

# 2008



## LOS ANGELES COUNTY WATERWORKS DISTRICTS

DISTRICT NO. 40, REGION 4 & 34 (LANCASTER & DESERT VIEW HIGHLANDS)

# ANNUAL WATER QUALITY REPORT

## DEAR CUSTOMER:

The Los Angeles County Waterworks Districts are pleased to provide you with our 2008 Annual Water Quality Report. We are committed to serving you a reliable supply of high quality water that meets State and Federal standards. Our on-going efforts include increasing the capacity and reliability of the water system and ensuring the quality of our water supply through rigorous water quality testing.

There are two drinking water quality standards, Primary and Secondary Drinking Water Standards. Primary Drinking Water Standards are set for substances that are thought to pose a health risk at certain levels and are enforceable by law. Secondary Drinking Water Standards are set for substances that do not pose a health risk and are intended to control the aesthetic qualities related to the public acceptance of drinking water. Secondary Standards are not enforceable by law. We are pleased to inform you that during all of 2008, your drinking water met all Primary and Secondary Drinking Water Standards.

This report is intended to provide you with a better understanding of your drinking water. It contains information about where your water comes from, how your water is treated and monitored, and what contaminants may be present in your water. Moreover, we have included source water assessments, results from our water quality testing, and general information about your drinking water.

*Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien.*

## WATER QUALITY MONITORING

To ensure that water is safe to drink, the United States Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.



To meet these regulations, the District has contracted with a State-certified laboratory to conduct all water quality analyses. The source water is tested for chemical, physical, radiological, and bacteriological parameters as required by Federal and State regulations. We also test for additional organic and inorganic chemicals that are not regulated.

Key locations within the distribution system have been selected to monitor water quality. Every week, the distribution system is tested for bacteria and disinfectant levels to ensure that you receive safe and high quality drinking water. The distribution system is also tested for color, odor, temperature, turbidity, and disinfection byproducts monthly. All tests are conducted in a State-certified laboratory using Federally approved testing methods. Our contracted laboratory is equipped with state-of-the-art instruments capable of detecting contaminants at very minute quantities.



## PUBLIC PARTICIPATION AND CONTACT INFORMATION

The regular meetings of the Los Angeles County Board of Supervisors are held every Tuesday at 9:30 a.m. in the Board's Hearing Room located at 500 West Temple Street, Room 381B, Kenneth Hahn Hall of Administration in Los Angeles. The regular meeting of the Board held on the fourth Tuesday of each month is primarily for the purpose of conducting legally required public hearings on zoning matters, fee increases, special district proceedings, property transactions, etc. On Tuesdays following a Monday holiday, the meetings begin at 1:00 p.m.

The Los Angeles County Waterworks Districts welcome your comments on our Annual Water Quality Report. For questions or comments regarding water quality or this report, please contact Mr. Ron DeVera at (661) 951-3683 or Mr. Timothy Chen at (626) 300-3342. To view this report on the internet, please visit our website at <http://ladpw.org/wsm/waterqualityrpt.cfm>.

