

2014 Water Quality – OCEANO COMMUNITY SERVICES DISTRICT

To Our Customers:

The Oceano Community Services District (OCSD) is pleased to present this annual report describing the quality of your drinking water. This report will answer questions and describe the quality of the drinking water in Oceano.

What is the source of my drinking water?

Oceano receives its drinking water from three water production wells, all located within the District boundaries. In addition, the District purchases treated surface water from the Lopez Project and the State Water Project. Both of the surface water sources are blended together and delivered through a single pipeline to the District's water pumping plant at 19th Street near Wilmar Avenue. The blended surface water entering the District's water system was an average of approximately 16% Lopez Water and 84% State Water in 2014.

Where is Oceano's drinking water tested?

Water samples are collected weekly by OCSD operators. The water samples are collected and analyzed by Clinical Laboratory of San Bernardino, Inc., in San Bernardino and Lompoc. The lab is certified by the DHS to conduct bacteriological and chemical analyses. Federal and State requirements dictate that all regulatory analyses follow approved procedures and be performed by certified labs.

2014 Water Statistics

- State and Lopez Water Purchased
 - ⇒ 178.5 Million Gallons (547.72 Acre-Feet)
- Water Pumped from District Wells
 - ⇒ 84.4 Million Gallons (259.1 Acre-Feet)
- Total Oceano Water Production
 - ⇒ 262.9 Million Gallons (806.82 Acre-Feet)

Who operates the Oceano water system?

The Oceano Water Department employs three full-time utility system operators. All operators who work for the District are required to pass written tests and be certified by the California Department of Health Services (DHS). Utility systems operators employed by OCSD are knowledgeable professionals dedicated to supplying you with dependable, high-quality drinking water.

Where can the community participate in decisions regarding water quality issues?

The Oceano Community Services District Board of Directors meets at the District Board Room on the second and fourth Wednesdays of each month. Meeting dates are published in the local newspapers, and the meeting agendas are posted in the District office at 1655 Front Street as well as our website at www.oceanocsd.org.

Additional General Information on Drinking Water

All 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. Immune-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, 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 reduce the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Additionally, the Office of Ground Water and Drinking Water at EPA maintains a website with useful information on drinking water.

The address is <http://www.epa.gov/OGWDW/>. Additional information can be obtained by calling Tony Marraccino, Utility System Operator, Supervisor for the Oceano CSD or come by the District Office at 1655 Front Street, Oceano. A source water assessment was conducted for OCSD's four active wells in March, 2001. No contaminants were detected in the water supply, however the source is considered most vulnerable to the following activities: sewer collection systems, utility station maintenance areas, and automobile and historic gas stations. A completed copy of the Assessment may be viewed at the District office, 1655 Front Street, Oceano. Additional information also may be viewed at DHS-DWFOB, 1180 Eugenia Place, Suite 200, Carpinteria, CA 93013

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Maximum Contaminant Level Goal (MCLG) and Public Health Goal (PHG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the Federal Environmental Protection Agency and PHGs are set by the California 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.

Primary Drinking Water Standards (PDWS) – MCLs 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 the drinking water. Contaminants with a SDWS do not affect the health at the MCL levels.

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

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

Micro ohms: Measure of electrical conductance in water.

NC: Not collected.

NS (No Standard): Contaminant for which there is no established MCL.

ND (Not Detected): Contaminant is not detectable at testing limit.

pCi/L: picoCuries per liter (a measure of radiation)

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

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

NTU: Nephelometric Turbidity Unit

TON: Threshold Odor Number

LI: Langelier Index; Noncorrosive = Any positive value

Corrosive = Any negative value

NA: (Not Analyzed) Contaminant was not analyzed

TERMS USED IN THIS REPORT:

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, 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 water 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 agriculture, urban storm water runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- *Radioactive contaminants* which 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 USEPA and the California Department of Health Services prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water which must provide the same protection for public health.

Tables 1 through 6 list all of the drinking water contaminants that were detected from January 2014 through December 2014, unless otherwise noted. The presence of these contaminants in water does not necessarily indicate that the water poses a health risk. The Department requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, may be more than one year old.

