

City of Santa Barbara

Annual Water Quality Report



June 2020

Our Commitment to Safe and Reliable Water Supplies

Water at Your Service During COVID-19 Crisis

Providing a safe and reliable water supply to the community is of the utmost importance to the City of Santa Barbara, especially during these unprecedented times. In response to the COVID-19 pandemic, the City has taken measures to protect the safety of staff while ensuring the water the community has always relied on for drinking, cooking, and bathing continues to meet or exceed all water quality standards.

The City's water treatment system uses the latest treatment technology to effectively remove and disinfect all viruses, including COVID-19. The Centers for Disease Control and Prevention (CDC) confirms that the COVID-19 virus has not been detected in drinking-water supplies; and, based on current evidence, the risk to water

supplies remains low. The City's drinking water is treated using a combination of ozonation, filtration, and chlorination. The water is continually monitored and tested at the City's water treatment facilities and at locations throughout the distribution system to ensure the quality and safety of the City's drinking water.

The City remains committed to providing essential services to residents, especially during the current pandemic. The City's water, wastewater, trash, and recycling services will continue regular operations. While this is a challenging time for all, the City remains dedicated to ensuring the community's safety.

We recognize many of our customers are facing financially challenging times. If you are struggling to pay your utility

bill, please contact the City's Utility Billing Office at (805) 564-5343 as soon as possible to discuss an alternative payment plan. It is imperative that you make contact with the City, rather than not paying your utility bill. Utility Billing staff are experienced in working with customers to evaluate options, such as payment plans, or connecting customers to resources to reduce future bill impacts, such as water conservation programs or trash service changes. The City is committed to assisting our customers during this difficult time.

For more information on the City's water quality, please reference this water quality newsletter, or call the Water Resources Laboratory at (805) 568-1008. For more information on the City's Water Resources Division, please visit SantaBarbaraCA.gov/Water.



Photo: Public Works, Water Resources Division

City of Santa Barbara Water Resources staff providing essential services to residents.



Drinking Water Treatment Regulations

Most of the City's drinking water comes from Lake Cachuma, Gibraltar Reservoir, and the Charles E. Meyer Desalination Plant. A portion of the City's water also comes from groundwater and imported State Water sources. As water travels over 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 the water sources include:

- Microbial contaminants such as bacteria and viruses that may come from wildlife or human activity.
- Inorganic contaminants such as salts and metals that can be naturally occurring or result from human activities.
- Radioactive contaminants, which can be naturally occurring.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm-water run-off, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes, petroleum production and use, or septic systems and agricultural applications.

To ensure safe drinking water, federal and state regulations limit the amount of certain contaminants in public water systems. Regulations also establish limits for contaminants in bottled water to provide protection for public health.

In 2019, the City of Santa Barbara's water met all EPA and state drinking water health standards. Before distribution, drinking water from our primary water sources is treated at the Cater Water Treatment Plant or the Charles E. Meyer Desalination Plant. Groundwater is treated at the Ortega Groundwater Treatment Plant or at the well site.

Safe Drinking Water Hotline and Website

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at 1-800-426-4791 or visiting their website at EPA.gov/SafeWater.

Special Info Available

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 of infection. These people should seek advice about drinking water from their health care providers. U.S. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Recommended Water Softener Settings

Groundwater: 16-30 grains/gallon
Surface Water: 17- 29 grains/gallon
Desal Water: 2-3 grains/gallon
 (1 grain/gallon = 17.1 milligrams per liter)

Desal water distribution map:
SantaBarbaraCA.gov/Desal

The Santa Ynez River is one of the largest rivers on the Central Coast of California and has three reservoirs.



The City's highest nitrate level in 2019 was 7.4 mg/L. Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness. Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask for advice from your health care provider.

Limited Potential for Contamination

The City has evaluated the vulnerability of its water supplies. Gibraltar Reservoir's remote location and restricted access limits opportunities for contamination. Water contact activities at Lake Cachuma are prohibited. The Desalination Plant and Cater Plant use advanced treatment technologies. City groundwater

supplies are located deep beneath the surface. Nonetheless, contaminants from sources such as gas stations and dry cleaners could potentially reach City water supplies. All water sources are carefully monitored to ensure pollutants are absent at levels exceeding state and federal standards. For more information, call 805-568-1008.