## Source Water Assessment Table for District 40, Region 4 & 34

Vulnerable Wells	Possible Contaminating Activities
4-5 AND 4-72	DRY CLEANERS
4-26, 4-60, 4-62, 4-67, 4-68, 4-69, AND 4-72	AUTOMOBILE GAS STATIONS
4-26	CHEMICAL, PETROLEUM PROCESSING, STORAGE
4-25, 4-38, 4-61, AND 4-68	ABOVE GROUND STORAGE TANKS
4-25, 4-38, AND 4-61	AUTOMOBILE CARWASHES
4-25, 4-32, 4-38, 4-61, AND 4-62	CONTRACTOR OR GOVERNMENT AGENCY, EQUIPMENT STORAGE YARD
4-25, 4-38, AND 4-61	HOSPITAL
4-25, 4-38, 4-61, AND 4-62	HIGH DENSITY HOUSING
4-25, 4-38, AND 4-61	PARKING LOTS/MALLS
4-32, 4-38, 4-61 AND 4-68	WATER SUPPLY WELLS
4-69	HIGH DENSITY SEPTIC SYSTEMS
4-62, 4-67, AND 4-69	AUTOMOBILE BODY SHOPS
4-62, 4-67, 4-69, AND 4-72	AUTOMOBILE REPAIR SHOPS
4-62, 4-69 AND 4-72	RAILROAD YARDS, MAINTENANCE, FUELING AREAS
4-67	JUNK, SCRAP, SALVAGE YARDS
4-67	FARMER MACHINERY REPAIR
4-15, 4-52, AND 4-72	METAL PLATING, FINISHING, FABRICATING
4-22, 4-27, 4-39, 4-41, 4-43, AND 4-72	LOW DENSITY SEPTIC SYSTEMS
4-29, 4-30, AND 4-69	FLEET, TRUCK, BUS TERMINALS
4-29 AND 4-30	UTILITY STATIONS - MAINTENANCE AREAS
4-33, 4-36, 4-50, 4-51, 4-54, 4-55, 4-58, 4-59, 4-62, 4-63, 4-64, 4-67, 4-69, AND 4-72	SEWER COLLECTION SYSTEMS
4-32, 4-62, AND 4-68	STORM DRAIN DISCHARGE POINTS
4-37	PARKS
4-39, 4-41, 4-43, 4-44, AND 4-65	ILLEGAL ACTIVITIES, UNAUTHORIZED DUMPING
4-39, 4-41, 4-43, 4-44, 4-62, AND 4-65	OTHER ANIMAL OPERATIONS
4-69	AGRICULTURAL DRAINING
4-70	CHEMICAL, PETROLEUM PIPELINES
4-67, 4-69 AND 4-72	MACHINE SHOPS
4-67 AND 4-68	ROADS
4-67	MOTOR POOLS
34-6	ABOVE GROUND STORAGE TANKS, WATER SUPPLY WELLS

## THE SOURCE OF YOUR WATER AND ITS TREATMENT

During 2008, approximately 52 percent of the water served in the Region was treated surface water and the remaining 48 percent was groundwater. The District purchases its treated surface water from the Antelope Valley-East Kern Water Agency (AVEK). AVEK gets its water from the Sacramento River/San Joaquin Delta via the State Water Project. The District extracts groundwater from its 42 wells in the Lancaster area.



The surface water from AVEK is treated at their treatment plants using conventional treatment methods, which include coagulation, flocculation, sedimentation, and filtration. The water is then disinfected to kill any remaining microorganisms, such as bacteria, and reduce the potential for their regrowth in the distribution pipes. The groundwater the District serves is also disinfected with chlorine for the same reasons.

## SOURCE WATER ASSESSMENT

A source water assessment was conducted for all of the active sources in the Region in December 2001. Nitrates and arsenic were detected from these sources. Arsenic occurs naturally in this region, while the occurrence of nitrates is probably due to past agricultural practices. The wells listed on the table below are considered most vulnerable to the following activities.



## CAPITAL IMPROVEMENTS

- Construction of four new groundwater wells was completed in 2008 to increase water supply reliability in Lancaster.



# WATER QUALITY DATA



The table below lists all drinking water contaminants that were 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. Bacteria, trihalomethanes, haloacetic acids, and chlorine are tested for regularly in the distribution system and are reported below. The State requires us to monitor certain contaminants less frequently than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, may be more than one year old, which is indicated in the parameter.

