



City of Oceanside Water Quality Report | 2010



We are pleased to report that **your drinking water meets or exceeds** all state and federal health standards for **water quality**.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Llame (760) 435-5948 para más información.

Dear Oceanside Water Customer,

I am happy to report that water delivered to City of Oceanside homes and businesses met all 2010 state and federal water quality standards for drinking water. Throughout the year, your water is routinely tested for about 90 different substances to ensure that it is of the highest quality. This report provides detailed water quality test results and explains where Oceanside's drinking water comes from.

Water is a precious resource and the city has done an outstanding job saving water this year. Although the state's official drought ended this spring, I encourage you to continue using water wisely because it's the right thing to do in our semi-arid climate.

The city is committed to providing safe drinking water to Oceanside. If you would like to view the report on the city's website, visit www.ci.oceanside.ca.us. For more information about your water, please call Mark Hammond at 760-435-5948.

Sincerely,

Mayor Jim Wood

Health Information

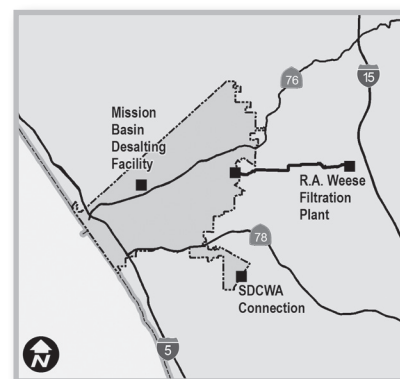
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants 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 lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline 800-426-4791.

Water Sources

The City of Oceanside (City) has three sources of drinking water. The primary source is imported water that is purchased untreated from the San Diego County Water Authority (SDCWA). This raw water is then treated at Oceanside's Robert A. Weese (RAWeese) water filtration plant. This facility filters and disinfects surface water from lakes and rivers, supplying about 64% of the drinking water used by the people of Oceanside. The second source is Oceanside's Mission Basin Desalting Facility (MBDF). This facility treats brackish groundwater from wells located in the San Luis Rey River valley. The groundwater is purified by reverse osmosis and then disinfected. The Desalting facility supplies about 15% of the drinking water used in Oceanside.

The third source is treated drinking water purchased directly from SDCWA. About 19% of the treated water used by the City is purchased from SDCWA.

Approximately 85% of the water we use in Oceanside is imported from hundreds of miles away. This is "surface water" from rivers and streams in Northern California and the Colorado River Basin. The Metropolitan Water District (MWD) imports this water to Southern California via a 242-mile-long aqueduct that carries Colorado River water from Lake Havasu, and a 444-mile-long aqueduct bringing water from the Sacramento-San Joaquin Delta. Both aqueducts terminate in Lake Skinner in Riverside County, where these waters are combined. The SDCWA purchases this imported water from MWD and distributes it to water agencies throughout San Diego County, including the City.



Source Water Assessment

In December 2002, MWD completed its source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to contamination from recreation, urban/storm water runoff, increasing urbanization in the watershed and wastewater. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A summary of the assessment can be obtained by contacting MWD by phone at 213-217-6850.

Ground Water Assessment

An assessment of the current groundwater sources for the City was completed in February 2002. The sources considered most vulnerable to contamination are from sewer collections and/or agricultural/irrigation wells. A copy of the complete assessment is available at the City of Oceanside Water Utilities Department office at 300 North Coast Highway in Oceanside or at the California Department of Public Health (CDPH) office at 1350 Front Street, Room 2050 in San Diego. You may request a summary of the assessment by contacting Mark Hammond at 760-435-5948 or CDPH at 619-525-4159.

Fluoride

Oceanside does not add fluoride to the water treated at the City's two treatment plants. Fluoride is naturally occurring and is typically found in water at 0.2 ppm. As of December 3, 2007, the treated water supplied by MWD to SDCWA and the City contains added fluoride. Depending on the season, this could be up to 50% of the total water supply for the City. This results in fluoride levels between 0.1 and 0.8 mg/L from blending of the three treated water sources in our system of reservoirs. Each month, 31 locations throughout the City are tested; the average fluoride level was 0.4 ppm. The area of the City south of Oceanside Blvd. receives fluoridated water from SDCWA and has fluoride levels between 0.5 and 0.8 ppm while the rest of the City is between 0.1 and 0.6 ppm.

Lead

The drinking water is tested for lead every three years and was last tested in 2009. Samples were collected inside 54 private homes and at the entry points to the water distribution system. There was no lead detected in the water entering the distribution system but some of the homes had very small amounts of lead detected. None of homes exceeded the Action Level (15 ppb) for lead. 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. Oceanside is responsible for providing high quality drinking water, but cannot control the variety of materials used in home 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 www.epa.gov/safewater/lead.

