

WATER QUALITY REPORT 2023

County Service Area 16 - SHANDON
System Number 4010028

Your 2023 Water Quality Report

The County of San Luis Obispo is pleased to present this 2023 annual report describing the quality of your drinking water. Details about where your water comes from, what it contains, and how it compares to State standards are included. Our dedicated staff works hard daily to maintain your water system and deliver the best quality water to you and your family. We sincerely hope this report gives you the information you seek and have a right to know.

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse County Service Area 16 – Shandon a Department of Public Works at (805) 781-2954 para asistirlo en español.

Your Water Supply

Source water for Shandon comes from two groundwater wells located in Shandon which tap into the Paso Robles Groundwater Basin. Your water is normally very clean and is simply disinfected with chlorine or chloramine to help minimize the potential for viral and bacterial contamination. A portion of your water may come from the Central Coast Water Authority (CCWA) Polonio Pass Water Treatment Plant (WTP). Source water for the Polonio Pass plant comes from the California State Water Project operated by the California Department of Water Resources. Water is conveyed to the Polonio Pass WTP by the Coastal Branch Aqueduct completed in 1997. Additional information on the State Water Project can be found at: <https://www.water.ca.gov/Programs/State-Water-Project>. **In 2023, the Shandon groundwater wells were the primary source of water. No water was used from CCWA.**

Important Health Information

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 land's surface or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, 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, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.
- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.
- Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfection.



To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (SWRCB) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The SWRCB regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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

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 (Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome) 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 healthcare providers. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline (1-800-426-4791).

Nitrate Health Risks in Drinking Water

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. In 2023, Shandon well water nitrate levels ranged from 2.3 – 4.9 mg/L.

Lead Health Risks in Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water typically comes from materials and components associated with service lines and home plumbing. The County of San Luis Obispo 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

PFAS National Primary Drinking Water Regulation

Per- and Polyfluoroalkyl Substances (PFAS) are a series of man-made chemical compounds that persist in the environment for long periods. They are often called "forever chemicals." For decades PFAS chemicals have been used in industry and consumer products such as nonstick cookware, waterproof clothing, fire fighting foam at airports, and stain-resistant materials. The latest science shows that these chemicals are harmful to our health.

On April 10, 2024, the USEPA finalized national drinking water standards for five individual PFAS: PFOA, PFOS, PFNA, PFHxS, and HFPO-DA (known as GenX Chemicals) and a Hazard Index level for two or more of four PFAS as a mixture: PFNA, PFHxS, HFPO-DA, and PFBS. These are legally enforceable drinking water limits and reduce PFAS exposure for approximately 100 million Americans served by public drinking water systems.

In 2023, the Shandon water system tested its drinking water wells for PFAS. Very low levels of PFOS were detected in one of Shandon's drinking water wells, but were below the new Federal maximum contaminant level (MCL). Additional information for PFAS may be found at the following links: <https://www.epa.gov/pfas> and <https://www.slocounty.ca.gov/pfas>



County of San Luis Obispo CSA 16 Shandon – CCR 2023

The following tables are a snapshot of drinking water constituents that were detected in your water in 2023, unless otherwise noted. The State allows us to monitor some substances less than once per year because the concentrations do not change frequently. Some of our data, although representative, may be more than one year old. The presence of these substances detected in water does not necessarily indicate that the water poses a health risk. For questions about this data, please contact the **Water Quality Laboratory at (805) 781-5111**.

Constituent (unit)	Wells		Distribution (Treated)		MCL, TT, or [MRDL]	PHG, (MCLG), or [MRDLG]	Potential Sources of Contamination
	Range Detected	Average Detected	Range Detected	Average Detected			
REGULATED CONTAMINANTS WITH PRIMARY DRINKING WATER STANDARDS							
Microbiological							
Total Coliform Bacteria (Present or Absent)	Absent – Present ¹	Absent	Absent	Absent	>1 positive per month	MCLG = (0)	Naturally present in the environment
<i>E. coli</i> Bacteria (Present or Absent)	Absent	Absent	Absent	Absent	0	MCLG = (0)	Human and animal fecal waste
Heterotrophic Bacteria (CFU/mL)	< 1 - 220	14	< 1 - 52	4.2	TT = < 500	NA	Naturally present in the environment
Inorganic Chemicals							
Nitrate as Nitrogen (mg/L)	2.3 - 4.9	3.85	----	----	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radionuclides (Collected in 2020)							
Gross Alpha Particle (pCi/L)	5.2 - 5.3	5.3	----	----	15	MCLG = (0)	Decay of natural and man- made deposits
Total Radium (pCi/L)	0.018 - 0.055	0.036	----	----	5	NA	Erosion of natural deposits
Uranium (pCi/L)	2.19 - 2.25	2.22	----	----	20	0.43	Erosion of natural deposits
Distribution System Disinfectant Residuals and Disinfection Byproducts							
Free Chlorine Residual (mg/L)	1.07 – 1.80	1.42	0.81 – 1.94	1.31	MRDL = [4.0]	MRDLG = [4.0]	Drinking water disinfectant added for treatment
Total Trihalomethanes (µg/L)	----	----	2.7	2.7	80	NA	By-product of drinking water chlorination
Haloacetic Acids (µg/L)	----	----	1.3	1.3	60	NA	By-product of drinking water chlorination