PARAMETER	PHG or MCLG	MCL	TREATED SURFACE WATER		CHLORINATED GROUNDWATER		TYPICAL SOURCE OF CONSTITUENT
			RANGE OF DETECTION	AVERAGE LEVEL	RANGE OF DETECTION	AVERAGE LEVEL	
<b>PRIMARY DRINKING WATER STANDARDS</b>							
<b>INORGANIC CONTAMINANTS</b>							
ARSENIC (ppb)	0.004	10	ND	ND	ND-30.6	5.3	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
CHROMIUM (ppb)	100	50	ND	ND	ND-11.8	4.7	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
FLUORIDE (ppm)	1	2	ND	ND	ND-0.51	0.20	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
NITRATE (AS NO <sub>3</sub> ) (ppm)	45	45	4.1	4.1	ND-17.9	3.2	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>DISINFECTION BYPRODUCTS PRECURSORS</b>							
TOTAL ORGANIC CARBON (ppm)	NS	TT	0.7-2.2	1.5	-	-	Various natural and manmade sources
<b>RADIOLOGICAL CONTAMINANTS</b>							
GROSS ALPHA PARTICLE ACTIVITY (pCi/L)	0	15	ND-6.2	ND	0.78-4.35	2.63	Erosion of natural deposits
COMBINED RADIUM (226 & 228) (pCi/L)	0	5	—	—	ND-0.48	0.21	Erosion of natural deposits
URANIUM (pCi/L)	0.43	20	—	—	0.29-4.81	2.23	Erosion of natural deposits
<b>SECONDARY DRINKING WATER STANDARDS</b>							
ZINC (ppm)	NS	5	0.27	0.27	ND-62.7	10.5	Runoff / leaching from natural deposits; industrial wastes
TOTAL DISSOLVED SOLIDS (ppm)	NS	1000	320	320	174-259	203	Runoff / leaching from natural deposits
SPECIFIC CONDUCTANCE (uS/cm)	NS	1600	430-852	512	276-415	324	Substances that form ions when in water; seawater influence
CHLORIDE (ppm)	NS	500	100	100	5.8-34.3	18.5	Runoff / leaching from natural deposits; seawater influence
SULFATE (ppm)	NS	500	69	69	16.2-39.6	26	Runoff / leaching from natural deposits; industrial wastes
<b>GENERAL PHYSICAL PARAMETERS</b>							
COLOR (units)	NS	15	<3-<5	<5	ND	ND	Naturally-occurring organic materials
ODOR (Units)	NS	3	<1-2	<1	ND	ND	Naturally-occurring organic materials
TURBIDITY (units)	NS	5	0.02-0.36	0.08	0.11-1.23	0.33	soil runoff
<b>UNREGULATED CONTAMINANTS</b>							
PARAMETER	PHG or MCLG	MCL	TREATED SURFACE WATER		CHLORINATED GROUNDWATER		HEALTH EFFECTS
			RANGE OF DETECTION	AVERAGE LEVEL	RANGE OF DETECTION	AVERAGE LEVEL	
CHROMIUM VI (ppb)	NS	NS	-	-	10.3-11.0	10.7	N/A

BORON (ppb)	NS	1000 (NOTIFICATION LEVEL)	-	-	190-760	475	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals
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### GENERAL MINERAL CONSTITUENTS

CARBONATE ALKALINITY (ppm)	NS	NS	<2	<2	ND	ND	Leaching from natural deposits
BICARBONATE ALKALINITY (ppm)	NS	NS	84	84	87-154	119	Leaching from natural deposits
TOTAL ALKALINITY (as CaCO <sub>3</sub> ) (ppm)	NS	NS	69	69	—	—	Leaching from natural deposits
CALCIUM (ppm)	NS	NS	27	27	8-26	16	Leaching from natural deposits
TOTAL HARDNESS (ppm)	NS	NS	110	110	22-80	49	Leaching from natural deposits
MAGNESIUM (ppm)	NS	NS	9.5	9.5	0.5-4.9	3.6	Leaching from natural deposits
pH (pH Units)	NS	NS	6.4-7.2	6.4	7.56-7.88	7.75	Natural acidity/alkalinity of water
POTASSIUM (ppm)	NS	NS	2.4	2.4	—	—	Leaching from natural deposits
SODIUM (ppm)	NS	NS	72	72	23.7-68.7	51.1	Leaching from natural deposits

