



2016 Pismo Beach Water System

Consumer Confidence Report

Pismo Beach Water Division (805)773-7054 www.pismobeach.org

Delivering Excellence

The City of Pismo Beach Water System met all Federal and State standards for drinking water during 2016.

Your 2016 Water Quality Report

The City of Pismo Beach is pleased to present this annual report describing the quality of your drinking water. Included are details about where your water comes from, what it contains, and how it compares to State standards. We sincerely hope this report gives you the information you seek and have a right to know.

WATER CONSERVATION REMINDER

AVOID WASTEFUL USE: www.ThinkH20now.com

How Much Water Do We Use?

In 2016, the residents and visitors of Pismo Beach used approximately 1646 acre feet or 536 million gallons 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 can pick up substances resulting from the presence of animals or human activity.

Where the Residents and Consumers of Pismo Beach get their water?

Surface Water

Lopez Lake – The City is entitled to receive 892 acre feet per year, approximately 291 million gallons of water.

State Water

The City is entitled to receive 1240 acre feet per year, approximately 456 million gallons of water.

Groundwater

Santa Maria Ground Water Basin – The City is entitled to extract 700 acre feet per year, approximately 228 million gallons of water.

EN ESPANOL

Este informe contiene informacion muy importante sobre la calidad del agua que usted consume. Por favor de traducirlo, o hable con alguien que lo entiende bien.



2016 Pismo Beach Water System

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Contaminants that may potentially be present in untreated source water, surface water and well water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agricultural, urban storm runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which occur naturally or from oil and gas production and mining activities.

Chlorate above the drinking water Notification Level

The County routinely monitors for the presence of chlorite and chlorate, disinfection by-products from the use of chlorine dioxide as a disinfectant in the water treatment process. Water sample results on 11/29/2016 showed chlorate levels as high as 0.86 mg/L in the water distribution system. This is above the notification level of 0.8 mg/L. Although this was not an emergency, as our customer, you have the right to know what happened and what we did to correct this situation.

What is a Notification Level?

The California State Water Resourced Control Board – Division of Drinking Water established health-based advisory levels, called “notification levels”, as needed. Notification levels are used to provide information to public water systems and others about certain non-regulated chemicals in drinking water that lack maximum contaminate levels (MCL).

Monitoring for chemicals with notification levels is not required for Lopez Project. The County of San Luis Obispo monitors for chlorate because it is a disinfection byproduct formed resulting from the use of chlorine dioxide.

What should I do?

This was not an immediate risk. If it had been, you would have been notified immediately. Chlorate is considered noncancerous, but may contribute to pituitary or thyroid gland issues. This Chemical may be given a maximum contaminant level at some time in the future once more information becomes available on the possible risk to human health.

What happened? What was done?

Staff noticed an increase in the amount of chlorine needed to maintain adequate disinfection in the treated water. Due to low water production at the plant, we believe degradation of sodium hypochlorite in our bulk storage tank resulted in a lower solution strength and increased chlorate levels in the sodium hypochlorite solution.

The County lowered the sodium hypochlorite tank level and has been taking more frequent deliveries of chlorine to keep the solution fresh.

**WATER
CONSERVATION
REMINDER**

**AVOID
WASTEFUL
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2016 Water Quality Data for Lopez Treatment Plant / State Water Project

Contaminants with a Primary Drinking Water Standard		
Table 1 - Treatment of surface water sources, combined filter Effluent Turbidity		
Turbidity Performance Standard - Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of the filtration system. Turbidity of combined filter effluent water must: 1. Lopez 0.15 & CCWA 0.3, less than or equal to in 95% of measurements in a month 2. Not exceed 1.0 NTU for more than eight consecutive hours	Treatment Technique for Lopez Project Alternative Filtration	Treatment Technique for Central Coast Water Authority (State Water) Conventional Treatment
Lowest monthly percentage of samples that met Turbidity Performance Standard 1	99.9-100%	100%
Turbidity (NTU) measurement during the year	0.028-0.252	0.03-0.11
The number of violations of any surface water treatment requirement	0	0

