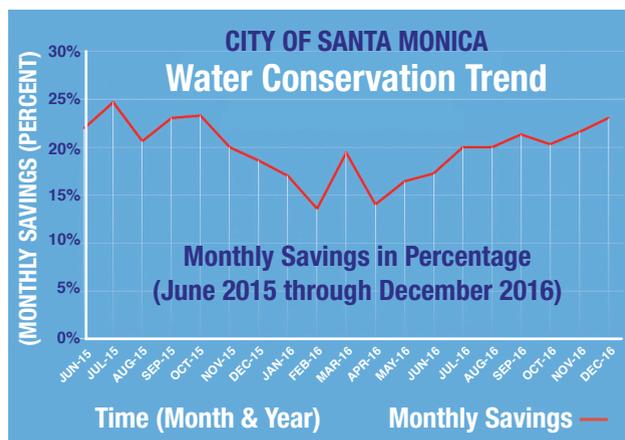
After five years of severe drought, this winter has generated record precipitation causing floods in many parts of the state and across the country. The fluctuation from extreme dry to extreme wet conditions is becoming increasingly frequent due to climate change. Although current conditions are favorable to California residents, drought remains an ever-present threat to the state and its scarce, but valuable, water resources. For more information please visit [www.drought.ca.gov](http://www.drought.ca.gov).

Santa Monica's major water supply, groundwater, has been impaired due to the drought. Recharge of these aquifers requires natural filtration processes, which are slow and unable to keep up with the water lost due to drier conditions and higher public demand.

In recent years, the City of Santa Monica has begun to address this issue by enacting conservation efforts to achieve a 20% reduction in water usage. By doing so, the City aims to develop long-term resiliency, as well as water self-sufficiency.

Meeting and maintaining our conservation target will allow us to become water self-sufficient, saving money and reducing the environmental impacts of importing scarce water from outside of the region.

The City's Council adopted Stage 2 Water Shortage Response Plan which is still in effect and you may find it at [www.water.smgov.net](http://www.water.smgov.net). This applies to all water customers in Santa Monica including residential, commercial, and City accounts. Although we are currently on track to meet the target, we urge everyone to maintain these efforts in order to achieve our goal of 20% reduction.



***Here are some simple ways you can conserve water and help our community reach the goal:***

- Only use sprinklers before 10 a.m. and after 4 p.m. any day of the week. Adjust your sprinkler controller each season. Go to [www.lacoastalgardens.com](http://www.lacoastalgardens.com) to find out how much water your garden needs and when to water. Better yet, convert sprinklers to a drip-irrigation system, install a rain barrel, or invest in sustainable landscaping. Rebates may be available!
- Don't allow irrigation water to overspray or run off your property, and never use a hose or a leaf blower to clean driveways, sidewalks, patios, streets, or alleys.
- Replace toilets older than 2014 with new high efficiency toilets, Install low-flow faucet aerators in your sink, showerheads, and clothes washers with WaterSense models and repair all leaking fixtures on your property. Rebates may be available!
- Turn off water when brushing teeth or shaving and only wash full loads of laundry.

In response to the shortage, Santa Monica has enhanced its water conservation plan. The City will continue providing its most sought-after conservation programs: rebates covering landscaping, toilets and water use consultations. To learn more, visit [www.water.smgov.net/](http://www.water.smgov.net/).

The City is also encouraging property owners to contribute to L.A. County's water management and planning through the use of non-potable water both outdoors and indoors through guidelines issued in 2016. If you are a property owner who would like more information on how you can reduce your water usage, please contact the City of Santa Monica Office of Sustainability & the Environment call (310) 458-8972, email [savewater@smgov.net](mailto:savewater@smgov.net) or you can visit us at [www.sustainablesm.org](http://www.sustainablesm.org).

## WE NEED YOU!

Public involvement is fundamental to ensuring that we are meeting water supply demand, water quality goals and the highest customer service level. We welcome your feedback, please see below for ways you can be involved with the City of Santa Monica: ***participate in conservation events; attend board and community meetings; sign up for the newsletters and alerts; please let us know how we are doing.***

# WHERE CAN I GET MORE INFORMATION?

## City of Santa Monica Public Works and Water Resources Division Offices:

- Water Quality .....(310) 434-2672
- 24-Hour Water Emergencies .....(310) 434-2672
- Water Conservation .....(310) 458-8972
- Billing Office .....(310) 458-8224

Visit our website:

[www.smgov.net/departments/publicworks/water.aspx](http://www.smgov.net/departments/publicworks/water.aspx)

Santa Monica City Council Meetings:

2nd & 4th Tuesdays of each month

Council Chamber

1685 Main Street, Santa Monica

[www.smgov.net/cityclerk/agendas.aspx](http://www.smgov.net/cityclerk/agendas.aspx)

Metropolitan Water District of Southern California

(213) 217-6850

[www.mwdh2o.com](http://www.mwdh2o.com)

California State Water Resources Control Board

Division of Drinking Water

(818) 551-2004

[www.waterboards.ca.gov/drinking\\_water/](http://www.waterboards.ca.gov/drinking_water/)

U.S. Environmental Protection Agency

Office of Ground Water & Drinking Water

Safe Drinking Water Hotline

(800) 426-4791

[www.epa.gov/safewater/dwhealth.html](http://www.epa.gov/safewater/dwhealth.html)

[www.water.epa.gov/drink/guide](http://www.water.epa.gov/drink/guide)



Water Resources Division

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*This brochure is printed with vegetable-based inks on paper made from recycled paper.*