

2008

CONSUMER CONFIDENCE REPORT

for *Central Marina and Ord Community*



Fire hydrants receive periodic flushings.

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

The mission of the Marina Coast Water District is to provide high quality water, wastewater and recycled water services to the District's expanding communities through management, conservation and development of future resources at reasonable costs.

Marina Coast Water District, as in previous years, is proud to present the 2008 Consumer Confidence Report to assure you that your drinking water meets both State and Federal drinking water health standards.

If you have any questions regarding the information in this report or about your water quality, please contact Water Quality Manager Evelina A. Adlawan at 384-6131 or visit www.mcwd.org.

Water Supply and Treatment

The District's supply wells in *Central Marina* come from three deep groundwater wells located in the 900-foot aquifer of the Salinas Valley Groundwater Basin. Water is treated at each well site for disinfection and to remove the naturally occurring hydrogen sulfide that can sometimes cause odor problems.

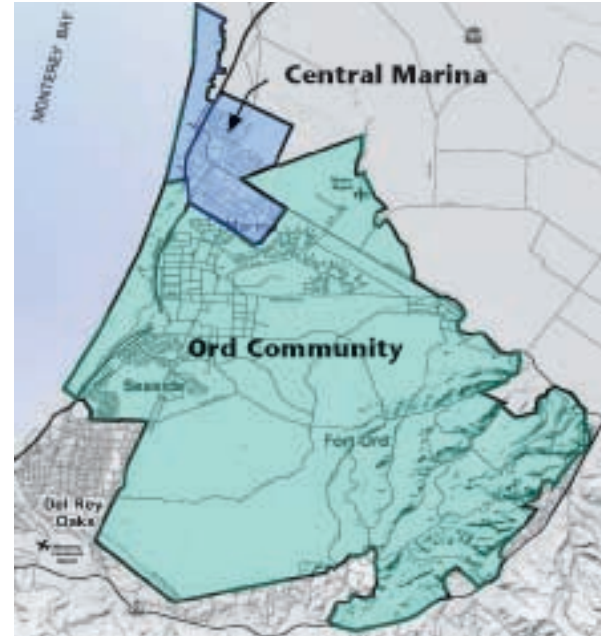
The District's supply wells in *Ord Community* come from three groundwater wells located in the lower 180-foot and 400-foot aquifers of the Salinas Valley Groundwater Basin. Groundwater from these wells is also disinfected at the Ord Community chlorination treatment plant.

In 2005, the Central Marina and Ord Community water systems were connected; integrated operations allowed water to flow between the two systems to meet peak demands and improve overall services. The exchange of water is automatically controlled and accounted for.

Marina's desalination plant did not operate during 2008, but is capable of providing up to 13 percent of *Central Marina's* annual water demand.

2008 Water Statistics

	Central Marina	Ord Community
Water Produced (million gallons)	597.4	739.3
Water Produced (acre-feet)	1,833.1	2,268.5
Maximum Month (million gallons)	August (63.7)	May (76.1)
Population Served	18,958	15,600 (est.)
No. of Service Connections	3,852	4,281



Water Supply Assessment and Protection

A one-time water assessment is required for each water source. In July 2001, the California Department of Public Health (CDPH) completed an assessment of groundwater supply wells in *Central Marina*, which concluded they are most vulnerable to historic waste dumps, landfill activities and military installations. The desalination plant seawater intake well is considered most vulnerable to saltwater intrusion and contaminants associated with injection wells.

In February 2002, an assessment was made of *Ord Community's* groundwater supply wells. Its well field is considered to be most vulnerable to known volatile organic contaminant plumes from the closed landfill on the former Fort Ord. The well field is also most vulnerable to saltwater intrusion, sewer collection system, above ground storage tanks, irrigated crops, transportation corridors, farm machinery repairs and septic systems.

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



Water quality chemist analyzes water samples.



Marina Coast Water District
11 Reservation Road
Marina, CA 93933-2099

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Web Site: www.mcwd.org
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Board meetings are open to the public and held the second Tuesday of every month at the District office, 11 Reservation Road (Marina State Beach) at 6:45 p.m. 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.

Water Quality

The District conducts extensive monitoring at various sampling points in Central Marina and Ord Community to ensure that your water meets all State and Federal drinking water health standards. Over 150 constituents, in addition to those listed in this report, were not detected in the District's supply wells. They can be viewed at www.mcwd.org/ccr2008-ND.html.