Table 2 - Microbiological Contaminants									
Contaminant (reporting units)	MCL	PHG(MCLG) or (MRDLG)	Delivered Water		CCWA PPWTP		Lopez WTP		Potential Source of Contamination
			Range	Average	Range	Average	Range	Average	
Total Coliform Bacteria (MPN/100mL)	>5.0% of monthly samples are positive	0	----	N/D	0-2.5%	0.40%	----	N/D	Naturally present in the environment
Heterotrophic plate count (CFU/mL)	TT = adequate disinfection < 500	----	ND-52	4	0-2	0.4	ND-25	4	Naturally present in the environment

Table 3 - Inorganic Contaminants									
Contaminant (reporting units)	MCL	PHG(MCLG) or (MRDLG)	Delivered Water		CCWA PPWTP		Lopez WTP		Potential Source of Contamination
			Range	Average	Range	Average	Range	Average	
Aluminum (ppm)	1 (b)	0.6	<0.02-0.072	0.045	ND-0.082	0.06	ND-0.03	0.024	Erosion of natural deposits; residue from some surface water treatment presses
Arsenic (ppb)	10	0.004	----	1.4	ND	ND	2.2-6.0	4.1	Erosion of natural deposits, runoff from orchards; glass and electronic production
Fluoride (ppm)	2.0	1.0	----	----	ND	ND	----	0.228	Erosion of natural deposits
Barium(ppm)	2	2	----	----	ND	ND	----	0.033	Discharge of oil drilling
Nitrate as NO3 (ppm)	45 as NO3	45 as NO3	----	0.52	0.41	0.41	----	ND	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion natural deposits

Table 4 - Radioactive Contaminants									
Contaminant (reporting units)	MCL	PHG(MCLG) or (MRDLG)	Range	Average	Range	Average	Range	Average	Potential Source of Contamination
Gross Beta Particle Activity (pCi/L)	15	0	----	----	ND	ND	1.42-1.59	1.51	Decay of natural and man-made deposits

Table 5 - Disinfectant Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors									
Contaminant (reporting units)	MCL	PHG(MCLG) or (MRDLG)	Delivered (Lopez and State Water)		CCWA PPWTP		Lopez WTP		Potential Source of Contamination
			Range	Average	Range	Average	Range	Average	
Total Trihalomethanes (ppb)	RAA = 80	----	26.8-49.3 (a,c)	49.3 (a,c)	31-60	48	20.8-36.9	36.9	By-product of drinking water chlorination
Haloacetic Acids (ppb)	RAA = 60	----	----	----	4.1-14	8.1	17.6-20.4	20.4	By-product of drinking water disinfection
Total Chlorine Residual (ppm)	MRDL = 4.0 as Cl2	4	1.81-2.92 (a,c)	2.19 (a,c)	1.9-2.7	2.3	1.76-2.92	2.32	Drinking water disinfectant added for treatment
Chlorite (ppm)	1	0.05	0.21-0.633 (a, g)	0.387 (a)	----	----	0.462-1.0	0.74	By-product of drinking water disinfection
Chlorate (ppb)	RAL = 800	----	126-851 (a)	386 (a)	----	----	600-693	652	By-product of drinking water disinfection
Chlorine Dioxide (ppb)	MRDL = 800 as ClO2	800	<100-293	2	----	----	20-340	88	Drinking water disinfectant added for treatment

