



Yorba Linda Water District

2008 Consumer Confidence Report

**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 Public Information Officer Cindy Mejia, 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, CA 92870.

This Consumer Confidence Report covers water quality data collected during the period from January to December 2007.

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 requirement 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 surplus water purchased from imported sources.

The District's groundwater sources are: Well No. 1, Well No. 5, Well No. 7, Well No. 10, Well No. 12, Well No. 18 are located within Placentia city limits; Well No. 11 and Well No. 15 are located within Anaheim city limits. A new well located in Placentia, Well 19, has been drilled, equipped, and operational.

The California Department of Public Health (CDPH) completed a Source Water Assessment of the Richfield well field in January 1999, Orange County Water District completed the Source Water Assessment of Wells 11 and 15 on April 2003, and Camp, Dresser and McKee completed the Source Water Assessment for Well 18 on September 2005. The reports are available upon request by contacting Water Quality Engineer Leon de los Reyes at (714) 701-3115.

Imported Water

Yorba Linda Water District obtains the remainder of the water our customers need from local wholesaler Municipal Water District of Orange County (MWDOC). MWDOC 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 well field (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, agricultural runoff, including animal manure and wastewater contamination. Some 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. The 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 the California Department of Public Health office at 28 Civic Center Plaza, Room 325, Santa Ana, California 92701, or at the Yorba Linda Water District office located at 1717 E. Miraloma Avenue, Placentia, CA 92870.

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.
- Arsenic is a naturally occurring substance that is found in very low levels in all drinking water supplies. While your drinking water meets the current EPA 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 Public Health 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.
- 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.

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 EPA's 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 your water. Naturally occurring fluoride is present in the 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 money 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, 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. During certain periods when import water is more economically available than groundwater sources, areas traditionally supplied with currently non-fluoridated water will temporarily receive fluoridated water supply from MWDSC. Please see the map contained in this report for areas of the community that traditionally receive local groundwater, imported water and blended of sources. Additional information about the fluoridation of drinking water include:

- 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

- 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 (PHGR) 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. It is the regulatory definition of what is "safe". 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

Measurements

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

<p><u>Parts per million:</u> 1 second in 12 days 1 penny in \$10,000 1 inch in 16 miles</p>	<p><u>Parts per billion:</u> 1 second in 32 years 1 penny in \$10 million 1 inch in 16,000 miles</p>
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In order to ensure that tap water is safe to drink, the EPA and the 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 2007 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, 2007. The CDPH 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 do most of the District's water quality testing.

Water Distribution System Water Quality							
Disinfection By-Products	MCL [MRDL]	PHG (MCLG) [MRDLG]	Highest [Locational] Running Annual Average	Range	Most Recent Sampling Date	Violation	Typical Source of Contaminant
Total Trihalomethanes (TTHMs) (ppb)	80	N/A	50	13 - 72	2007	NO	by-product of drinking water disinfection
Haloacetic Acids (HAAs) (ppb)	60	N/A	19	4 - 32	2007	NO	by-product of water disinfection
Stage-2 D/DBP ² Total Trihalomethanes (TTHMs) (ppb)	80	N/A	[45]	0.0 - 51	2007-2008	NO	by-product of drinking water disinfection
Haloacetic Acids (HAAs) (ppb)	60	N/A	[13]	2-17	2007-2008	NO	by-product of drinking water disinfection
Total Chlorine (ppm)	[4 as Cl ₂]	[4 as Cl ₂]	1.73	1.40-2.14	2007	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 (213) 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 Presence in a Monthly Sample	Most Recent Sample Date	Violation	Typical Source of Contaminant
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Total Coliform (Non-Fecal Coliform)	5%	(0)	1%	2007	NO	Naturally present in the environment
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Lead & Copper Levels at Residential Taps	NL	PHG	90th Percentile Value	Site Exceeding NL Sample	Most Recent Sample Date	Violation	Typical Source of Contaminant
Lead (ppb)	15	2	6	None	2006	NO	internal corrosion of household water plumbing system; discharge from industrial manufacturers, erosion of natural deposits
Copper (ppm)	1.3	0.17	0.21	None	2006	NO	internal corrosion of household plumbing systems; erosion of deposits; leaching from natural wood preservative