Lead and Copper in Public Schools: Per California Assembly Bill 746 (AB 746) and at the request of the Shandon Joint Unified School District, twenty samples were collected from various sites at Shandon Elementary School, Shandon High School, Shandon School District Residences, and the CW Clarke Park. Below is a summary of the lead and copper results.

Lead and Copper Monitoring at the Consumers' Tap – Shandon School District (Collected in 2018)						
Constituent (unit)	Number of Samples	90th percentile	Action Level	PHG	# of sites exceeding AL	Potential Source of Contamination
Lead (µg/L)	20	4.3	15	0.2	None	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (mg/L)	20	0.098	1.3	0.3	None	

¹ The well sample was recollected the next day and the results were 1.0 MPN/100 mL for Total Coliform and < 1 MPN/100 mL for *E. coli*. Confirming the positive test, the well was removed from service, disinfected, and resampled with results of < 1 MPN/100 mL for both Total Coliform and *E. coli*.



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Lead and Copper Monitoring at the Consumers' Tap - Distribution (Collected in 2023)

Constituent (unit)	Number of Samples	90th percentile	Action Level	PHG	Potential Source of Contamination
Lead (ppb)	10	ND	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	10	0.096	1.3	0.3	

Constituent (unit)	Wells		Distribution (Treated)		Secondary MCL	Potential Sources of Contamination
	Range Detected	Average Detected	Range Detected	Average Detected		
SECONDARY STANDARDS - Aesthetic Standards						
Chloride (mg/L)	84 - 140	112	----	----	500	Runoff/leaching from natural deposits
Color (ACU)	ND - 1	ND	ND - 2	ND	15	Naturally occurring organic materials
Odor Threshold (TON)	ND - 1.7	ND	ND - 2.5	ND	3	Naturally occurring organic materials
Specific Conductance (µS/cm)	700 - 910	805	----	----	1600	Naturally occurring organic materials
Sulfate (mg/L)	90 - 110	100	----	----	500	Runoff/leaching from natural deposits
Total Dissolved Solids (mg/L)	470 - 680	575	----	----	1000	Runoff/leaching from natural deposits
Turbidity (NTU)	0.06 - 0.50	0.15	0.06 - 0.96	0.11	5	Soil runoff
ADDITIONAL PARAMETERS (Unregulated)						
Alkalinity, Total as CaCO ₃ (mg/L)	94 - 107	101	----	----	NA	Runoff/leaching from natural deposits
Boron (µg/L)	110	110	----	----	NA	Runoff/leaching from natural deposits
Calcium (mg/L)	86 - 110	98	----	----	NA	Runoff/leaching from natural deposits
Hardness (Total) as CaCO ₃ (mg/L)	240 - 330	285	----	----	NA	Runoff/leaching from natural deposits
Magnesium (mg/L)	6.0 - 9.9	8.0	----	----	NA	Runoff/leaching from natural deposits
pH	7.34 - 7.47	7.40	7.87	7.87	NA	Runoff/leaching from natural deposits
Potassium (mg/L)	5.7 - 6.2	6.0	----	----	NA	Runoff/leaching from natural deposits
Sodium (mg/L)	51 - 52	52	----	----	NA	Runoff/leaching from natural deposits

New Regulation Per- and Polyfluoroalkyl Substances (PFAS)

Constituent (unit)	Well 04	Well 05	MCL	MCLG	Potential Source of Contamination
PFOS (ppt)	< 2	2.7	4	0	Runoff from firefighting substances

Additional constituents monitored in 2023 and not detected above State reporting limits: copper, fluoride, iron, lead, manganese, MBAS, nitrite, silver, and zinc. Additional constituents monitored in 2022 and not detected above State reporting limits: perchlorate and 1,2,3-Trichloropropane. Additional constituents monitored in 2021 and not detected above State reporting limits: aluminum, antimony, beryllium, cadmium, chromium, cyanide, mercury, nickel, selenium, and thallium. Additional constituents monitored in 2020 and not detected above State reporting limits: volatile and synthetic organic chemicals. Additional constituents monitored in 2018 and not detected above State reporting limits: atrazine and simazine.



Operations

Shandon operators are certified by the California State Water Resources Control Board (SWRCB). Our operators are knowledgeable professionals dedicated to maintaining an excellent water system and delivering the best quality water possible. Operators conduct weekly inspections of the wells, tanks, and distribution system. In addition, the SWRCB routinely inspects the facilities, operating procedures, and water quality monitoring records to verify compliance with state and federal regulatory requirements.

