

The EPA proposed MCL for radon is 300 pCi/L. The proposal will provide states flexibility in how to limit exposure to radon by allowing states to focus its efforts on the greatest radon risks-those in indoor air-while also reducing the risks from radon in drinking water. The states' option for radon compliance is as follows:

First Option: States can choose to develop enhanced state programs to address the health risks from radon in indoor air. These programs are known as Multimedia Mitigation (MMM) Programs. Individual water systems reduce radon levels in drinking water to 4,000 pCi/L or lower. EPA is encouraging states to adopt this option because it is the most cost effective way to achieve the greatest radon risk reduction.

Second Option: If a state chooses not to develop an MMM program, individual water systems in that state would be required to either reduce radon in their system's drinking water to 300 pCi/L or develop individual local MMM programs and reduce levels in drinking water to 4,000 pCi/L.

Regulated Constituents with Secondary Standards (Groundwater Sources)

Constituent	Secondary MCL	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Chloride (ppm)	500	105	102 - 108	2008	NO	runoff/leaching from natural deposits; seawater influence
Color (units)	15	1	ND - 5	2008	NO	naturally occurring organic materials
Corrosivity (Aggressiveness Index)	Non-Corrosive	Non-Corrosive	Non-Corrosive	2008	NO	elemental or industrially- influenced balance of hydrogen, carbon, and oxygen in water; affected by temperature and other factors.
Manganese3 (ppb)	50	12	ND - 131	2008	NO	leaching from natural deposits
Specific conductance (micromhos/cm)	1600	1016	984 - 1110	2008	NO	substance that form ions when in water, seawater influence
Sulfate (ppm)	500	138	125 - 170	2008	NO	runoff/leaching from natural deposits industrial wastes
Total Dissolved Solids (ppm)	1000	620	582 - 680	2008	NO	runoff/leaching from natural deposits
Turbidity (NTU)	5 Units	0.2	ND - 0.5	2008	NO	soil runoff
Zinc (ppb)	5000	12	ND - 161	2008	NO	runoff/leaching from natural deposits; industrial waste

State Regulated Constituents without Standards (MCL) but Requires Monitoring (Groundwater Sources)

Constituent	NL	Average Amount	Range Detected	Most Recent Sample date	Typical Source in Drinking Water
Boron (ppb)	1,000	260	210 - 280	2008	run-off/leaching from natural deposits; natural waste
Chlorate (ppm)	0.8	0.06	ND - 0.11	2008	disinfection by-products; industrial processes
Vanadium (ppb)	50	5	3 - 8	2008	naturally occurring; industrial waste discharge

Additional Water Quality Parameters (Groundwater Sources)

Constituents		Average Amount	Range Detected	Most Recent Sample Date
Alkalinity as CaCO ₃ (ppm)	NS	217	202 - 239	2008
Bromide (ppm)	NS	0.23	0.15 - 0.39	2008
Calcium (ppm)	NS	97	84 - 123	2008
Hardness as CaCO ₃ (grains per gallons, gpg)	NS	19	17 - 24	2008
Magnesium (ppm)	NS	21	18 - 25	2008
Potassium (ppm)	NS	5	4 - 8	2008
pH (acids/bases)	NS	8	7.7 - 8.2	2008
Sodium (ppm)	NS	92	83 - 99	2008

Water Quality Data of Imported Water Sources

The table below lists all of the contaminants that the MWD detected during the 2008 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2008.

Primary Standards (Import Sources)

Inorganic Chemicals	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Aluminum (ppb)	1000	600	164	78 - 280	2008	NO	erosion of natural deposit; residual from surface water treatment processes
Arsenic (ppb)	10	0.004	2.4	ND - 2.9	2008	NO	natural deposit erosion; glass and electronic production waste
Barium, (ppb)	1000	2000	117	111 - 123	2008	NO	oil and metal refineries discharge; natural deposits erosion
Fluoride (ppm) (fluoridation levels)	2	1	0.8	0.6 - 0.9	2008	NO	water additive for dental health
Nitrate (as N), ppm	10	10	0.5	ND - 0.6	2008	NO	runoff and leaching from fertilizer use; septic tank Sewage; natural deposit erosion