Contaminants in Drinking Water

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. In order to ensure that tap water is safe to drink, the USEPA and the CA Department of Public Health (CDPH) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline **800-426-4791** or at www.epa.gov/safewater.

Contaminants in Source Water

The sources of tap water and bottled water include rivers, lakes, streams, springs and wells. Water, as it travels over the surface or through the ground, can pick up or dissolve natural minerals or substances from human or animal activities. Contaminants that may be found in source water include the following:

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, 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 that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Terms & Abbreviations

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

CFU/mL - Colony Forming Unit per milliliter A measure of bacterial numbers.

DLR - Detection Limit for purposes of Reporting The lowest level that can be reliably detected and quantified.

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 are set to control the odor, taste, and appearance.

MCLG - Maximum Contaminant Level Goal The level of a contaminant in drinking water below which there is no known or expected risk to health.

MRDL - Maximum Residual Disinfectant Level The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

MRDLG - Maximum Residual Disinfectant Level Goal The level of a disinfectant added for water treatment below which there is no known or expected risk to health.

NA - Not Applicable or not specified

ND - Not Detected

NTU - Nephelometric Turbidity Units A measure of clarity.

pCi/L - picocuries per liter (a measure of radiation)

Primary Drinking Water Standard Primary standards protect public health by limiting the levels of contaminants in drinking water. Levels are limited by MCLs, MRDLs or Treatment Techniques.

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

ppm - parts per million or milligrams per liter

ppt - parts per trillion or nanograms per liter

RAA - Running Annual Average The monthly average of all samples computed each quarter and averaged for four consecutive quarters.

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

The following data tables list all the substances that were detected in the drinking water during 2010 or the most recent sampling prior to 2010. The presence of these substances does not necessarily constitute a health risk. The tables contain the name of each substance, the unit of measurement, the highest level allowed, the ideal goals, the detection level, the amount detected and the usual source of the substance. Some substances are not tested each year because the concentrations do not vary significantly from year to year. For these substances, the tables include from the most recent testing done within the past five years.

