

Marina Coast Water District



2016 Consumer Confidence Report

Marina Coast Water District is proud to present the 2016 Consumer Confidence Report. This annual water quality report includes information about where your water comes from, what it contains and how it compares to drinking water standards. As in the past, the District gives you the assurance that your drinking water meets stringent California and Federal drinking water standards.

If you have any questions regarding the information in this report or about your water, please contact our Laboratory Supervisor, Thomas Barkhurst at 384-6131. You can also visit our website at www.mcwd.org

Water Supply and Treatment

The District provides groundwater produced from eight wells delivered through a distribution system network of seven storage tanks and nearly 250 miles of pipeline.

Three deep supply wells (10, 11, and 12) located in Central Marina draw groundwater from the 900-foot aquifer of the Salinas Valley Groundwater Basin. The groundwater is treated at each well site for disinfection and to remove naturally-occurring hydrogen sulfide that can cause odor.

Five supply wells (29, 30, 31, 34 and Watkins Gate) located in the Ord Community draw groundwater from the Salinas Valley Groundwater Basin 900-foot, 400-foot and lower 180-foot aquifers. Groundwater from these supply wells is disinfected in the Ord Community chlorination treatment plant.

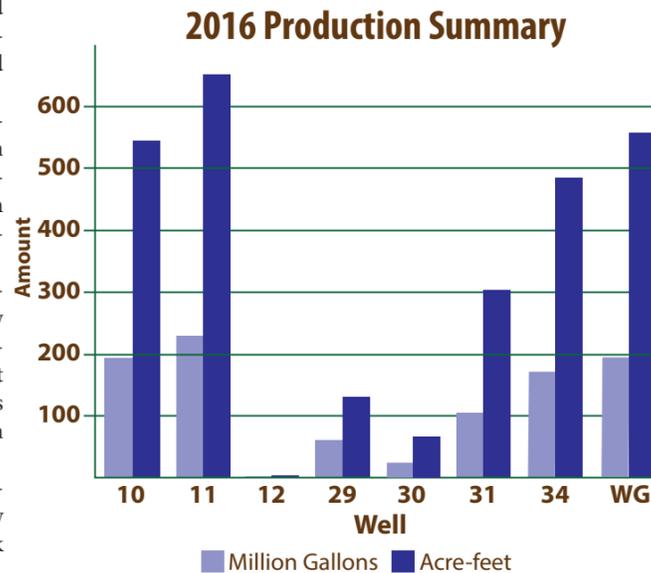
In 2005, the Central Marina and Ord Community water systems were connected to allow water to flow between the systems to meet peak demands and improve overall service.

Source Water Assessment

Several source water assessments have been completed. The source water assessment considers several factors: The presence of a possible contaminating activity (PCA) such as current or historic human activities that are potential origins of contamination for a drinking water source, its proximity to the source, the risk associated with the PCA, and the construction and setting of the source. These factors are then ranked, the source is considered most vulnerable to the PCAs at the top of the ranking.

In July 2001, the California Department of Public Health (CDPH) completed an assessment of each groundwater supply well in Central Marina, which concluded they are most vulnerable to historic waste dumps, landfill activities and military installations.

For the Ord Community: In February 2002, an assessment was completed of each groundwater supply



well. They are most vulnerable to known volatile organic contaminant plumes from the closed landfill on the former Fort Ord, as well as to saltwater intrusion, sewer collection system, above ground storage tanks, irrigated crops, transportation corridors, farm machinery repairs and septic systems. In November 2012, a completed source assessment for Watkins Gate well determined the well to be most vulnerable to Military Installations. In February 2014, a completed assessment for Well 34 determined the well most vulnerable to Military installations (former Fort Ord), agricultural drainage, salt water intrusion, and sewer collection systems.

Full details of the assessment may be viewed at the following locations: MCWD, 11 Reservation Road, Marina, CA, or at SWRCB DDW, 1 Lower Ragsdale Drive, Building 1, Suite 120, Monterey, CA.



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Mission Statement: We provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.