Aesthetic Quality	Secondary MCL	Average	Range	Most Recent Sample Date	Violation	Typical Source of Contaminant
Color, units	15	ND	ND < 5	2007	NO	naturally occurring organic materials
Odor-Threshold	3	ND	ND < 1	2007	NO	naturally occurring organic materials
Turbidity, NTU	5	0.17	0.12 - 0.93	2007	NO	Total suspended solids

Water Quality Data - Groundwater Sources

Primary Standards

Inorganic Chemicals	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source of Contaminant
Arsenic ³ (ppb)	10	0.004	4	ND - 11	2007	NO	erosion of natural deposits; runoff from orchard, glass and electronics production wastes
Flouride (ppm) (naturally occurring)	2	1	0.4	0.3 - 0.5	2007	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	14	11 - 17	2007	NO	runoff and leaching from fertilizer use; leaching from septic tank and sewage; erosion of natural deposits
Nitrate plus Nitrite (ppm) (as nitrogen, N)	10	10	3	2 - 4	2007	NO	runoff and leaching from fertilizer use; leaching from septic tank and sewage; erosion of natural deposits

Radiation Standards

Radionuclides	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source of Contaminant
Gross Alpha (pCi/L)	15	0	8	4 - 11	2005	NO	erosion of natural deposits
Uranium (pCi/L)	20	0.43	8	5 - 11	2005	NO	erosion of natural deposits
Total Radon (pCi/L) (222)	NS	NS	464	424 - 491	2005	NO	

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.

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).

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
(aesthetic/sensory standards)**

Constituent	Secondary MCL	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source of Contaminant
Chloride (ppm)	500	104	98 - 108	2007	NO	runoff/leaching from natural deposits; seawater influence
Color (units)	15	1	ND - 3	2007	NO	natural occurring organic materials
Corrosivity (Aggressiveness Index)	Non-Corrosive	Non-Corrosive	Non-Corrosive	2006	NO	elemental or industrially influenced balance of hydrogen, carbon, and oxygen in water; affected by temperature and other factors.
Manganese ³ (ppb)	50	12	ND - 101	2007	NO	leaching from natural deposits
Specific Conductance (micromhos/cm)	1600	1002	984 - 1040	2007	NO	substance that form ions when in water; seawater influence
Sulfate (ppm)	500	135	125 - 144	2007	NO	runoff/leaching from natural deposit; industrial wastes
Total Dissolved Solids (ppm)	1000	611	576- 652	2007	NO	runoff/leaching from natural deposit
Turbidity (NTU)	5 Units	0.3	ND - 1	2007	NO	soil run off
Zinc (ppb)	5000	13	ND - 161	2007	NO	runoff/leaching from natural deposits; industrial waste

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

State Regulated Constituents without Standards (MCL) but Requires Monitoring

Constituent	NL	Average Amounts	Range Detected	Most Recent Sample Date	Typical Source of Contaminant
Boron (ppb)	1,000	250	190 - 280	2007	run-off/leaching from natural deposits; natural waste
Chlorate (ppm)	0.8	0.06	ND - 0.16	2007	disinfection by-products; industrial processes
Vanadium (ppb)	50	5	3 - 8	2007	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	214	202 - 238	2007
Bromide (ppm)	NS	0.22	0.20 - 0.26	2007
Calcium (ppm)	NS	95	84 - 108	2007
Hardness as CaCO ₃ (gpg)	NS	19	17 - 20	2007
Magnesium (ppm)	NS	20	18 - 23	2007
Postassium (ppm)	NS	5	4 - 8	2007
pH (acids/bases)	NS	8	7.9 - 8.1	2007
Sodium (ppm)	NS	91	83 - 98	2007

Water Quality Data of Imported Water Sources

The table below lists all of the contaminants that the MWD **detected** during the 2007 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, 2007.