Table 6 - Regulated Contaminants with Secondary MCL's									
Contaminant (reporting units)	MCL	PHG(MCLG) or (MRDLG)	Range	Average	Range	Average	Range	Average	Potential Source of Contamination
Chloride (ppm)	500	----	----	76.4	41-138	97	----	31.7	Runoff/leaching from natural deposits
Color (CU)	15	----	----	1	ND	ND	----	2	Naturally occurring organic materials
Copper	1.0	----	----	0.082	----	----	----	0.029	Erosion of natural deposits
Corrosivity (LI)	Noncorrosive	----	----	----	Noncorrosive	Noncorrosive	----	----	Balance of hydrogen, carbon and oxygen in water
Iron (ppb)	300	NA	100	----	----	----	----	----	Affected by temperature and other factors leaching from natural deposits; industrial waste
Manganese (ppb)	50	NA	20	----	ND	ND	----	----	Leaching from natural deposits
Odor - Threshold (TON)	3	----	1.0-4.5 (a)	1.7 (a)	ND	ND	1.0-3.5	2	Naturally occurring organic materials
Specific Conductance (uS/cm)	1600	----	----	779	374-757	609	----	886	Runoff/leaching from natural deposits
Sulfate (mg/L)	500	----	----	128	100	100	----	143	Runoff/leaching from natural deposits
Turbidity (NTU)	5 units	----	NA	NA	0.03-0.13	0.06	0.028-0.252	0.038	Soil Runoff
Total Dissolved Solids (ppm)	1000	----	----	510	194-442	346	----	590	Runoff/leaching from natural deposits

Table 7 - Contaminants with no MCL's									
Contaminant (reporting units)	MCL	PHG(MCLG) or (MRDLG)	Range	Average	Range	Average	Range	Average	Potential Source of Contamination
Alkalinity as CaCO3 (ppm)	NA	NA	140-230	178	42-84	66	279-339	296	Runoff/leaching from natural deposits; seawater influence
Calcium (ppm)	NA	NA	----	81	30-82	53	----	86	Runoff/leaching from natural deposits; seawater influence
Hardness as CaCO3	NA	NA	230-344	271	64-162	115	----	435	Generally found in ground and surface water
Magnesium (ppm)	NA	NA	----	33	17	17	----	53	Runoff/leaching from natural deposits; seawater influence
pH	NA	NA	8.14-8.50	8.34	8.0-8.5	8.3	8.07-8.3	8.22	Runoff/leaching from natural deposits; seawater influence
Potassium (ppm)	NA	NA	----	----	4.0	4.0	----	----	Runoff/leaching from natural deposits; seawater influence
Sodium (ppm)	NA	NA	----	73	87	87	----	40	Runoff/leaching from natural deposits; seawater influence
Total Organic Carbon (f) (TOC) (ppm)	TT	NA	----	----	1.5-3.5	2.3	----	----	Various natural and man-made sources

2016 WATER QUALITY DATA FOR PISMO BEACH

Table #1 DISTRIBUTION SYSTEM WATER SAMPLING RESULTS SHOWING DETECTION OF COLIFORM BACTERIA

Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Contaminant
Total Coliform Bacteria	0	0	More than 1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform Bacteria of E. Coli	0	0	A routine sample and a repeat sample are total Coliform positive, and one is also fecal Coliform or E. Coli	0	Human and animal fecal waste

Table #2 - 2012 HOME SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Contaminants (CCR UNITS)	No. of Samples	90th Percentile Level Detected	--No. of Sites Exceeding RAL	RAL	PHG	Typical Source of Contaminant
Lead (ppb)	20	0	0	15	0.2	Internal corrosion of household plumbing system; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	20	0.32	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Table #3 - GROUND WATER SAMPLING TEST RESULTS FOR DETECTION OF CONTAMINANTS

