

# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



*Presented By*



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

PWS ID#: 4010009

## Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

## Source Water Assessment

Assessments of the drinking water sources for the City of San Luis Obispo have been conducted. These sources include Salinas Reservoir, Whale Rock Reservoir, Nacimiento Lake, and Pacific Beach Well. These sources are considered most vulnerable to the following activities not associated with any detected contaminants: grazing, managed forests, recreational areas, septic systems, sewer collection systems, and gas stations.

A copy of the complete assessment is available from the SWRCB Division of Drinking Water, 1180 Eugenia Place, Suite 200, Carpinteria, California, 93013, or the City of San Luis Obispo, 879 Morro Street, San Luis Obispo, California, 93401.

We remain vigilant in delivering the best-quality drinking water

## Substances That Could Be in 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) 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 U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. 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.

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 can 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, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Community Participation

City Council meetings are held on the first and third Tuesday of each month at 6:00 p.m. at City Hall, 990 Palm Street, San Luis Obispo. A public comment period is held at the beginning of each meeting.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please contact Jason Meeks, Water Treatment Plant Supervisor, at (805) 781-7566 or [jmeeks@slcity.org](mailto:jmeeks@slcity.org).

## Water Treatment Process

The treatment process consists of a series of steps referred to as conventional surface water treatment. First, raw water is drawn from our water sources and sent to an ozone contact basin, which provides primary disinfection and oxidation of the high iron levels that are present in the water. The water then goes to a mixing tank, where aluminum sulfate and cationic polymer are added. The addition of these substances causes small particles (called floc) to adhere to one another, making them heavy enough to settle into a basin, from which sediment is removed.

At this point, the water is filtered through layers of fine coal and silicate sand. As smaller suspended particles are removed, turbidity disappears, and clear water emerges. Chlorine is added as a precaution against any bacteria that may still be present. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.

Finally, fluoride (to prevent tooth decay) and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to sanitized underground reservoirs and water tanks and into your home or business.

## The Benefits of Fluoridation

Our water system treats your water by adding fluoride to the naturally occurring level to help prevent dental caries in consumers. State regulations require the fluoride levels in the treated water be maintained within a range of 0.6 to 1.2 parts per million (ppm), with an optimum dose of 0.7 ppm. Our monitoring showed that the fluoride levels in the treated water ranged from 0.5 to 1.0 ppm, with an average of 0.72 ppm. Information about fluoridation, oral health, and current issues is available from [http://www.swrcb.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml).

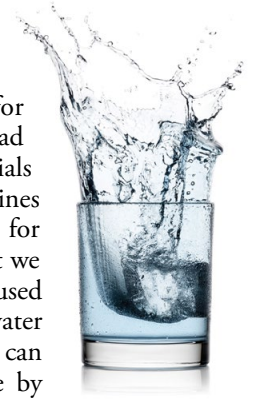
## Additional Lead Testing

In California AB 746 was approved by the governor in October 2017, requiring all water purveyors who serve K-12 public and private schools to provide lead testing. This testing is mandatory for all public schools and upon written request from private schools. As a result of the requirements set forth in AB 746, the City of San Luis Obispo collected samples from 10 public schools and four private schools. All results were below the action level. One private school had an exemption because it was constructed after 2010.



## Lead in Home 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 service lines and home plumbing. We are responsible for providing high-quality drinking water, but we 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 two minutes before using water for drinking or cooking. (If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



## Where Does My Water Come From?

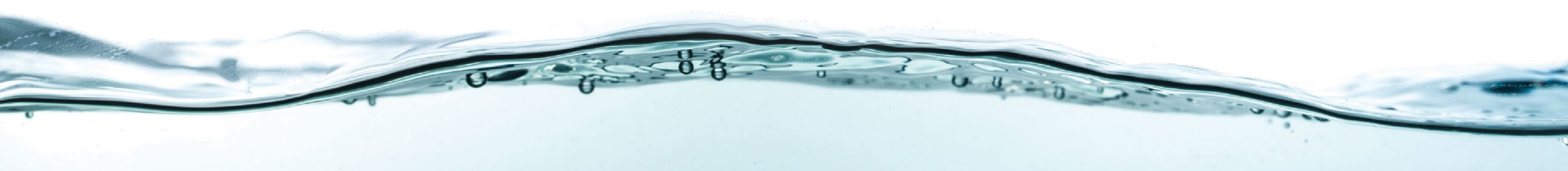
The City of San Luis Obispo is fortunate to have several sources of water. The Salinas Reservoir (also known as Santa Margarita Lake, eight miles east of Santa Margarita), Whale Rock Reservoir (Cayucos), and Nacimiento Lake (16 miles northwest of Paso Robles) are our main supplies. The surface water from the three lakes is treated at the Stenner Creek Water Treatment Plant. During 2019 our treatment plant delivered 1.68 billion gallons of water to San Luis Obispo.

## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

| REGULATED SUBSTANCES   |                 |                                    |                           |                                   |                                  |           |   |
|--|-----------------|------------------------------------|---------------------------|-----------------------------------|----------------------------------|-----------|---|
| SUBSTANCE<br>(UNIT OF MEASURE)   | YEAR<br>SAMPLED | MCL<br>[MRDL]                      | PHG<br>(MCLG)<br>[MRDLG]  | AMOUNT<br>DETECTED                | RANGE<br>LOW-HIGH                | VIOLATION | TYPICAL SOURCE  |
| Aluminum (ppm)   | 2019            | 1                                  | 0.6                       | 0.046                             | ND–0.14                          | No        | Erosion of natural deposits; residue from some surface water treatment processes  |
| Chlorine (ppm)   | 2019            | [4.0 (as Cl <sub>2</sub> )]        | [4 (as Cl <sub>2</sub> )] | 0.84                              | ND–2.1                           | No        | Drinking water disinfectant added for treatment   |
| Control of DBP precursors [TOC] (percent of removal)   | 2019            | TT <sup>1</sup>                    | NA                        | 31                                | ND–50                            | No        | Various natural and man-made sources  |
| Fluoride <sup>2</sup> (ppm)  | 2019            | 2.0                                | 1                         | 0.72                              | 0.5–1.0                          | No        | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories  |
| Gross Alpha Particle Activity (pCi/L)  | 2011            | 15                                 | (0)                       | 0.0145                            | ND–0.029                         | No        | Erosion of natural deposits   |
| Haloacetic Acids <sup>3</sup> (ppb)  | 2019            | 60                                 | NA                        | 22                                | 13–33.0                          | No        | By-product of drinking water disinfection   |
| Hexavalent Chromium (ppb)  | 2015            | 10 <sup>4</sup>                    | 0.02                      | 2.0                               | ND–12.0                          | No        | Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits |
| TTHMs [Total Trihalomethanes] <sup>3,5</sup> (ppb)   | 2019            | 80                                 | NA                        | 49                                | 33–90                            | No        | By-product of drinking water disinfection   |
| Turbidity <sup>6</sup> (NTU)   | 2019            | TT                                 | NA                        | 0.24                              | 0.05–0.24                        | No        | Soil runoff   |
| Turbidity (Lowest monthly percent of samples meeting limit)  | 2019            | TT = 95% of samples meet the limit | NA                        | 100                               | NA                               | No        | Soil runoff   |
| Tap water samples were collected for lead and copper analyses from sample sites throughout the community |                 |                                    |                           |                                   |                                  |           |   |
| SUBSTANCE<br>(UNIT OF MEASURE)   | YEAR<br>SAMPLED | AL                                 | PHG<br>(MCLG)             | AMOUNT<br>DETECTED<br>(90TH %ILE) | SITES ABOVE<br>AL/TOTAL<br>SITES | VIOLATION | TYPICAL SOURCE  |
| Copper (ppm)   | 2019            | 1.3                                | 0.3                       | 0.188                             | 0/30                             | No        | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives   |
| Lead (ppb)   | 2019            | 15                                 | 0.2                       | ND                                | 0/30                             | No        | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits   |



## SECONDARY SUBSTANCES

| SUBSTANCE<br>(UNIT OF MEASURE) | YEAR<br>SAMPLED | SMCL  | PHG<br>(MCLG) | AMOUNT<br>DETECTED | RANGE<br>LOW-HIGH | VIOLATION | TYPICAL SOURCE  |
|--------------------------------|-----------------|-------|---------------|--------------------|-------------------|-----------|---|
| Aluminum (ppb)                 | 2019            | 200   | NS            | 46                 | ND–140.0          | No        | Erosion of natural deposits; residual from some surface water treatment processes |
| Chloride (ppm)                 | 2019            | 500   | NS            | 11                 | 11–11             | No        | Runoff/leaching from natural deposits; seawater influence                         |
| Specific Conductance (µmho/cm) | 2019            | 1,600 | NS            | 363                | 363–363           | No        | Substances that form ions when in water; seawater influence                       |
| Sulfate (ppm)                  | 2019            | 500   | NS            | 62.9               | 62.9–62.9         | No        | Runoff/leaching from natural deposits; industrial wastes                          |

## UNREGULATED AND OTHER SUBSTANCES<sup>7</sup>

| SUBSTANCE<br>(UNIT OF MEASURE) | YEAR<br>SAMPLED | AMOUNT<br>DETECTED | RANGE<br>LOW-HIGH | TYPICAL SOURCE   |
|--------------------------------|-----------------|--------------------|-------------------|--|
| Hardness (ppm)                 | 2019            | 170                | 100–288           | Sum of polyvalent cations present in water, generally magnesium and calcium; naturally occurring |
| Sodium (ppm)                   | 2019            | 18                 | 8–20              | Naturally occurring  |

<sup>1</sup>Total organic carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection by-products such as TTHMs and HAA5s. The city's TOC reduction requirement was 25 to 35 percent, based on a running annual average calculated quarterly.

<sup>2</sup>State regulations require the fluoride levels in the treated water be maintained within a range of 0.6 to 1.2 ppm, with an optimum dose of 0.7 ppm.

<sup>3</sup>Regulatory compliance is determined based on the LRAA. Additional sample results are included in this report, along with regulatory compliance results.

<sup>4</sup>There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.

<sup>5</sup>Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may have an increased risk of getting cancer.

<sup>6</sup>Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

<sup>7</sup>Unregulated contaminant monitoring helps U.S. EPA and the State Water Resources Control Board determine where certain contaminants occur and whether the contaminants need to be regulated.



## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90 percent of our lead and copper detections.

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

**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 (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

**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. EPA.

**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.

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NS:** No standard

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**PDWS (Primary Drinking Water Standard):** 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 EPA.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

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

**µmho/cm (micromhos per centimeter):** A unit expressing the amount of electrical conductivity of a solution.