Radionuclides	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Gross Alpha (pCi/L)	15	(0)	5.6	3.8 - 9.3	2008	NO	erosion of natural deposits
Gross Beta (pCi/L)	50	(0)	4.3	ND - 6.4	2008	NO	natural and man-made deposits
Uranium (pCi/L)	20	0.43	3.3	2.9 - 3.7	2008	NO	erosion of natural deposits

Regulated Constituents with Secondary Standards (Import Sources)

	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Aluminum (ppb)	200	600	164	78 - 280	2008	NO	erosion of natural deposit; residual from surface water treatment processes
Chloride (ppm)	500	NS	96	92 - 103	2008	NO	runoff and/or leaching from natural deposit; seawater influence
Color, Units	15	NS	2	1 - 2	2008	NO	naturally occurring organic material
Corrosivity (Saturation index)	non-corrosive	non-corrosive	0.46	0.38-0.50	2008	NO	elemental balance in water; affected by temperature, orther factors
Corrosivity (Aggressiveness Index)	non-corrosive	non-corrosive	12.3	12.2-12.4	2008	NO	elemental balance in water; affected by temperature, other factors
Odor Threshold, Units	3	NS	2	2	2008	NO	naturally organic material
Specific Conductance (micromhos/cm)	1600	NS	947	837 - 1080	2008	NO	substance that form ions when in water; seawater influence
Sulfate (ppm)	500	NS	212	170 - 272	2008	NO	runoff and/or leaching from natural deposit; industrial waste
Total Dissolved Solids (ppm)	1000	NS	569	505 - 668	2008	NO	runoff and/or leaching from natural deposit; seawater influence
Turbidity (NTU)	5	NS	0.05	0.04 - 0.05	2008	NO	soil run-off

State/Federal Regulated Constituents with No Standards (MCL) but Requires Monitoring (Import Sources)

	NL	Average Amount	Range Detected	Most Recent Sample Date	Typical Source in Drinking Water
Boron (ppb)	1000	140	130 - 150	2008	runoff/leaching from natural deposits industrial wastes
Chromium VI (ppb)	NA	0.19	0.1 - 0.29	2008	industrial waste discharge; could be naturally present
Vanadium (ppb)	50	3.8	3.5 - 3	2008	naturally occurring; industrial waste discharge
Chlorate (ppb)	800	48	24 - 58	2008	by-product of drinking water chlorination; industrial waste

Additional Water Quality Parameters (Import Sources)

	Average Amount	Range Detected	Most Recent Sample Date	Comments
Alkalinity (ppm)	110	110 - 121	2008	No standard has been established.
Calcium (ppm)	61	55 - 72	2008	No standard has been established.
Hardness (gains per gallons, gpg)	15	13 - 18	2008	No standard has been established.
Magnesium (ppm)	25	22 - 29	2008	No standard has been established.
N-Nitrosodimethylamine (NDMA) (ppt) (PHG = 3 ppt)	N/A	ND - 2.7	2008	No standard has been established.
pH (acids/bases)	8.1	8 - 8.2	2008	No standard has been established.
Potassium (ppm)	4	4 - 5	2008	No standard has been established.
Sodium (ppm)	94	85 - 106	2008	No standard has been established.
Total Organic Carbon (ppm)	2	2 - 3	2008	No standard has been established.



2009 Consumer Confidence Report

Last year, as in years past, your tap water met all Environmental Protection Agency (EPA), and State drinking water health standards. Yorba Linda Water District vigilantly safeguards its water supplies, and once again we are proud to report that our water system has never violated a water quality standard. This Consumer Confidence Report covers water quality data collected during the period from January to December 2008.

Esta informacion es importante. Por favor pidale a alguien que se la traduzca.
(This information is important. Please have someone translate it for you.)

Water System Information

Yorba Linda Water District is an independent special district that provides water and sewer service to most of the City of Yorba Linda and to portions of Anaheim, Brea, Placentia and unincorporated Orange County.

For more information about the District or your water service, please call Management Analyst Cindy Botts, at 714 701-3024 or Water Quality Engineer Leon de los Reyes at 714-701-3115.

The Yorba Linda Water District Board of Directors' regularly scheduled meetings are held on the second and fourth Thursday of each month at 8:30 a.m. in the District boardroom located at 1717 E. Miraloma Avenue, Placentia, California 92870.