Sources of Contaminants

The sources of both tap and bottled drinking water include rivers, lakes, streams, ponds, reservoirs, spring 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. It can also 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, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

- **Inorganic Contaminants**, such as salts and metals, may be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

- **Pesticides and Herbicides** 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 (by-products of industrial processes and petroleum production) can come from gas stations, urban stormwater runoff, agricultural application and septic systems.



Water samples are taken throughout system.

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

To ensure that tap water is safe to drink, the US Environmental Protection Agency (USEPA) and CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Perchlorate Regulations

Perchlorate was not detected in any District supply wells in 2008. Perchlorate and its salts are propellants used in rockets, missiles and fireworks. The State's MCL, or standard, is 6 parts per billion.

Trichloroethylene (TCE)

In 2008, low-level TCE (below the MCL or standard) were detected in *Ord Community's* supply wells No. 29 and 30, and also in the intermediate and sand tanks. TCE was a common solvent used by the US Army on the former Fort Ord. With the interconnection of the two water systems, the intermediate tank and sand tank may supply drinking water to *Central Marina* and *Ord Community* distribution systems.

The US Army continues to operate a network of shallow groundwater monitoring wells to track progress in its ongoing cleanup of the TCE contamination plume from the closed landfill and fire drill area. Results of the Army's cleanup showed low-level TCE were detected in a majority of its groundwater monitoring wells. In



Disinfection treatment ensures safe water.

addition to quarterly monitoring of the Army's groundwater monitoring wells, *Ord Community's* supply wells No. 29, 30 and 31 are also monitored quarterly. You can view the Army's program at www.fortordcleanup.com.

Arsenic

The District's supply wells in *Central Marina* meet both the lower State and Federal arsenic standard of 10 parts per billion, but it does contain low-levels of naturally occurring arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The USEPA 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. Arsenic was not detected in *Ord Community's* supply wells.

A Notice on Radon

Radon is a naturally occurring radioactive gas that is found throughout the nation. Radon can move up through the ground and into a home through cracks and holes in the foundation, though it cannot be seen, tasted or smelled. Radon can also be released from tap water while showering, washing dishes or other household activities. Compared to entering the home through the soil, radon entering the home through tap water will, in most cases, be slight. Breathing air containing radon may lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about the presence of radon, test the air in your home. Testing is inexpensive and easy. For additional information, call the USEPA's Radon Hotline at (800) SOS-RADON.



Customer Service staff answer customer's questions.

Educational 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.

A Note to the Immuno-compromised:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as those undergoing chemotherapy or organ transplants, those 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 USEPA Safe Drinking Water Hotline: 1-800-426-4791.

Water Information Sources

California Department of Public Health-
www.dph.ca.gov/ps/ddwem
 US Environmental Protection Agency-
www.epa.gov/safewater
 Centers for Disease Control- www.cdc.gov
 Fort Ord Cleanup Project-www.fortordcleanup.com

How to Read the Water Quality Tables

The following tables list the results of detected contaminants in the District's distribution system and groundwater supply wells. While most chemical monitoring was conducted in 2008, the State allows the District to monitor for some 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 and *Other Constituents* and *Unregulated Chemicals*. 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 (this may be lower

than what is allowed). *Year Tested* is usually in 2008 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	Positive Samples	5.0% Monthly Samples	(0)	2008	523 Samples 1- Positive 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 (THM's)	ppb	80	n/a	2008	9.5	2.3 - 33	No	Byproduct of drinking water chlorination.
Haloacetic Acids (HAA's)	ppb	60	n/a	2008	0.4	ND - 3.3	No	Byproduct of drinking water chlorination.
Chlorine Residual [as Cl ₂]	ppm	[4.0]	[4]	2008	0.6	0.04 - 1.81	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	0.17	2007	0.27	0 of 30	No	Internal corrosion of household plumbing systems.

* 90th Percentile: For compliance, the sample result at the 90th percentile level must be less than the copper action level at 1.3 ppm. Lead action level is 15 ppb. Lead was not detected in Central Marina and Ord Community indoor tap water samples.

Definitions of Terms Used

Maximum Contaminant Level (MCL): The highest contaminant level allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.

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

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. (PHG's are set by the California EPA.)

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. (MCLG's are set by the USEPA.)