PRIMARY DRINKING WATER STANDARDS					
PRIMARY CONTAMINANT	MCL	MCLG PHG	WELL #5 RANGE	WELL #23 RANGE	POTENTIAL CONTAMINATION SOURCE
Arsenic (ppb)	10	0.004	4	3	Erosion of natural deposits
Chromium (total) (ppb)	50	100 ug/l	7	5	Erosion of natural deposits
Chromium, Hexavalent	10	.02ug/l	0.5	0.5	Erosion of natural deposits
Nitrate (as NO3) (ppm)	45	45	0.1	1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Fluoride (ppm)	2	1	0.10	0.2	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/l)	15	NA	5.27	3.67	Erosion of natural deposits
Uranium (pCi/l)	20	0.43	2.09	4.38	Erosion of natural deposits
Nickel (ppb)	100	12	1	1	Erosion of natural deposits; discharge from metal. Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects
PRIMARY DRINKING WATER STANDARDS					
SECONDARY CONTAMINANT	MCL		WELL #5 RANGE	WELL #23 RANGE	POTENTIAL CONTAMINATION SOURCE
Chloride (ppm)	500		120	58	Runoff; leaching from natural deposits; seawater
Iron (ppb)	300		250	30	Natural or industrial
Manganese (ppb)	50		40	10	Natural or industrial
Sulfate (as SO4) (ppm)	500		170	219	Runoff; leaching from natural from natural deposits; industrial
Total Dissolved Solids (ppm)	1000		860	720	Soil runoff; leaching from natural deposits
Zinc (ppb)	5000		60	90	Improper waste disposal
WITHOUT A DRINKING WATER STANDARDS					
CONTAMINANT	MCL		WELL #5 RANGE	WELL #23 RANGE	POTENTIAL CONTAMINATION SOURCE
Total Alkalinity as CaCO3 (ppm)	NA		370	280	Runoff; leaching from natural deposits; seawater
Calcium (ppm)	NA		128	105	Runoff; leaching from natural deposits; seawater
Sodium (ppm)	NA		56	63	Runoff; leaching from natural deposits; seawater
Magnesium (ppm)	NA		55	46	Runoff; leaching from natural deposits; seawater
ADDITIONAL ANALYSIS					
Aggressive Index	NA		12.0	11.8	NA
Specific Conductance (micromhos)	NA		1350	1150	Substances that form ions when in water; seawater influence
Total Hardness (ppm) (as CaCO3)	NA		546	451	Generally found in ground and surface water
pH (units)	NA		6.8-7.5	6.8-7.4	NA
Turbidity (NTU)*****	NA		1.38-2.97	0.17-2.39	Soil runoff; leaching from natural deposits
***** Turbidity is a measure of the cloudiness of the water. The City monitors this because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.					
DISTRIBUTION SYSTEM					
VOLATILE ORGANIC CONTAMINANTS					
	MCL	MRDL	RANGE		
Total Trihalomethanes (ppb)	80	NA	29.8-45.3		By-product of drinking water chlorination
Total Haloacetic Acids (ppb)	60	NA	8.0-28.0		By-product of drinking water chlorination
Chlorine Residual	4.0	4.0	0.2-4.0		Disinfectant

Table #4 - WELL SAMPLING RESULTS SHOWING DETECTION OF UNREGULATED CHEMICALS

UNREGULATED CHEMICALS	Avg. Level Detected	Range of Detections Low-High	MCL	RAL	Typical Source of Contaminants
Boron (ppb)	250	ND-300	NS	100	Naturally-occurring; element found in soil and water in the form of boric acid and sodium tetraborate
Vanadium (ppb)	4.5	ND-6.7	NS	50	Naturally-occurring; has been found in association with hazardous waste sites

USEPA/CDC Provides guidelines on appropriate means to the risk of infection by Cryptosporidium and other microbial contaminants, for information call - Safe Drinking Water Hotline (1-800-426-4791).
 This hotline operates from 9 a.m. to 5 p.m. EST, Monday through Friday.
 For more information contact:
 • The Office of Ground Water and Drinking at EPA
 • www.water.epa.gov/drink/index.cfm
 • American Water Works Association [http://www/awwa.org](http://www.awwa.org)
 • County Board of Supervisors <http://slocounty.ca.gov/bos.html>

You can provide input regarding water quality decisions in your area.

- A vulnerability assessment of well #5 and #23 has been completed.
- The drinking water source assessment and protection program was completed in September 2002, both are on file at the Water Division.
- The public can address concerns to the Public Works Water Division. Contact Brandon Shea at (805) 773-7054
- The City Council meets the first and third Tuesday of each month at City Hall.
- Este informe contiene informacion muy importante sobre la calidad del agua que usted consume. Por favor de traducirlo, o hable con alguien que lo entiende bien.