### DISTRIBUTION SYSTEM WATER QUALITY

DISINFECTANTS & DISINFECTION BYPRODUCTS	MCLG OR [MRDLG]	MCL OR [MRDL]	RANGE OF DETECTION	HIGHEST 4-QUARTERLY AVERAGE	TYPICAL SOURCE OF CONSTITUENT
TOTAL CHLORINE (ppm)	[4] as Cl <sub>2</sub>	[4] as Cl <sub>2</sub>	0.93-1.14	1.06	Drinking water disinfectant added for treatment
TOTAL TRIHALOMETHANES (ppb)	NS	80	ND-166.0	50.1	Byproduct of drinking water chlorination
HALOACETIC ACIDS (ppb)	NS	60	ND-27.0	11.5	Byproduct of drinking water chlorination

### RESIDENTIAL TAP WATER QUALITY

LEAD AND COPPER (UNITS)	PHG	ACTION LEVEL	RANGE OF DETECTION	90TH % LEVEL	NUMBER OF SITES SAMPLED	NUMBER OF SITES ABOVE ACTION LEVEL	TYPICAL SOURCE OF CONSTITUENT
COPPER (ppm) 2007	0.17	1.3	ND-0.84	0.38	51	0	Internal corrosion of household plumbing system; erosion of natural deposits; leaching from wood preservatives
LEAD (ppb) 2007	2	15	ND-30.7	7.12	51	2	Internal corrosion of household plumbing system; discharge from industrial manufacturers; erosion of natural deposits

## TERMS AND ABBREVIATIONS USED IN THE WATER QUALITY DATA TABLE

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

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

**Public Health Goal (PHG)** is 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.

**Maximum Residual Disinfectant Level (MRDL)** is 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)** is 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 USEPA.

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

**Regulatory Action Level (AL)** is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Treatment Technique (TT)** is a required process intended to reduce the level of a contaminant in drinking water.

ppm = parts per million (milligrams per liter)  
ppb = parts per billion (micrograms per liter)  
pCi/L = picoCuries per liter  
ppt = parts per trillion

NA = Not Applicable  
ND = None Detected  
NS = No Standard

SI = Saturation Index (Langelier)  
NTU = Nephelometric Turbidity Unit  
µmhos/cm = micromhos per centimeter

# CONTAMINANTS THAT MAY BE PRESENT IN WATER

The sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over land surface 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 use.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

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

In order to ensure tap water is safe to drink, the 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 provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of 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).

## THE QUALITY OF YOUR WATER

**Lead and Copper:** During 2007, we conducted lead and copper sampling from several high-risk homes in the Region as required by DHS. The 90th percentile result for copper was 0.38 milligrams per liter and 7.12 micrograms per liter for lead. These results are well below the regulatory Action Levels for lead and copper in drinking water. The next round of lead and copper monitoring is scheduled for 2010.

**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.

Arsenic is naturally occurring and is introduced into groundwater through arsenic-bearing soils and rocks. The arsenic concentration in stand-by Well No. 4-37 was measured at 30.6 ppb. Stand-by wells are used in emergency situations and can be used a maximum of fifteen days in a one-year period. Well No. 4-37 was active for less than four days and was one of four wells used to prevent a water outage during the AVEK shutdown in 2008. It is noteworthy to point out that the MCL was lowered by the USEPA from 50 ppb to 10 ppb in January 2006.

**Trihalomethanes:** Some people who use water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.

**Cryptosporidium:** Cryptosporidium is a microscopic organism that causes a gastro-intestinal disease called cryptosporidiosis which may cause diarrhea, headache, abdominal cramps, nausea, vomiting, and low grade fever. The infectious microorganism can be transmitted through ingestion of contaminated food, drinking water, or by direct contact with the fecal matter of infected persons or animals.



The chance of its presence in the water supply is extremely small because it is being monitored on a regular basis and very low levels, hundreds of times lower than those reported in other parts of the Country, have been detected in untreated water. Multiple-barrier treatment which includes coagulation, flocculation, filtration, and disinfection at AVEK treatment plants further minimize the chance of its presence in treated water.