Lead in Plumbing

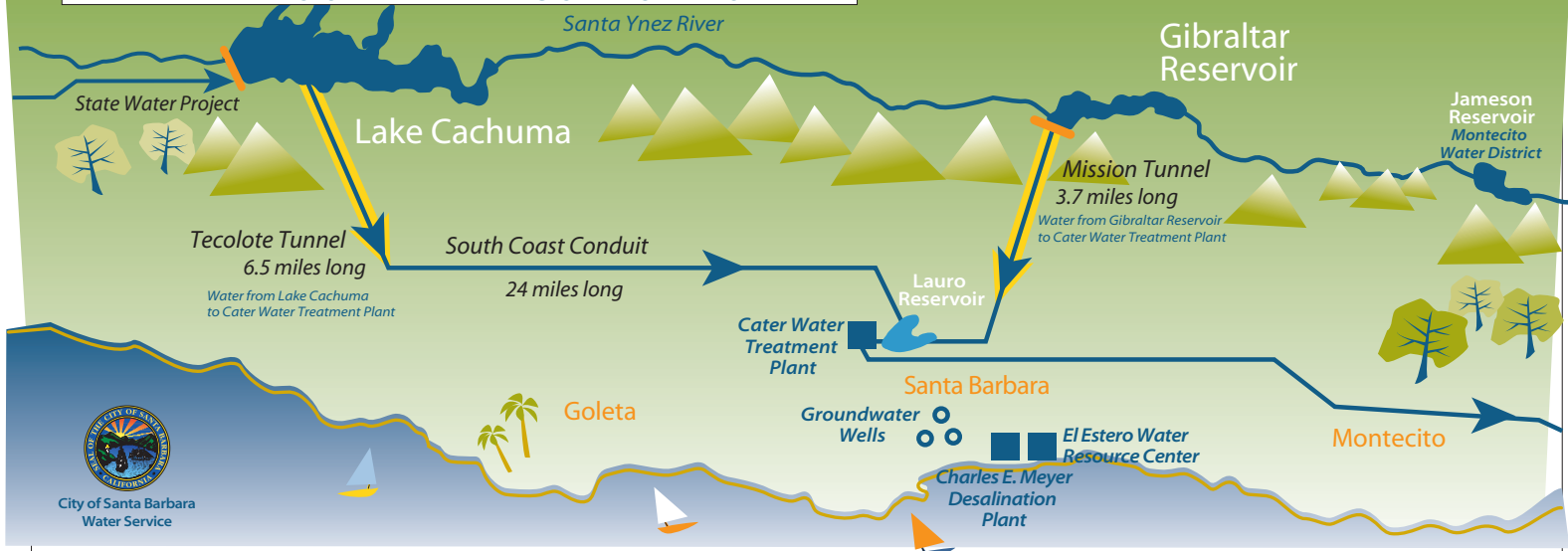
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with private service lines and home plumbing. The City has no lead service lines in the water distribution system. The City is responsible for providing high-quality drinking water but cannot control the variety of materials used in private plumbing components. The City's water contains low levels of lead and copper. However, if your water has been sitting in your pipes for a number of days, you can minimize lead exposure before using the water for drinking or cooking by flushing your tap for 30 seconds. Additionally, 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 at 1-800-426-4791, or EPA.gov/SafeWater/Lead.

Compliance with Drinking Water Regulations

Compliance with drinking water regulations requires continuous monitoring of filters for turbidity levels during the treatment process. On October 30, 2019, for a 33-hour period, the turbidity meter for one filter was not returned to service after maintenance, which is a violation of the regulations. As our customer, you have a right to know of this monitoring violation. During this period, the turbidity levels for the combination of all operating filters were continuously monitored and met water quality standards.

To ensure the delivery of quality drinking water that is free of harmful bacteria, water quality tests are performed weekly at our sample stations located throughout the water system. The results are submitted monthly to the State Water Resources Control Board, Division of Drinking Water. All water systems are required to comply with both the State Total Coliform Rule and the Federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbes (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.