Inorganic Chemicals	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source of Contaminant
Aluminum (ppb)	100	600	75	ND - 120	2007	NO	erosion of natural deposit; residual from surface water treatment processes
Arsenic (ppb)	10	0.004	ND	ND - 2.8	2007	NO	natural deposits erosion; glass and electronic production waste
Barium, (ppm)	1000	2000	ND	ND - 103	2007	NO	oil and metal refineries discharge; natural deposits erosion
Fluoride (ppb) (treatment related)	2	1	0.1 - 1	0.6 - 0.9	2007	NO	erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as Nitrogen (ppm)	10	10	0.5	ND - 0.7	2007	NO	run-off & leaching from fertilizer use; sewage; natural erosion

Radionuclides

Gross Alpha (pCi/L)	15	(0)	ND	ND - 7.2	2007	NO	erosion of natural deposits
Gross Beta (pCi/L)	50	(0)	ND	ND - 6.4	2007	NO	decay of natural and man-made deposits

Regulated Constituents with Secondary Standards (Import Sources)

(aesthetic/sensory standards)

	MCL	PHG (MCLG)	Average Amount	Range Detected	Most Recent Sample Date	Violation	Typical Source of Contaminant
Aluminum (ppb)	200	600	75	ND - 120	2007	NO	erosion of natural deposit; residual from surface water treatment processes
Chloride (ppm)	500	NS	88	75 - 101	2007	NO	runoff and/or leaching from natural deposit; seawater influence
Color, Units	15	NS	2	1 - 2	2007	NO	natural occurring organic material
Corrosivity (Saturation Index)	"non-corrosive"	"non-corrosive"	0.32	.17-.45	2007	NO	elemental balance in water; affected by temperature, other factors
Corrosivity (Aggressiveness Index)	"non-corrosive"	"non-corrosive"	12.2	12 - 12.3	2007	NO	elemental balance in water, affected by temperature, other factors
Odor Threshold, Units	3	NS	2	ND - 2	2007	NO	natural organic material
Specific Conductance (micromhos/cm)	1600	NS	801	674 - 893	2007	NO	substance that form ion when in water, seawater influence
Sulfate (ppm)	500	NS	158	122- 179	2007	NO	runoff and/or leaching from natural deposit, industrial waste
Total Dissolved Solids (ppm)	1000	NS	469	394-519	2007	NO	runoff and/or leaching from natural deposit; seawater influence
Turbidity (NTU)	5	NS	0.04	.03-.05	2007	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 of Contaminant
Boron (ppb)	1000	140	130-150	2007	runoff/leaching from natural deposits industrial wastes
Chromium VI (ppb)	NA	0.11	0.09-0.13	2007	industrial waste discharge
Vanadium (ppb)	50	3.3	ND - 3.7	2007	naturally occurring; industrial waste discharge
Chlorate (ppb)	800	24 - 43	ND - 36	2007	by-product of drinking water chlorination; industrial

Additional Water Quality Parameters (Import Sources)

	Average Amount	Range Detected	Most Recent Sample Date	Comments
Alkalinity (ppm)	93	82 - 103	2007	No standard has been established.
Calcium (ppm)	46	36 - 55	2007	No standard has been established.
Hardness (grains per gallons, gpg)	12	9 - 13	2007	No standard has been established
Magnesium (ppm)	21	16 - 23	2007	No standard has been established.
N-Nitros odimethylamine (NDMA) (ppt) (PHG = 3 ppt)	NO	ND - 8.2	2007	No standard has been established.
pH (acids/bases)	8.2	8.1 - 8.3	2007	No standard has been established.
Postassium (ppm)	4	3 - 4	2007	No standard has been established.
Sodium (ppm)	83	73 - 91	2007	No standard has been established.