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

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

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. (MRDLG's are set by the USEPA.)

Secondary Drinking Water Standards: Secondary MCLs are set to protect odor, taste and appearance of drinking water.

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

n/a: not applicable

ND: not detectable at testing limit

NTU: Nephelometric Turbidity Units (measure of clarity or turbidity)

pCi/L: picocuries per liter (a measure of radioactivity)

ppm: parts per million, or milligrams per liter

ppb: parts per billion, or micrograms per liter

TON: Threshold Odor Number

Groundwater Supply Wells Water Quality

Detected Contaminants	Units	MCL	PHG (MCLG)	Year Tested	Annual Average	Range Low - High	Violation	Major Sources in Drinking Water
PRIMARY DRINKING WATER STANDARDS								
Arsenic	ppb	50	0.004	2008	2.2	ND - 6.3	No	Erosion of natural deposits.
Fluoride (Natural)	ppm	2.0	1	2008	0.21	0.15 - 0.26	No	Erosion of natural deposits.
Nitrate (NO3)	ppm	45	1	2008	4.4	ND - 20	No	Erosion of natural deposits.
Radium 228	pCi/L	5=Tot Rad (a)	(0)	2005	ND	ND - 1.4	No	Erosion of natural deposits.
Trichloroethylene (TCE)	ppb	5	0.8	2008	0.6	ND - 1.1	No	Discharge from metal degreasing.

SECONDARY DRINKING WATER STANDARDS

Chloride	ppm	500	n/a	2008	87	70 - 110	No	Natural deposits; seawater influence.
Color	units	15	n/a	2008	1	ND - 3	No	Naturally-occurring organic materials.
Odor Threshold	TON	3	n/a	2008	1	1 - 2	No	Naturally-occurring organic materials.
pH Units	Units	6.5 - 8.5	n/a	2008	7.9	7.4 - 8.6	No	Naturally-occurring minerals.
Specific Conductance	µS/cm	1600	n/a	2008	594	447 - 687	No	Formed ions when in water; seawater influence.
Sulfate	ppm	500	n/a	2008	52	22 - 73	No	Naturally-occurring minerals.
Total Dissolved Solids	ppm	1000	n/a	2008	344	242 - 430	No	Naturally occurring minerals and metals.
Turbidity	NTU	5	n/a	2008	0.23	0.05 - 0.45	No	Soil run-off.

OTHER CONSTITUENTS — No Drinking Water Standards

Alkalinity	ppm	n/a	n/a	2008	111	70 - 149	n/a	Naturally-occurring minerals.
Calcium	ppm	n/a	n/a	2008	36	3.8 - 65	n/a	Naturally-occurring minerals.
Magnesium	ppm	n/a	n/a	2008	11	0.37 - 20	n/a	Naturally-occurring minerals.
Potassium	ppm	n/a	n/a	2008	2.6	2.0 - 3.0	n/a	Naturally-occurring minerals.
Sodium	ppm	n/a	n/a	2008	64	37 - 99	n/a	Naturally-occurring minerals.
Hardness (b)	ppm	n/a	n/a	2008	137	11 - 241	n/a	Naturally-occurring minerals.
Radon 222	pCi/L	n/a	n/a	2000	532	208 - 1408	n/a	Naturally-occurring gas.

UNREGULATED CHEMICALS — No Drinking Water Standards

Boron	ppb	1000 (AL)	n/a	2008	67	ND - 180	n/a	Erosion of natural deposits.
Chromium, Cr VI Screen	ppb	n/a	n/a	2004	3.4	1.3 - 5.9	n/a	Erosion of natural deposits.
Vanadium	ppb	50 (AL)	n/a	2008	4.5	ND - 7.5	n/a	Erosion of natural deposits.

Footnotes:

(a) Total Radium is the sum of Radium 226 and Radium 228

(b) Water Hardness Unit Conversion: 138 ppm = 8.7 grains/gallon

Comparisons

Parts per million = 1 second in 12 days
 Parts per million = 1 inch in 16 miles
 Parts per billion = 1 second in 32 years
 Parts per billion = 1 inch in 16,000 miles

* 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. Lead was not detected in *Central Marina* and *Ord Community* indoor tap water samples.

Not Detected Chemicals: The list of chemicals tested, but not detected are reported at:

www.mcwd.org/ccr2008-ND.html