2010 Report of Detected Compounds

| | Unit | MCL [MRDL] | PHG (MCLG) [MRDLG] | State DLR | Range Average | Source Waters | | | Sources in Drinking Water |
|---|-------|---------------|--------------------------|--------------|---|---------------------------------|---------------------------|-------------------------|--|
| | | | | | | RAWeese surface water | SDCWA surface water | MBDF ground water | |
| PRIMARY STANDARDS -- Mandatory Health-related Standards | | | | | | | | | |
| Turbidity (a) | NTU | TT | NA | NA | Highest | 0.20 | 0.05 | 0.27 | Soil runoff |
| | | | | | %<0.3 | 100% | 100% | 100% | |
| INORGANIC | | | | | | | | | |
| Aluminum (b) | ppb | 1000 | 600 | 50 | Range | 72 - 244 | ND | ND | Residue from water treatment process; Erosion of natural deposits |
| | | | | | Average | 182 | ND | ND | |
| Barium | ppb | 1000 | 2000 | 100 | Range | 90 - 101 | ND - 120 | ND | Oil and metal refineries discharge natural deposits erosion |
| | | | | | Average | 96 | 110 | ND | |
| Fluoride Natural | ppm | 2 | 1 | 0.1 | Range | 0.24 - 0.33 | Fluoride | 0.1- 0.2 | Erosion of natural deposits. |
| | | | | | Average | 0.3 | Added | 0.2 | |
| Fluoride (c) Added | ppm | 2 | 1 | 0.1 | Optimal Control Range | | 0.7 - 1.3 | | Water additive for dental health |
| | | | | | Range | Not Added | 0.6 - 1.0 | Not Added | |
| | | | | | Range | Distribution System - 0.1 - 0.8 | | | |
| Nitrate | ppm | 45 | 45 | 2 | Range | ND | ND | 4.8 - 6.9 | Runoff & leaching from fertilizer use; sewage; erosion of natural deposits |
| | | | | | Average | ND | ND | 5.7 | |
| Copper (d) | ppm | 1.3 (AL) | 0.3 | 0.05 | Range for 54 homes sampled = ND - 0.43 90th Percentile for 54 homes sampled = 0.14 | | | | Internal corrosion of household plumbing; erosion of natural deposits |
| Lead (d) | ppb | 15 (AL) | 0.2 | 5 | Range for 54 homes sampled = ND - 8 90th Percentile for 54 homes sampled = 2 | | | | Internal corrosion of household plumbing; erosion of natural deposits |
| MICROBIOLOGICAL | | | | | | | | | |
| Total Coliform Bacteria (e) | % | 5.0 | (0) | NA | Range | Distribution System - ND - 0.7 | | | Natural Bacteria found in the environment |
| | | | | | Average | Distribution System - 0.2 | | | |
| RADIOACTIVE (f) | | | | | | | | | |
| Gross Alpha | pCi/L | 15 | (0) | 3 | Range | ND | 3.3 - 4.3 | ND - 4.2 | Erosion of natural deposits |
| | | | | | Average | ND | 3.6 | 3.3 | |
| Gross Beta | pCi/L | 50 | (0) | 4 | Range | ND | ND - 8.8 | ND | Decay of natural and man-made products. |
| | | | | | Average | ND | ND | ND | |
| Radium 228 | pCi/L | NS | 0.019 | 1 | Range | ND - 1.1 | ND | ND | Erosion of natural deposits |
| | | | | | Average | ND | ND | ND | |
| Uranium | pCi/L | 20 | 0.43 | 1 | Range | 1.8 - 2.9 | 2.3 - 2.7 | 4.0 - 4.8 | Erosion of natural deposits |
| | | | | | Average | 2.1 | 2.5 | 4.4 | |
| Disinfection by Products (DBP) | | | | | | | | | |
| Haloacetic acids (g) | ppb | 60 (RAA) | NA | 1 | Distribution System-wide Range = 5 - 30 Distribution System highest RAA = 12 | | | | By-product of drinking water chlorination |
| Total Chlorine | ppm | [4.0] (RAA) | [4.0] | NA | Distribution System-wide Range = 0.2 - 4.4 (h) Distribution System highest RAA = 2.5 | | | | By-product of drinking water chlorination |
| Total Trihalo-methanes (g) | ppb | 80 (RAA) | NA | 1 | Distribution System-wide Range = 12 - 56 Distribution System highest RAA = 37 | | | | By-product of drinking water chlorination |
| UNREGULATED CONTAMINANTS (UCMR2) (i) | | | | | | | | | |
| N-Nitrosodiethylamine (NDEA) | ppb | NA | NA | 0.005 | Range | 0.006 | ND | ND | By-product of drinking water chlorination, industrial waste |
| | | | | | Average | 0.006 | ND | ND | |
| N-Nitrosodimethylamine (NDMA) | ppb | NA | NA | 0.002 | Range | ND | ND - 0.002 | ND | By-product of drinking water chlorination, industrial waste |
| | | | | | Average | ND | 0.001 | ND | |
| N-Nitrosodimethylamine (NDMA) | ppb | NA | NA | 0.002 | Distribution System station with maximum residence time = 0.003 | | | | By-product of drinking water chlorination, industrial waste |