WHERE YOUR WATER COMES FROM



2019 City Drinking Water Quality Report

PRIMARY STANDARDS

Regulated Contaminants with Primary MCLs or MRDLs

Microbiological Contaminants	MCL	PHG	Highest % of Positives			Major Sources in Drinking Water			
Total Coliform Bacteria	5% of monthly samples test positive	MCLG, 0	0.00%			Naturally present in the environment			
Turbidity (NTU)	TT = 1 NTU TT = 95% of samples ≤0.3 NTU	NA	Highest Single Measurement 0.18			Samples ≤0.3 NTU 100%			
Lead/Copper Rule			90th % Value	# of Sites Sampled	# of Sites Exceeding AL				
Copper (mg/L)	AL, 1.3	0.3	0.19	21	0				
Lead (µg/L)	AL, 15	0.2	2.5	21	0				
Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors	MCL	PHG	System Wide Average			System Wide Range			
Total Trihalomethanes (µg/L)	LRAA, 80	NA	Highest LRAA, 43			0.82 - 56			
Haloacetic Acids (µg/L)	LRAA, 60	NA	Highest LRAA, 26			ND - 34			
Disinfectant - Chlorine as Cl ₂ (mg/L)	MRDL, 4.0	MRDLG, 4.0	0.75			ND - 1.85			
Bromochloroacetic Acid (ug/L)	NA	NA	3.0			ND - 6.9			
Bromochloroacetic Acid (ug/L)	NA	NA	Surface Water Average 0.92	Surface Water Range ND - 1.4	Groundwater Average NA	Groundwater Range NA	Desalinated Water Average NA	Desalinated Water Range NA	
Bromate (µg/L)	10	0.1	3.6	2.2 - 5.4	NA	NA	NA	NA	
Control of DBP Precursors - TOC (mg/L)	TT	NA	2.48	1.69 - 3.16	NA	NA	ND	NA	
Radioactive Contaminants									
Gross Alpha Particle Activity (pCi/L)	15	MCLG, 0	NA	NA	ND	NA	ND	NA	
Gross Beta Particle Activity (pCi/L)	50	MCLG, 0	NA	NA	ND	NA	3.6	3.3 - 4.4	
Uranium (pCi/L)	20	0.43	0.83	NA	2.9	0.74 - 5	ND	NA	
Volatile Organic Contaminants									
Tetrachloroethylene (PCE) (ug/L)	5	0.05	ND	NA	0.42	ND - 0.59	ND	NA	
Inorganic Contaminants									
Aluminum (mg/L)	1	0.6	0.019	ND - 0.054	ND	NA	ND	NA	
Arsenic (ug/L)	10	0.004	1	ND - 1.2	7	6 - 8	ND	NA	
Barium (mg/L)	1	2	0.065	NA	0.11	0.041 - 0.18	ND	NA	
Fluoride (mg/L)	2.0	1	0.45	0.38 - 0.60	0.46	0.29 - 0.63	ND	NA	
Nitrate as NO3 (mg/L)	45	2	0.45	ND - 1.46	11	ND - 33	ND	NA	
Nitrate as N (mg/L)	10	10	0.21	ND - 0.33	2.4	ND - 7.4	ND	NA	

SECONDARY STANDARDS

Regulated Contaminants with Secondary MCL

Aesthetic Standards Established by the State of California, Department of Public Health. No adverse health effects from exceedance of standards.

	MCL	PHG	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	Desalinated Water Average	Desalinated Water Range	
Iron (µg/L)	300	NA	ND	NA	2050	ND - 12000	ND	NA	Leaching from natural deposits
Manganese (ug/L)	50	NA	ND	NA	90	ND - 350	ND	NA	Leaching from natural deposits
Color, Apparent (units)	15	NA	ND	NA	21	ND - 40	ND	NA	Naturally occurring organic materials
Threshold Odor Number at 60 °C (units)	3	NA	3	1.4 - 8	2	2 - 2	NA	NA	Naturally occurring organic materials
Turbidity, Laboratory (NTU)	5	NA	0.20	0.10 - 0.62	3.30	0.15 - 21	0.26	-	Soil runoff
Total Dissolved Solids (mg/L)	1000	NA	708	532 - 810	660	510 - 1000	269	230 - 320	Runoff / leaching from natural deposits
Specific Conductance (µmhos/cm)	1600	NA	1024	852 - 1109	1070	780 - 1600	544	480 - 640	Substances that form ions when in water; seawater influence
Chloride (mg/L)	500	NA	28.6	25.6 - 36.4	198	57 - 340	136	110 - 160	Runoff / leaching from natural deposits; seawater influence
Sulfate (mg/L)	500	NA	306	206 - 346	96	63 - 130	2.7	2 - 4.7	Runoff / leaching from natural deposits