1. Turbidity Performance Standard - Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the surface water filtration system. Turbidity of filtered water must: Be less than or equal to < 0.3 NTU in 95% of measurements in a month and < 1 NTU every 4 hours.	Treatment Technique for Conventional Treatment Central Cost Water Authority	Treatment Technique for State Water Conventional Treatment Lopez WTP
Lowest monthly percentage of samples that met Turbidity Performance Standard 1.	100%	100%
Highest single turbidity measurement during the year.	0.11 NTU	0.54 NTU
The number of violations of any surface water treatment requirement.	0	0

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

Lead & Copper (to be completed only if there was a detection of lead or copper in the last sample set)	No. of Samples collected	90th Percentile Level detected	No. Sites Exceeding AL	AL	MCLG	Typical Source of Contaminant
Lead (ppm)	22	.0054	1	30	NA	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)	22	.620	N/A	0	NA	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

Contaminant (reporting units)	Surface Water		Well Water		Potential Source of Contamination
	Range	Average	Range	Average	
Alkalinity as CaCO ₃ (ppm)	60-273	175	170-380	282	Runoff/leaching from natural deposits; seawater influence
Calcium (ppm)	50-86	72	56-110	86.6	Runoff/leaching from natural deposits; seawater influence
Hardness (ppm)	116-369	254	260-500	408	Generally found in ground and surface water
Magnesium (ppm)	24-43	34	30-53	46.4	Runoff/leaching from natural deposits; seawater influence
pH	7.3 - 10	8.2	7.3-8.4	7.64	Runoff/leaching from natural deposits; seawater influence
Potassium (ppm)		4.8			Runoff/leaching from natural deposits; seawater influence
Sodium (ppm)	31-130	31	36-49	43.8	Runoff/leaching from natural deposits; seawater influence
Vanadium (ppb)		40	7.1-9.1	8.1	Runoff/leaching from natural deposits; seawater influence

Table 4 – Detection of Contaminants with a Secondary Drinking Water Standard		Surface Water		Well Water		
Contaminant (reporting units)	MCL	Range	Average	Range	Average	Potential Source of Contamination
Aluminum (ppb)	200	<20 - 73	73	ND	ND	Naturally present in the environment and residue from water treatment processes
Chloride (ppm)	500	27.1 – 52.4	52.4	40-48	34.6	Runoff/leaching from natural deposits; seawater influence
Color (CU)	15		2	0-14	7.3	Naturally-occurring organic materials
Copper (ppm)	1.0	.060 - .082	0.071	ND	ND	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Odor – Threshold	3	ND – 5.5	1	2	2	Naturally-occurring organic materials
Specific Conductance (micro ohms)	1600	606-969	775	640-1100	988	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	500	119-120	119	84-210	158.8	Runoff/leaching from natural deposits; industrial wastes
Turbidity (NTU)	5	0.04-0.11	.07	0.35-4.63	2.02	Soil runoff/Presence of colloidal and/or suspended matter
Total Dissolved Solids (ppm)	1000	490-500	495	390-730	646	Runoff/leaching from natural deposits

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Table 2 - Microbiological Contaminants			Surface Water		Well Water		
Contaminant (reporting units)	MCL	PHG(MCLG)	Range	Average	Range	Average	Potential Source of Contamination
Total Coliform Bacteria	MCL (systems collecting less than 40 samples per month): More than 1 sample in a month with a detection; (systems collecting more than 40 samples per month): More than 5% of monthly samples are positive.	(0)	ND	ND	ND	ND	Naturally present in the environment
Heterotropic Plate Count (CFU/mL)	TT = adequate disinfection, <500	-----	1 - 20	2.2	<1 - 2100	24	Naturally present in the environment.

Table 3 – Detection of Contaminants with a Primary Drinking Water Standard			Surface Water		Well Water		
Contaminant (reporting units)	MCL	PHG (MCLG)	Range	Average	Range	Average	Potential Source of Contamination
Aluminum (ppm)	1000	600	ND – 0.69	0.35	ND	ND	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppm)	10	.004	ND – 4.3	2.1	ND – 2.5	1.25	Runoff from orchards; natural deposits; glass & electronics production wastes
Barium (ppm)	2	2	0.027-0.028	.027			Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	2.0	1.0	ND – 0.38	0.19	0.15-0.33	0.24	Erosion of natural deposits
Gross Beta particle activity (pCi/L)	50	(0)		4.1			Decay of natural and man made products

Gross Alpha Particle Activity (pCi/L)	15	(0)	0.028-3.15	1.25	ND	ND	Erosion of natural deposits
Total Trihalomethanes (ppb) (Dist. Sample; compliance based on running annual average)	RAA 80	-----	46 - 64	59	26.3-42.7	34.58	By-product of drinking water chlorination
Haloacetic Acids (ppb) (Dist. Sample; compliance based on running annual average)	60	0	8.2 - 18	12	11.8-27.3	18.89	By-product of drinking water chlorination
Chlorine (ppm)	MRDL = 4.0 as Cl ₂	MRDL = 4.0 as Cl ₂	1.52-3.02	2.14			Drinking water disinfectant added for treatment.
Chlorite (ppm)	1.0 (delivered and distribution avg.)	0.05	0.042-0.677	0.460			Byproduct of drinking water disinfection.
Chlorate (ppb)	RAL = 800	-----	95-485	405			Byproduct of drinking water disinfection.
Chlorine Dioxide (ppb)	MRDL = 800 as ClO ₂	[800]	<100-410	263			Drinking water disinfectant added for treatment.
Nitrate as NO ³ (ppm)	45	45	ND-.53	0.27	ND-23	7.5	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage.; erosion of natural deposits
Selenium (ppb)	50	(50)	1.04	ND - 12	ND - 24	2.7	Discharge from petroleum, glass and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)