Board meetings are open to the public and held the third Monday of every month at the City of Marina Council Chambers, 211 Hillcrest Avenue at 6:30 PM. Agendas are posted in the following places at least 72 hours before each meeting: Marina Coast Water District, Marina and Seaside City Halls, Marina and Seaside Libraries and the Marina Post Office.

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

Water Quality

The District diligently monitors water quality and, once again, is proud to report that your tap water meets California and Federal drinking water standards.

Federal Groundwater Rule

The California Department of Public Health (CDPH) implemented the Federal Groundwater Rule (GWR); compliance started on December 1, 2009. The purpose of the GWR is to reduce the risk of illness caused by microbial contamination in public groundwater systems. The District is pleased to report that coliforms were not detected in all but four of the required 532 distribution system samples collected in Central Marina and Ord Community.

Trichloroethylene (TCE)

TCE was a common solvent used by the US Army on the former Fort Ord. In 2016, TCE (below the MCL or standard) was detected in District supply Wells 29, 30 and 31, and also in the Sand Tank. With the interconnection of the two water systems the Intermediate and Sand Tanks may supply drinking water to the Central Marina and Ord Community distribution systems. The District continues to monitor quarterly its Wells 29, 30, 31, 34 and Watkins Gate for TCE.

The Army operates a network of shallow groundwater monitoring wells to track progress in its ongoing cleanup of the TCE contamination plume from the now-closed landfill and fire drill area. The Army groundwater monitoring wells do not supply drinking water to District customers. TCE has been detected in a majority of Army groundwater monitoring wells.

Nitrate

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. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

Arsenic

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs

of removing arsenic from drinking water. The U.S. Environmental Protection Agency 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 circulatory problems.

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. Marina Coast Water District 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 www.epa.gov/lead.

What Are the Sources of Contaminants?

The sources of drinking water (both tap 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 human activity. 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 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, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

A Notice on Radon

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your State radon program (1-800-745-7236), the EPA Safe Drinking Water Act Hotline (1-800-426-4791), or the National Safety Council Radon Hotline (1-800-767-7236).

- **Radioactive Contaminants**, that 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 U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health. **Note to the Immuno-compromised:** 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 (1-800-426-4791).



The District's Customer Service staff is available to assist you Monday through Friday, 8 AM to 5:30 PM.

Educational Information and Special Health Information

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).

Other Water Information Sources

CA State Water Resources Control Board Division of Drinking Water:

waterboards.ca.gov/drinking_water/programs

US Environmental Protection Agency: water.epa.gov/drink

Centers for Disease Control: cdc.gov

Fort Ord Cleanup Project: fortordcleanup.com



Laboratory staff continually monitor drinking water. Water quality data is posted monthly on the MCWD website (www.mcwd.org).

How to Read Water Quality Tables

The following tables list the results of detected contaminants in the District's distribution system and groundwater supply wells. While most monitoring was completed through December 2016, regulations allow the District to monitor certain chemicals less than once per year because the levels do not change frequently. The test results are divided into the following sections: *Primary Drinking Water Standards*,

Secondary Drinking Water Standards, Other Constituents, Unregulated Contaminants. To help better understand the report, use the *Definitions of Terms* given below.

To read the table, start with the column titled *Detected Contaminant(s)* and read across the row. *Units* express the amount measured. *MCL* shows the highest amount of contaminant allowed. *PHG/MCLG* is the goal amount for that

contaminant (may be lower than what is allowed). *Year Tested* is usually in 2016 or for some contaminants the most recent sampling year. *Annual Average* is the average amount measured or detected. *Range* tells the lowest and highest amounts measured. A *No Violation* indicates that regulation requirements were met. *Major Sources in Drinking Water* tell where the contaminant usually originates.

Distribution System Water Quality

PRIMARY DRINKING WATER STANDARDS — Microbiology

Detected Contaminant	Units	MCL	(MCLG)	Year Tested	Total Samples Collected & Month Positive	Violation	Major Sources in Drinking Water
Total Coliform Bacteria	Positive Samples	5.0% Monthly Samples	(0)	2016	532 Samples 1 Positive (2.3%) in January & 1 Positive (2.3%) in April. 2 Positive (3.6%) in October.	No	Naturally present in the environment.