While the general public is at a very low risk of contracting Cryptosporidium, 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 risks of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

# BOTTLED WATER, HOME TREATMENT DEVICES, AND SOFTENERS

**B**ottled water need not be purchased for health reasons, since tap water meets the Federal and State drinking water standards. If taste is an issue, bottled water might be the answer, but keep in mind that it is over 1,000 times more expensive than tap water.

Installation of a home treatment unit is a personal matter. These devices are not required to make the water meet the Federal and State drinking water standards. In fact, if not properly maintained, these devices may actually cause water quality problems. However, some people are concerned about the taste of their drinking water. If taste is an issue, then a home treatment unit might be appropriate. All units require maintenance and should be bought from a reputable dealer. They should also be tested and validated against accepted performance standards like those used by the National Sanitation Foundation (NSF).

Hardness in drinking water is caused by two non-toxic minerals: calcium and magnesium. Hard water reduces the amount of lather or suds produced by soap. Hard water also tends to leave deposits such as rings in the bathtub, scales on cooking pots and irons, and spots on glassware. At a hardness level above 120 milligrams per liter, a water softener might be considered to reduce deposits in the hot water system and to make washing easier. Distilled water may be used in place of drinking water in irons to prevent deposits.

Water softeners generally replace the non-toxic hardness minerals in the water with sodium. Although the amount of sodium produced is relatively insignificant in comparison to the sodium found in food, people with sodium restricted diets should consult their doctor or install a softener for their hot water supply only.



## WATER CONSERVATION INFORMATION

**O**n 02/27/09, California Governor Arnold Schwarzenegger declared a state emergency due to drought and said he would consider mandatory water rationing in the face of nearly \$3 billion in economic losses from below-normal rainfall this year. As California is facing the most significant water crisis in history, it is critical that water systems and their customers properly conserve and manage our water resources.

In addition to protecting the quality of water delivered to you, we also promote and implement water conservation programs in your area. You can conserve water at home and save money by observing the following practical guidelines:

- Run your dishwasher or washing machine with only full loads and save 30 to 800 gallons every month. Use cold or warm water rather than hot for washing clothes and dishes whenever possible.
- Install water saving devices like faucet aerators and low flow showerhead and save a gallon of water during each minute of your shower. Turn off water while washing face, shaving or brushing teeth.
- Up to 70% of residential water use occurs outdoors. Landscaping your yard and garden with California native and drought - tolerant plants is a smart alternative for residents who want to have a beautiful garden and save water and money. Turn off sprinkles in the winter or when it's raining or windy. Make sure sprinklers water the yard, not the sidewalk or street and save 500 gallons a month.
- Sweep your sidewalks and driveways instead of hosing them and save up to 4 gallons of water per minute that you would have spent using the hose.
- Check your pipes and faucets regularly for leaks and repair them promptly. Call our office at 1-800-675-HELP to report leaks in our system.
- Use less energy by setting your water heater to 120°.
- Fill the sink or a bucket with water rather than letting the water run until it gets hot.
- Visit [www.bewaterwise.com](http://www.bewaterwise.com) or [www.ladpw.org/wwd/conservation/](http://www.ladpw.org/wwd/conservation/) for practical "how-to" information on water conservation.
- Call (888) 828-8602 or email [watersurveys@niagaraconservation.com](mailto:watersurveys@niagaraconservation.com) to request a conservation specialist to visit your home at no cost to you, and receive personalized recommendations for water conserving measures to reduce your water usage without affecting your quality of life.
- Contact Ms. Viki Yip at (626) 300-4683 to request information on rebates for free ultra-low-flush toilets or high-efficiency clothes washers.

If you have any questions or comments regarding water conservation, visit [www.888cleanLA.com](http://www.888cleanLA.com). You may also call 1-888-CLEANLA or contact Ms. Viki Yip at (626) 300-4683.