Sources of Water

Sources of drinking water (both public tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. Water also picks up substances resulting from the presence of animals or from human activity.

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 EPA's Safe Drinking Water Hotline at 1-800-426-4791 or by accessing the EPA's internet web site at www.epa.gov/safewater.

Local Groundwater

Yorba Linda Water District obtains approximately half of its water supplies from properly constructed wells located within the District. The District's wells tap an underground aquifer that underlies most of northern Orange County. The aquifer is carefully managed by the Orange County Water District, and is replenished by water from the Santa Ana River, local rainfall, and water purchased from imported sources.

The District's groundwater sources include: Well No. 1, Well No. 5, Well No. 7, Well No. 10, Well No. 12, Well No. 18, Well No. 19, which are located within Placentia city limits; and Well No. 11 and Well No. 15, which are located within Anaheim city limits.

Imported Water

Yorba Linda Water District obtains the remainder of the water our customers need from local wholesaler Municipal Water District of Orange County (MWD-DOC). MWD-DOC obtains water from regional supplier Metropolitan Water District of Southern California (MWD). MWD obtains water from northern California via the California Aqueduct, and from the Colorado River via the Colorado River Aqueduct. MWD owns and operates the Robert B. Diemer water treatment plant located just north of western Yorba Linda where the water is treated to meet drinking water standards.

Vulnerability Assessment of Potential Sources of Contamination

A vulnerability assessment of local drinking water sources of the Richfield Plant wellfield (Wells No. 1, 5, 7, 10, and 12) for the District was completed in January 1999. These sources are considered most vulnerable to contaminants produced by the following activities: gas stations; dry cleaners; metal plating/finishing/fabricating plants; plastic/synthetic producers; underground injection of commercial/industrial discharges; underground storage tanks; agricultural drainage; fertilization, pesticide and herbicide application; automobile-body and repair shops; and chemical/petroleum processing/storage.

In December 2002, Metropolitan Water District of Southern California (MWD) completed a source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to contamination by recreation uses, urban/storm water runoff, industrial runoff, increasing urbanization in the watershed and wastewater contamination. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, and wildlife, agriculture, recreation and wastewater contamination.

Vulnerability assessments of potential sources of contamination for Wells 11 and 15 were completed in April 2003. These groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants: chemical/petroleum processing/storage; metal plating/finishing/fabricating; and plastics/synthetics production.

A vulnerability assessment of potential sources of contamination for Well 19 and Well 18 were completed in May 2004 and September 2005, respectively. The groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants: gas stations; dry cleaners; metal plating/finishing/fabricating plants; plastic/synthetic producers; underground injection of commercial/industrial discharges; underground storage tanks; agricultural drainage; fertilization, pesticide and herbicide application; automobile-body and repair shops; sewer collection systems; food processing,

and chemical/petroleum processing/storage.

A copy of the complete assessment is available at Department Public of Health district office at 605 West Santa Ana Blvd., Building 28, Room 325, Santa Ana, CA 92701, or by contacting Water Quality Engineer Leon de los Reyes at (714) 701-3115.

Contaminants That **May Be Present In Source Water**

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. **Cryptosporidium** is a microscopic organism that when ingested can cause diarrhea, fever, and other gastrointestinal maladies. The organism comes from animal and/or human waste and may be found in surface (imported) water. A standard treatment process that includes sedimentation, filtration, and disinfection can eliminate cryptosporidium contamination.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Inorganic contaminants, such as salts and metals that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- 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 that can be naturally occurring or be the result of oil and gas production and mining activities.

Special Risk Populations

Some individuals may be more vulnerable to the effects of possible contaminants in drinking water than the general population. Persons who are undergoing chemotherapy, persons who have undergone organ transplants, some elderly persons, infants, persons infected with HIV/AIDS, or persons with other immune system disorders can be particularly at risk. These persons should seek advice from their health care providers about drinking water. The USEPA/ Center for Disease Control guidelines on appropriate means to lessen the risks of infection by cryptosporidium or other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Fluoride

Yorba Linda Water District does not add fluoride to its groundwater supplies. Naturally occurring fluoride is present in the well water, but not at a level that provides dental health benefits.