CONTAMINANTS WITH NO MCLs

i.e., Unregulated Contaminants

Boron (mg/L)	NL,1	NA	0.38	0.37 - 0.39	0.085	NA	0.78	0.64 - 0.91	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals. Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production & textile manufacturing facilities; erosion of natural deposits.
Hexavalent chromium, Cr VI (µg/L)	NA	NA	0.044	NA	ND	NA	NA	NA	
<i>Additional Constituents</i>									Note: Listed in the tables are substances detected in the City's drinking water. Not listed are more than 100 regulated and unregulated substances that were below the laboratory detection level. The state allows us to monitor for some contaminants less than once per year since the concentrations of the these contaminants do not change frequently. Some of our data, though representative, are more than one year old. All data presented in the table are from 2019, except for: Potassium for ground water is from 2018. Uranium as a non-radioactive contaminant for surface water is from 2018. Uranium as a radioactive contaminant for surface water is from 2018. Boron for surface water is from 2016 & 2017. Boron for groundwater is from 2015. Radon 222 for surface water & groundwater are from 2012. Lead & Copper results are from 2018 additional testing for desalinated water.
pH (units)	NA	NA	7.62	7.10 - 7.82	7.01	6.82 - 7.11	NA	NA	
Total Hardness as CaCO ₃ (mg/L)	NA	NA	430	300 - 492	390	280 - 500	46	NA	
Total Alkalinity as CaCO ₃ (mg/L)	NA	NA	222	190 - 370	207	180 - 230	42	5.4 - 48	
Calcium (mg/L)	NA	NA	99.7	75.3 - 110	103	76 - 130	17	2.1 - 26	
Magnesium (mg/L)	NA	NA	45	31 - 52	32	23 - 42	1.5	1.1 - 2.3	
Sodium (mg/L)	NA	NA	60	57 - 63	85	40 - 130	79	66 - 95	
Potassium (mg/L)	NA	NA	3.8	3.2 - 4.2	1.4	1.1 - 1.7	NA	NA	
Radon 222 (pCi/L)	NA	NA	ND	NA	630	460 - 930	NA	NA	
Uranium (µg/L)	NA	NA	3.2	NA	4.2	1.1 - 7.4	ND	NA	

UNREGULATED CONTAMINANTS MONITORING (UCMR3)

<i>List 1 Contaminants</i>	MCL	PHG	System Wide Average	System Wide Range
Chromium, Total (µg/L)	NA	NA	0.54	ND - 1.7
Molybdenum (µg/L)	NA	NA	6.3	ND - 11
Strontium (µg/L)	NA	NA	1045	670 - 1900
Vanadium (µg/L)	NA	NA	1.7	ND - 4.0
Chromium 6 (Hexavalent Chromium) (µg/L)	NA	NA	0.49	ND - 1.8
Chlorate (µg/L)	NA	NA	253	72.0 - 410
1,4-Dioxane (µg/L)	NA	NA	0.024	ND - 0.11
1,1-Dichloroethane (ng/L)	NA	NA	31	ND - 130
Chloromethane (ng/L)	NA	NA	31	ND - 250

UNREGULATED CONTAMINANTS MONITORING (UCMR4)

<i>Haloacetic Acids</i>	MCL	PHG	System Wide Average	System Wide Range
Bromochloroacetic Acid (ug/L)	NA	NA	3.9	ND - 8.2
Bromodichloroacetic Acid (ug/L)	NA	NA	3.5	ND - 5.8
Chlorodibromoacetic Acid (ug/L)	NA	NA	2.2	ND - 3.3
Dibromoacetic Acid (ug/L)	NA	NA	2.3	ND - 4.2
Dichloroacetic Acid (ug/L)	NA	NA	6.0	ND - 16
Tribromoacetic Acid (ug/L)	NA	NA	2.3	ND - 4.9
Trichloroacetic Acid (ug/L)	NA	NA	4.2	ND - 12
HAA5	NA	NA	13	ND - 32
HAA6Br	NA	NA	14	ND - 24
HAA9	NA	NA	24	ND - 51
<i>Additional Contaminants</i>				
Bromide (ug/L)	NA	NA	24000	51 - 73000
Germanium (ug/L)	NA	NA	0.42	ND - 0.95
Manganese (ug/L)	NA	NA	0.81	ND - 4.1
Total Organic Carbon (mg/L)	NA	NA	3.5	1.2 - 5.4

About the Unregulated Contaminant Monitoring Rule 3 & Rule 4

Unregulated contaminant monitoring helps USEPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

Definitions

Public Health Goal (PHG)

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

Maximum Contaminant Level Goal (MCLG)

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

Maximum Contaminant Level (MCL)

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

Maximum Residual Disinfectant Level Goal (MRDLG)

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

Maximum Residual Disinfectant Level (MRDL)

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

Regulatory Action Level (AL)

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

Treatment Technique (TT)

A required process intended to reduce the level of contaminants in drinking water.

Primary Drinking Water Standards (PDWS)

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

Secondary Drinking Water Standards (SDWS)

MCLs for contaminants that affect taste, odor, or appearance of drinking water. Contaminants with SDWS do not affect the health at MCL levels.

Notification Level (NL)

Notification levels are health-based levels established by CDPH for chemicals in drinking water that lack MCLs.