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Table 3 – Detection of Contaminants with a Primary Drinking Water Standard as VOC	MCL	Well 4, 5, and 6 Range	Average	Potential Source of Contamination
Dichloromethane	5.0 ug/L	0.56-0.80	0.67	Discharge from pharmaceutical and chemical factories

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* Any violation of an MCL or AL is asterisked. Additional information is provided below.

Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age.

High nitrate levels in drinking water can interfere with the capacity of an infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of skin. High nitrate levels may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider or choose to use bottled water for mixing formula and juice for your baby. If you are pregnant, you should drink bottled water.

Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure. 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. Oceano CSD 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 or at <http://www.epa.gov/safewater/lead>.

While your drinking water meets the current standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The California Department of Health Services continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and other circulatory problems.

Selenium in drinking water in excess of the MCL can cause hair or fingernail loss, numbness in fingers or toes, and/or circulation system problems. Two of Oceano's water-production wells have produced water that is above the MCL in selenium during the past year. Our operators are taking several steps to assure that the selenium content in the distribution system does not exceed the MCL. The two wells are used on a very limited basis. In addition, any well water that is above the limit in selenium is blended with other water that is low in selenium. The blended water is closely monitored and analyzed on a weekly basis. **All water that is supplied to the consumers of Oceano Community Services District is below the MCL for selenium.**

Monitoring Requirement Not Met for Chlorite

Based on the 2014 Consumer Confidence Report prepared by the County Of San Luis Obispo for the Lopez Water Treatment Plant, On December 12, 2014, a daily chlorite residual grab sample was not collected and analyzed for water entering the Lopez distribution system. This daily monitoring is required by the State Water Resources Control Board to comply with federal regulations. Although the treatment facility has online chlorite monitoring equipment that continuously monitors this residual, these analyzers are not yet approved by the EPA or the State for compliance reporting.

Chlorite is a disinfection byproduct formed when water is treated with the disinfectant chlorine dioxide. At no time did the plant's equipment indicate any disinfectant feed problems or chlorite residuals in excess of the maximum contaminant level (MCL) of 1.0 mg/L. Additional chlorite samples were collected from the distribution system the following day for confirmation of acceptable residual levels; all samples were below the MCL for chlorite.

This is not an emergency. If it had been, you would have been notified immediately. You do not need to boil your water or take other actions. If you have any questions regarding the above information, please contact the Lopez Water Treatment Plant at (805) 473-7152.

Monitoring Requirement Not Met for Turbidity

Based on the 2014 Consumer Confidence Report prepared by the County Of San Luis Obispo for the Lopez Water Treatment Plant. The Lopez Water Treatment Plant did not meet a monitoring treatment technique for turbidity on February 23 and February 28, 2015. Although this is not an emergency, as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation.

The County routinely monitors your water for turbidity (cloudiness). Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. The Lopez Water Treatment Plant filters your water through membrane fibers capable of filtering out microorganisms and particulate matter larger than 0.1 micron in size. Each day, a membrane integrity test (MIT) is performed on each of the five racks containing thousands of membrane fibers. The membrane integrity test (MIT) is a direct method of monitoring the integrity of each membrane fiber by pressurizing the system to check for leaks.

Each of the membrane racks containing these fibers are equipped with continuous online turbidity monitoring equipment to provide an "indirect" integrity test of each rack. If turbidity monitoring indicates there are two sequential 15 minute turbidity readings exceeding an alarm set point of 0.15 NTU, per our permit, the County is required to shut down the membrane rack and initiate a MIT on the rack.

In February, there were two times one of the racks exceeded the 0.15 NTU set point for two consecutive 15 minute turbidity reads. County staff did not shut down the rack and perform the required MIT. The daily compliance MITs were performed and indicated no failure with the membrane fibers on this individual rack that day or the following day.

To correct this problem, County staff has been notified of the monitoring failure and the requirements specific to membrane filtration. Additional programming changes will be implemented to automatically shut down the rack and notify operators to perform an MIT.

This is not an emergency. If it had been, you would have been notified immediately. You do not need to boil your water or take other actions.