In 1995, the California Legislature passed a bill mandating that all large water agencies fluoridate their supplies, but only if the state or “somebody” provided the agencies with the funds to do so. To date, the state has not come up with the funds to implement fluoridation.

Metropolitan Water District of Southern California (MWDSC) commenced fluoridation of southern California’s drinking water supplies in November of 2007. YLWD purchases approximately half of its water from MWDSC. Because of MWD’s decision and YLWD’s dual sources of water (groundwater and import), the District is faced with a situation where some of its customers will get water fluoridated by MWD, some will get non-fluoridated water, and some will get a blend of fluoridated and non-fluoridated water.

If you need to know the approximate level of fluoride in your tap water, or specific water service area, please call Leon de los Reyes, Water Quality Engineer, at 714 701-3115. Additional information about the fluoridation of drinking water can be found through the following sources:

- U.S. Centers for Disease Control and Prevention, 1-888-CDC-2306 www.cdc.gov/Oralhealth/factsheet/fl-background.html
- American Dental Association www.ada.org/public/topics/fluoride/fluor-links.html
- American Water Works Association www.awwa.org

Terms and Abbreviations

- Public Health Goals (PHG):** The level of the contaminant in drinking water below which there is no known or expected risk to health *including individuals with special health care needs*. The California Environmental Protection Agency sets PHGs. The District prepared and held a public hearing of its Public Health Goals Report on July 1998, 2001, 2004, and 2007. The next PHG report is due on July 2010.
- Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is known or expected risk to health. The U.S. Environmental Protection Agency sets MCLGs.
- 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 Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded 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. MRDLs are set by the U.S. Environmental Protection Agency.
- Primary Drinking Water Standard or PDWS:** MCLs and MRDLs for contaminant that affect health along with their monitoring and reporting requirements, and water treatment techniques.
- Treatment Technique (TT):** A required process intended to reduce the level of contaminants in drinking water.
- Notification Level (NL):** The concentration of a contaminant which, when exceeded, triggers a treatment process or other requirements that a water system must follow.

- N/A:** not applicable
- ND:** not detectable
- NS:** no standard has been established
- ppm:** parts per million or milligrams per liter
- ppb:** parts per billion or micrograms per liter
- ppt:** parts per trillion or nanograms per liter
- pCi/L:** picoCuries per liter (a measure of radiation)
- NTU:** nephelometric turbidity units
- gpg:** grains per gallon (a measure of water hardness)

Measurements

Most of the contaminants are measured in parts per million (ppm), parts per billion (ppb), and parts per trillion. If these are difficult to envision, these are the comparisons:

<i>Parts per million:</i> 1 second in 12 days 1 penny in \$10,000 1 inch in 16 miles	<i>Parts per billion:</i> 1 second in 32 years 1 penny in \$10 million 1 inch in 16,000 miles	<i>Parts per trillion:</i> 10 drops in a Rose Bowl-sized pool 1-second in 32,000 years 1 inch in 16 million miles
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In order to ensure that tap water is safe to drink, EPA and CDPH prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

The table below lists all the drinking water contaminants that Yorba Linda Water District **detected** during the **2008** calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done for the period January 1 through December 31, 2008. The California Department of Public Health requires monitoring for certain contaminants less often than every year because the concentrations of these contaminants are not expected to vary significantly from year to year. Thus, some of the data, though representative of current water quality, is more than one year old. YLWD contracts with state certified, independent laboratories to perform most of the District’s water quality testing.

Water Distribution System Water Quality (Ground and Import Water Sources)							
Disinfection By-Products	MCL [MRDL]	PHG (MCLG) [MRDLG]	Highest [Locational] Running Annual Average	Range	Most Recent Sampling Date	Violation	Typical Source in Drinking water
Total Trihalomethanes (TTHMs) (ppb)	80	N/A	38	14 - 58	2008	NO	by-product of drinking water disinfection
Haloacetic Acids (HAAs) (ppb)	60	N/A	12	3 - 23	2008	NO	by-product of disinfection
Stage-2 D/DBP ² Total Trihalomethanes (TTHMs) (ppb)	80	N/A	[54]	5 - 54	2007 - 2008	NO	by-product of drinking water disinfection
Stage-2 D/DBP ² Haloacetic Acids (HAAs) (ppb)	60	N/A	[17]	2 - 17	2007 - 2008	NO	by-product of drinking water disinfection
Total Chlorine (ppm)	[4 as Cl ₂ ¹]	[4 as Cl ₂ ¹]	1.6	1.40 – 1.81	2008	NO	drinking water disinfectant added for treatment