Community Participation

The County of San Luis Obispo Board of Supervisors meets two to three times a month. All meetings are held in the Board Chambers located in the new County Government Center, 1055 Monterey Street, San Luis Obispo. The Board holds budget hearings during June. Interested people should check the Board's agendas for specific dates. Agendas for all Board of Supervisors meetings are posted in some County libraries, the County Government Center, and on the Board of Supervisors internet website at

<https://www.slocounty.ca.gov/Departments/Administrative-Office/Board-of-Supervisors-Agenda.aspx>.

Information specific to the CSA 16 water system can be found at www.slocounty.ca.gov/pw/csa16

The **Shandon Advisory Council** is scheduled to hold regular meetings on the 1st Wednesday of every month starting at 7 pm at the Club House at Crawford W. Clarke Memorial Park, Shandon, CA. You can contact the advisory council by **email:** info@ShandonCA.org, or at P.O. Box 92, Shandon, 93461. Advisory council recommendations are considered by the Board of Supervisors when they make decisions that affect Shandon, including the water system.

Source Water Assessments were completed for both of Shandon's wells in 2002. The wells were most vulnerable to the following activities: animal grazing, utility stations, septic systems, parks, fire station, historic gas station, fertilizer/pesticide/herbicide applications, underground storage tank, and above ground storage tank. A copy of the assessment is available from the State Water Resources Control Board at (805) 566-1326 or from the County of San Luis Obispo Department of Public Works at: <https://www.slocounty.ca.gov/Departments/Public-Works/Forms-Documents/Water-Resources/Drinking-Water-Source-Assessments/Shandon-DWSAP.pdf>

CONTACT INFORMATION

USEPA Office of Ground Water and Drinking Water

<http://water.epa.gov/drink/index.cfm>

California State Water Resources Control Board (SWRCB)

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/publicwatersystems.shtml

County of San Luis Obispo Water Quality Division

Department of Public Works County Government Center, Room 206

San Luis Obispo, CA 93408

www.slocounty.ca.gov/PW.htm

PW.WQL@co.slo.ca.us

(805) 781-5111



Terms and Abbreviations

CaCO₃ – Calcium carbonate

CCWA– Central Coast Water Authority

DLR – Detection Level for purposes of Reporting

ELAP Environmental Laboratory Accreditation Program

Hazard Index (HI) - The Hazard Index is a long-established approach that the EPA regularly uses to understand health risks from a chemical mixture (i.e., exposure to multiple chemicals). The HI is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the health-based water concentration.

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.

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.

mg/L – Milligrams per Liter.

µg/L – Micrograms per Liter.

MPN/100 mL – Most Probable Number per 100 milliliters

MRDL – Maximum Residual Disinfectant Level. The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the 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.

µS/cm – microsiemens per centimeter (unit of specific conductance of water).

NA – Not Applicable

ND – Not Detected. The contaminant is not detectable at the testing limit.

NS – No Standard

NTU – Nephelometric Turbidity Unit. A measure of water clarity.

pCi/L – picocuries per liter (a measure of radioactivity).

PDWS – Primary Drinking Water Standards. MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements. PDWS pertains to the following: Filtration Performance, Microbiological Contaminants, Inorganic Contaminants, Radioactive Contaminants and Disinfection Byproducts, Disinfection Residuals, and Disinfection Byproduct Precursors.

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.

ppb – parts per billion, or micrograms per liter (µg/L).

ppm – parts per million, or milligrams per liter (mg/L).

ppt - parts per trillion, or nanograms per liter (ng/L).

Primary MCL – Maximum contaminant level for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.

Secondary MCLs – Maximum contaminant level for contaminants to protect the taste, odor, or appearance of the drinking water. Contaminants with secondary MCLs do not affect health at the MCL levels.

State Water – The California State Water Project’s raw source water is treated by the Central Coast Water Authority (CCWA) Polonio Pass Water Treatment Plant. The CCWA treated water (State Water) is purchased by the County of San Luis Obispo to be blended with Shandon’s treated well water for delivery to CSA16.

SWRCB – State Water Resources Control Board

TON – Threshold Odor Number.

TT – Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water. For microbiological and turbidity contaminants, the raw water will be treated at a water treatment facility or used for groundwater recharge before use.

USEPA – United States Environmental Protection Agency

WTP – Water Treatment Plant

A Comparison of Shandon’s Water Usage (2022– 2023):

CSA16 – SHANDON Water Statistics (January - December)				
Year	Annual Consumption (million gallons)	Average Daily Demand (gallons)	Gallons per day Per service connection ²	Percent Change from Previous Year
2022	25.3	69,200	192	2.0 % Decrease
2023	24.7	67,700	187	2.6 % Decrease

² According to the Environmental Protection Agency (EPA), the average American Family uses more than 300 gallons of water per day at home.