PRIMARY DRINKING WATER STANDARDS — Disinfection Byproducts & Disinfectant Residual

Detected Contaminants	Units	MCL [MRDL]	PHG (MCLG) [MRDLG]	Year Tested	Annual Average	Range Low - High	Violation	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	ppb	80	n/a	2016	8	3.3 - 12	No	Byproduct of drinking water disinfection.
Chlorine Residual [as Cl ₂]	ppm	[4.0]	[4]	2016	1.08	0.14 - 2.12	No	Drinking water disinfectant added for treatment.

PRIMARY DRINKING WATER STANDARDS — Lead & Copper Indoor Tap Samples

Detected Contaminant	Units	Action Level	PHG	Year Tested	* 90th Percentile Level	No. of Sites Above Action Level	Violation	Major Sources in Drinking Water
Copper	ppm	1.3	0.3	2016	0.29	0 of 35	No	Internal corrosion of household plumbing systems.
Lead	ppb	15	0.2	2016	ND (<5)	1 of 35	No	Internal corrosion of household plumbing systems.

* 90th Percentile: For compliance, the sample result at the 90th percentile level must be less than the Action Level for copper at 1.3 ppm. Action Level for lead is set at 15 ppb.

Definitions of Terms Used

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.

Maximum Contaminant Level Goal (MCLG): 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.

Public Health Goal (PHG): 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.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

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

UCMR: Unregulated Contaminant Monitoring Rule that help EPA and CDPH to determine where certain contaminants occur and need to be regulated.

MRL: Method Reporting Limit or the lower-limit of quantitation

n/a: Not Applicable

ND: Non-Detected

Notification Level: DDW established health-based advisory levels for chemicals in drinking water that lack maximum contaminant levels

NTU: Nephelometric Turbidity Units

pCi/L: picocuries per liter

ppm: parts per million or milligrams per liter

ppb: parts per billion or micrograms per liter

ppt: parts per trillion or nanograms per liter

TON: Threshold Odor Number

Groundwater Supply Wells Water Quality

Detected Contaminants	Units	MCL	PHG (MCLG)	Year Tested ^(b)	Annual Average	Range Low - High	Violation	Major Sources in Drinking Water
PRIMARY DRINKING WATER STANDARDS								
Arsenic	ppb	10	0.004	2016	2.2	ND - 6.6	No	Erosion of natural deposits.
Fluoride (Natural)	ppm	2.0	1	2016	0.19	0.11 - 0.25	No	Erosion of natural deposits.
Hexavalent Chromium	ppb	10	0.02	2016/2014 ^(b)	2.8	ND - 6.2	n/a	Erosion of natural deposits.
Gross Alpha particle activity	pCi/L	15	(Zero)	2016/2014/2013 ^(c)	ND	ND - 4.9	No	Erosion of natural deposits.
Nitrate (as N)	ppm	10	10	2016	1.8	ND - 5.8	No	Erosion of natural deposits.
Trichloroethylene [TCE]	ppb	5	1.7	2016	ND	ND - 2.2	No	Discharge from metal degreasing sites.
Uranium	pCi/L	20	0.43	2013 ^(d)	2.1	ND - 4.8	No	Erosion of natural deposits.

SECONDARY DRINKING WATER STANDARDS

Chloride	ppm	500	n/a	2016	96	69 - 190	No	Leaching from natural deposits; seawater influence.
Iron	ppb	300	n/a	2016	ND	ND - 330***	No	Leaching from natural deposits.
Odor Threshold	TON	3	n/a	2016	ND	ND - 40*	No	Naturally-occurring organic materials.
pH Units	Units	6.5 - 8.5	n/a	2016	7.8	7.5 - 8.5	No	Naturally-occurring minerals.
Specific Conductance	µS/cm	1600	n/a	2016	650	460 - 1000	No	Substances that form ions when in water; seawater influence.
Sulfate	ppm	500	n/a	2016	46	25 - 61	No	Leaching from natural deposits.
Total Dissolved Solids	ppm	1000	n/a	2016	386	260 - 590	No	Leaching from natural deposits.
Turbidity	NTU	5	n/a	2016	0.16	0.11 - 0.75	No	Soil run-off.