¹ As chlorine (Cl₂)

² Stage-2 Disinfectants and Disinfection By-Product Rule

About Chloramines and Free Chlorine: These disinfectants must be removed from water used in hemodialysis treatment. Water used for dialysis machines must meet standards established by the Association for the Advancement of Medical Instrumentation. A good source of information, in addition to your health care provider, is the Southern California Renal Disease Council at (323) 962-2020. In addition, they must be removed from water before it is used to fill or replenish *aquariums* and *fish ponds*. For more information, contact your local pet store.

Microbiological	MCL	PHG (MCLG)	Highest Percentage Total Coliform-Presence in a Monthly Sample	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Total Coliform (Non-Fecal Coliform)	5%	(0)	0.66%	2008	NO	naturally present in the environment

NOTE: *On November 15, 2008, due to significant loss of water pressure in the Hidden Hills Estates area during the height of the Freeway Complex*

Fire, YLWD issued a Boil Water Advisory. This step was taken as a precautionary measure to protect that particular affected area against potential microbiological contamination of the drinking water system, and in compliance with California Department of Public Health requirements.

After conducting multiple sampling and review of water quality analyses taken within the Hidden Hills Estates area, it was determined on November 20, 2008, that the drinking water met microbiological standards and was safe for consumption and domestic use. Subsequently, the Boil Water Advisory was cancelled.

Lead & Copper Levels at Residential Taps	NL	PHG	90 th Percentile Values	Sites Exceeding NL Sample	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Lead (ppb)	15	2	6	None	2006	NO	Internal corrosion of household water plumbing system; discharges from industrial manufacturers, erosion of natural deposits
Copper (ppm)	1.3	0.3	0.21	None	2006	NO	Internal corrosion of household water plumbing system; discharges from industrial manufacturers, erosion of natural deposits

Aesthetic Quality	Secondary MCL	Average	Range	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Color, units	15	ND	ND < 5	2008	NO	Naturally occurring organic materials
Odor - Threshold	3	ND	ND < 1	2008	NO	Naturally occurring organic material
Turbidity, NTU	5	0.21	0.14 - 1.14	2008	NO	Total suspended solids

Primary Standards (Groundwater Sources)

Inorganic Chemicals	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Arsenic ³ (ppb)	10	0.004	4	ND - 11	2008	NO	Erosion of natural deposits; runoff from orchard, glass and electronics production wastes
Barium (ppb)	1000	2000	2.86	ND - 103	2008	NO	Discharges of oil drilling waste, and from metal refineries; erosion of natural deposits
Fluoride (ppm) (naturally occurring)	2	1	0.4	0.3 - 0.5	2008	NO	erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm) (as Nitrate, NO ₃ ⁻)	45	45	12	9 - 16	2008	NO	runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate plus Nitrite (as Nitrogen, N) (ppm)	10	10	3	2 - 4	2008	NO	runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

³ The District has a California Department of Public Health approved blending plan that reduces the levels of arsenic and manganese in the water distribution system to within drinking water standards.

Radio nuclides	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source in Drinking Water
Gross Alpha (pCi/L)	15	(0)	9	6 - 13	2008	NO	Erosion of natural deposits
Uranium (pCi/L)	20	0.43	8	5 - 12	2008	NO	Erosion of natural deposits
Total Radon (pCi/L) (222)	NS	NS	457	404 - 491	2008	N/A	“see note below”
Total Radium (pCi/L) (228)	5	0.019	0.1	0 - 2.3	2008	NO	Erosion of natural deposits

About Radon: Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the world. Radon can move through the ground and into homes 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 homes through soil, radon entering the home through tap water will, in most cases, be a minor 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, test the air in your home. Testing is inexpensive and easy. Fix 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, you can call the EPA’s Radon Hotline (800-SOS-Radon).