State and Lopez Water Footnotes:

- (a) Distribution system samples. (b) Combined Filter Effluent turbidity monitoring is used as an indicator of filtration performance.
- (c) Compliance based on the running annual average of samples computed quarterly. (d) TOCs are taken at the treatment plant's combined filter effluent.
- (e) The MRDL for chlorine is based on a running annual average of distribution system samples. (f) Increases in odor have been associated with algae blooms. During times of increased algae blooms an odor in the algae is controlled with algaecides and the odor is reduced to acceptable levels by treating water with powder activated carbon.

Maximum Contaminant Level (MCL)	The highest level of contaminant that is allowed in drinking water
Regulatory Action Level (RAL)	The concentration of a contaminat that, if exceeded, triggers treatment or other requirements that a water system must follow
Maximum Contaminant Level Goal (MCLG and Public Health Goal (PHG))	The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the United States Environmental Protection Agency and PHGs are set by the California Environmental Protection Agency
Maximum Residual Disinfectant Level (MRDL)	The level of a disinfectant added for water treatment that may not be exceeded at the consumer's faucet
Maximum Residual Disinfectant Level Goal (MRDLG)	The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency
Primary Drinking Water Standards (PDWS)	MCLs 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
Primary Drinking Water Standards (SDWS)	MCLs for contaminants to protect the taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect health at the MCL levels
Treatment Technique (TT)	A required process intended to reduce the level of a contaminant in drinking water
Regulatory Notification Level (NL)	The concentration of a contaminant that, if exceeded, triggers treatment of other requirement which a water system must follow
Running Annual Average (RAA)	An arithmetic average of all sample is computed quarterly. The quarterly average is then averaged against the previous three quarters worth of data to provide an annual running average. The highest running average over a twelve month period used for compliance
Not Collected (NC)	A sample was not collected for this contaminant
Not Reported (NR)	Contaminant was not reported
Not Standard (NS)	Contaminant for which there is no established MCL
Not Detected (ND)	Contaminant is not detectable at testing limit
Not Analyzed (NA)	Contaminant was not analyzed
WAIVED	On September 4, 2007, the CDPH granted the TOC waiver to the Lopez WTP. The facility upgraded to Membrane Treatment
pCi/L	PICOCURIES PER LITER (A MEASURE OF RADIOACTIVITY)
ppm	PARTS PER MILLION, OR MILLIGRAMS PER LITER (MG/L)
ppb	PARTS PER BILLION, OR MICROGRAMS PER LITER (G/L)
uS/cm	MICROMHOS PER CENTIMETER (UNIT OF SPECIFIC CONDUCTANCE OF WATER)
CU	COLOR UNITS
NS	NO STANDARD
CFU/ml	COLONY FORMING UNITS PER MILLILITER
NTU	NEPHELOMETRIC TURBIDITY UNIT
TON	THRESHOLD ODOR NUMBER
USEPA	UNITED STATES ENVIORNMENTAL PROTECTION AGENCY
CDC	CENTER FOR DISEASE CONTROL HOTLINE (1-800-426-4791)
LI	LANGELIER INDEX; NONCORROSIVE = ANY POSITIVE VALUE, CORROSIVE = ANY NEGATIVE VALUE
LopezWTP	LOPEZ WATER TREATMENT PLANT
CCWA	CENTRAL COAST WATER AUTHORITY
PPWTP	POLANIO PASS WATER TREATMENT PLANT
TOC	TOTAL ORGANIC CARBON

In order to ensure that tap water is safe to drink, EPA, and the California Department of Public Health, prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must 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 does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's State Drinking Water Hotline (1-800-416-4791). Some people may be more vulnerable to contaminants in drinking water then the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplant, people with HIV/AIDS or other immune system deficiencies, some elderly, and infants can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Pismo beach 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 drinking water testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/lead>.