| | Unit | MCL [MRDL] | PHG (MCLG) [MRDLG] | State DLR | Range Average | RAWeese surface water | SDCWA surface water | MBDF ground water | Sources in Drinking Water |
|--|------------|------------------|--------------------------|--------------|---|-----------------------------|---------------------------|-------------------------|---|
| SECONDARY STANDARDS -- Aesthetic Standards | | | | | | | | | |
| Chloride | ppm | 500 | NA | NA | Range | 78 - 93 | 89 - 98 | 133 - 165 | Runoff/leaching from natural deposits; seawater influence |
| | | | | | Average | 85 | 96 | 148 | |
| Color | Units | 15 | NA | NA | Range | ND | 1 | ND | Naturally occurring organic materials |
| | | | | | Average | ND | 1 | ND | |
| Corrosivity (j) | SI | Non Corrosive | NA | NA | Range | -0.19 to 0.45 | 0.20 to 0.51 | 0.31 to 0.69 | Natural or industrial factors that influence chemical balance. |
| | | | | | Average | 0.11 | 0.21 | 0.49 | |
| Total Hardness | ppm | NA | NA | NA | Range | 197 - 305 | 190 - 300 | 225 - 306 | Leaching from natural deposits |
| | | | | | Average | 254 | 260 | 281 | |
| Total Hardness | grains/gal | NA | NA | NA | Range | 12 - 18 | 11 - 18 | 13 - 18 | Leaching from natural deposits |
| | | | | | Average | 15 | 15 | 16 | |
| Odor | TON | 3 | NA | 1 | Range | ND | 19 - 35 | ND | Naturally occurring organic materials |
| | | | | | Average | ND | 25 | ND | |
| Sulfate | ppm | 500 | NA | 0.5 | Range | 159 - 237 | 160 - 240 | 144 - 168 | Runoff/leaching from natural deposits; industrial wastes |
| | | | | | Average | 199 | 210 | 157 | |
| Total Dis- solved Solids | ppm | 1000 | NA | NA | Range | 514 - 536 | 480 - 610 | 516 - 706 | Runoff/leaching from natural deposits; seawater influence |
| | | | | | Average | 521 | 560 | 612 | |
| Turbidity | NTU | 5 | NA | NA | Distribution System-wide Range = 0.05 - 0.7 | | | | Soil runoff |
| | | | | | Distribution system average = 0.1 | | | | |
| ADDITIONAL PARAMETERS | | | | | | | | | |
| Alkalinity as CaCO ₃ | ppm | NA | NA | NA | Range | 92 - 126 | 91 - 130 | 88 - 118 | Leaching from natural deposits |
| | | | | | Average | 110 | 110 | 111 | |
| Ammonia as Nitrogen | ppm | NA | NA | NA | Distribution System-wide range = 0.1 - 1.1 | | | | By-product of drinking water chloramination |
| | | | | | Distribution System-wide average = 0.6 | | | | |
| Boron | ppb | 1000(NL) | NA | 100 | Range | 108 - 144 | 120 - 130 | 152 - 179 | Leaching from natural deposits |
| | | | | | Average | 129 | 120 | 163 | |
| Calcium | ppm | NS | NA | NA | Range | 46 - 76 | 52 - 70 | 48 - 65 | Leaching from natural deposits |
| | | | | | Average | 62 | 64 | 60 | |
| Heterotrophic PlateCount | CFU/mL | TT | NA | NA | Distribution System-wide range = ND - 160 | | | | Bacteria naturally present in the environment. |
| | | | | | Distribution System-wide average = 2 | | | | |
| Magnesium | ppm | NA | NA | NA | Range | 20 - 28 | 21 - 28 | 26 - 35 | Leaching from natural deposits |
| | | | | | Average | 24 | 25 | 32 | |
| pH | pH units | NA | NA | NA | Range | 7.7 - 8.3 | 7.7 - 8.3 | 8.1 - 8.6 | Measure of the acidic or basic character of water. |
| | | | | | Average | 8.0 | 7.9 | 8.3 | |
| Potassium | ppm | NA | NA | NA | Range | 3.6 - 4.8 | 3.9 - 4.8 | 2.6 - 4.1 | Runoff/leaching from natural deposits; seawater influence |
| | | | | | Average | 4.2 | 4.7 | 3.3 | |
| Sodium | ppm | NA | NA | NA | Range | 77 - 99 | 80 - 100 | 98 - 113 | Runoff/leaching from natural deposits; seawater influence |
| | | | | | Average | 86 | 91 | 105 | |

- Turbidity is a measure of the cloudiness of the water. Turbidity is monitored because it indicates the effectiveness of the filtration system. Filtration is considered a Treatment Technique (TT). Treatment plant samples are tested every three hours and the turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month. Turbidity shall not exceed 1.0 NTU at any time. Turbidity is also tested at 30 locations each month within the distribution system and reported under Secondary Standards
- Aluminum also has a secondary MCL of 200 ppb or 0.2 ppm.
- MWD started fluoridation treatment in 2007. Some MWD water is used to supplement Oceanside's treated water. Oceanside does not currently fluoridate during treatment.
- Lead and copper are tested every three years at consumer's taps. Tested in 2009. If the Action level is exceeded in 10% of the samples (90th percentile) then the water supplier must modify the treatment process to prevent the leaching of these metals into the water from the plumbing. None of the samples exceeded the Action Levels.
- No more than 5.0% of all monthly samples taken in the distribution system may be Total Coliform positive. In 2010 there were 1623 samples taken throughout the City and three were positive. The MCL was not violated. No samples were positive for *E.coli* bacteria.
- Analyzed every six years. RAWeese and MBDF sampled in 2006 – 2007 and MWD (SDCWA) sampled in 2008.
- Compliance is based on a running annual average (RAA) of 12 distribution system samples taken every quarter.
- More than 1600 samples were tested for total chlorine in 2010. One sample was greater than four. The running annual average Maximum Residual Disinfectant Limit (MRDL) was not exceeded.
- UCMR2 = Unregulated Contaminants Monitoring Rule 2. The EPA requires monitoring in order to determine if there is a need to regulate these compounds. Testing was done in 2009–2010.
- Saturation Index (SI) is a calculation based on pH, temperature and dissolved minerals to determine scale forming or scale dissolving tendencies. SI below -0.5 tends to exhibit noticeably increased dissolving abilities while water with an SI above +0.5 tends to exhibit noticeably increased scale forming properties.