OTHER CONSTITUENTS — No Drinking Water Standards

Alkalinity	ppm	n/a	n/a	2016	118	62 - 180	n/a	Naturally-occurring minerals.
Bicarbonate Alkalinity	ppm	n/a	n/a	2016	143	79 - 220	n/a	Naturally-occurring minerals.
Calcium	ppm	n/a	n/a	2016	41	16 - 54	n/a	Naturally-occurring mineral.
Magnesium	ppm	n/a	n/a	2016	14	0.54 - 23	n/a	Naturally-occurring mineral.
Potassium	ppm	n/a	n/a	2016	2.7	1.9 - 3.6	n/a	Naturally-occurring mineral.
Sodium	ppm	n/a	n/a	2016	69	38 - 120	n/a	Naturally-occurring mineral.
Hardness ^(a)	ppm	n/a	n/a	2016	158	42 - 230	n/a	Naturally-occurring minerals.
Radon 222	pCi/L	n/a	n/a	2000 ^(c)	532	208 - 1408	n/a	Naturally-occurring gas.

UNREGULATED CONTAMINANTS — No Drinking Water Standards

Boron	ppb	1000 (AL)	n/a	2016	ND	ND - 180	n/a	Erosion of natural deposits.
Vanadium	ppb	50 (AL)	n/a	2016	6.9	ND - 14	n/a	Erosion of natural deposits.
Chlorate	ppb	800 (AL)	n/a	2014 ^(f)	461	100 - 1400**	n/a	Disinfectant added for treatment.

Footnotes:

(a) Water Hardness Unit Conversion: Total Hardness (Annual Average) = 9.22 grains/gallon (for 158 ppm). Total Hardness (Range) = 2.45 - 13.4 grains/gallon.

(b) Well 30 did not operate in 2013 & 2014. December 10, 2012--California Department of Public Health (CDPH) granted an amendment to Marina Coast Water District's Domestic Water Supply Permit to allow two new groundwater sources: Wells 34 and Watkins Gate. Prior to the amendment, CDPH granted interim approval to operate Well 34 10/31/2012 and Watkins Gate Well 11/28/2012.

(c) Testing in Year (most recent sampling for compliance) 2000 did not include Well 34 and Watkins Gate Well, see footnote (b) above.

(d) Wells 12 & 29 waived--due 2016 depending on Gross Alpha results. 2016 Gross Alpha was ND for Wells 12 & 29, thus no Uranium tested in 2016.

(e) Year Tested (most recent sampling dates for compliance) 2013, 2014, 2016: Wells 31 34 & Watkins Gate 1/8/13, 4/2/13, 7/6/13, 10/8/13; Well 11 2/25/14; Wells 10 & 29 7/12/16; Well 30 8/22/16, 12/6/16; Well 12 12/6/16.

(f) UCMR3 Wells post-treatment (Entry Point to the Distribution System) chlorate sampling dates 4/1/2014, 4/15/2014 and 10/1/2014. **Only Notification Level exceedance 1400 ppb was Well 12 treatment plant effluent sampled 10/1/2014.

* Well 11 sampled 1/13/2016 Odor secondary MCL exceedance 40 TON, sampled thrice 3/23/2016 results 1.0, 2.0, and 1.0 TON, respectively; sampled 6/14/2016 result ND; sampled 7/12/16 result ND--no violation.

** Only California (Notification Level) AL exceedance was Well 12 treatment plant effluent sampled 10/1/2014.

*** Well 30 sampled 8/22/2016 Iron secondary MCL exceedance result 330 ppb, Well 30 resampled 9/7/16 Iron sMCL result ND--no violation.

Not Detected Chemicals:
The list of chemicals tested but not detected are reported at: www.mcwd.org/2016ccr-ND.html.