Legend

mg/L:	milligrams per liter (parts per million)
µg/L:	micrograms per liter (parts per billion)
µmhos/cm:	micromhos per centimeter
pCi/L:	picoCuries per liter (a measure of radioactivity)
ND:	Not Detected at testing limit
NA:	Not Applicable
NTU:	Nephelometric Turbidity Units
DBP:	Disinfection Byproducts
TOC:	Total Organic Carbon
LRAA:	Locational Running Annual Average
ng/L:	nanograms per liter (parts per trillion)

Radon

Radon is a radioactive gas that you cannot see, taste, or smell that is found throughout the United States. It occurs naturally in certain rock formations. As a result, radon can be found in Santa Barbara's groundwater. Groundwater is a small part (<10%) of the City's total water supply. Radon has not been detected in the City's surface water. Radon can enter homes through cracks or holes in foundations and floors. Radon can also get indoors when released from tap water. Test your home if you are concerned about radon. Testing is inexpensive and easy. For additional information, call the State radon program at 1-800-745-7236, the EPA Safe Drinking Water Hotline at 1-800-426-4791, or the National Safety Council Radon Hotline at 1-800-SOS-RADON.

Wastewater System Report

El Estero Water Resource Center

The Unsung Hero in the Protection of Public Health and the Environment

In light of the current pandemic, it is a good time to reflect on the importance of our modern sanitation systems. In particular, how the City of Santa Barbara's Collection System and the El Estero Water Resource Center (EEWRC) fit into this modern sanitation system and protect the health and safety of our community. Since the dawn of civilization, providing both clean drinking water and an equally critical sanitation system has been a logistical challenge. Wherever water resources, infrastructure, or sanitation systems were insufficient, diseases spread and people fell ill or died prematurely. At the beginning of the 20th century, the greatest advancement in human health came from the wide-spread adoption of sanitation systems to safely remove wastewater from homes and businesses. In the middle of the 20th century, the focus shifted to improvements

in how that wastewater impacted the environment. Today, the City of Santa Barbara's wastewater system is the single most important system in the protection of public health and the environment. According to the British Medical Journal, "sanitary sewers have had the most significant improvement to public health, more so than any medical breakthrough." Today, we rely on our modern wastewater collection and treatment systems to safely convey and treat wastewater, protecting us from a whole host of dangerous bacteria and viruses, including COVID-19.

"This is all interesting" you might say, "but why is it important to me?" The City's complex wastewater system collects and treats 6.5 million gallons of wastewater daily through a complex network that includes 256 miles of pipe, seven pump (lift) stations, over 7,000

access structures, and the EEWRC. The wastewater is gathered from more than 24,000 private sewer laterals, which is the piping that carries wastewater from a house or business to the City wastewater collection system. It is important to understand that each property owner is responsible for maintaining their own sewer lateral; a critical component in the shared responsibility between the City and property owners in protecting public health and the environment. And if protecting public health and the environment was not enough, failures of private laterals can cost a property owner thousands of dollars to repair and clean, so regular maintenance is key. If you're unsure of where to begin, the City is here help with knowledgeable staff and a wealth of information on our website. Please visit us online at **[SantaBarbaraCA.gov/ElEstero](https://www.santabarbaraca.gov/ElEstero)** or call us at **805-568-1010**.





City of Santa Barbara
Public Works Department
Post Office Box 1990
Santa Barbara, CA 93102-1990

Get the latest on Santa Barbara's drinking water.

The City distributes this Annual Water Quality Report, a summary of last year's water quality information, to customers as required by state and federal regulation.



Keep Saving Santa Barbara!

- Rebates available for mulch and high efficiency washing machines
- Check for and repair leaks inside and out with our DIY videos.
- Adjust your sprinkler schedule based on the weather. Use the Watering Calculator & Watering % Adjust on our website.
- Schedule a free virtual or phone Water Checkup appointment for your home or business.



For more information, visit SantaBarbaraCA.gov/WaterWise or call 805-564-5460.

En Español

Este informe contiene información muy importante sobre su agua potable. Si usted tiene preguntas acerca del agua de la ciudad, por favor llame a Jessica Ramirez-Duran a la oficina de Recursos del Agua, al teléfono 805-564-5413.

For More Information

For questions on water quality, call the Water Resources Laboratory at 805-568-1008.

For questions on the City's water system, call 805-564-5387.

The City of Santa Barbara Water Commission meets at 9:00 a.m. on the third Thursday of each month. Water Commission meetings are open to the public and are currently held virtually due to COVID-19. For more information on the Water Commission, visit SantaBarbaraCA.gov/WC.



SantaBarbaraCA.gov/Water