

Building for tomorrow

■ **Increasing Water Reliability**
Lakewood strives to provide safe and abundant water to its customers. Water reliability requires the maintenance of existing water wells and the development of new water wells when a well's yield drops and cannot be recovered through rigorous maintenance. The city rehabilitated two existing water wells to increase water production and well efficiency. In July 2010 the city turned on the switch to a 2,250 gallon per minute well and treatment plant facility. The facility, part of a joint water storage project with the Long Beach Water Department, was partially funded through a grant from the California Department of



Water Resources and Metropolitan Water District of Southern California.

Save \$ with Lakewood's water rebate program

■ **Improving Water Delivery**
Old 4 inch diameter cast iron water mains can be a source of rusty water. Lakewood replaces these mains with new 8 inch lines to improve water quality and increase water volume and pressure for fire suppression activities. In addition to the city's annual water main flushing program, the Department of Water Resources replaced three miles of water mains in 2010. The project included replacing 452 customer service lines, installing 33 new fire hydrants and 41 new operating valves. Lakewood plans to replace another two miles of water mains in 2011.

While California emerges from a three-year drought, our city government is already committed to preparing Lakewood to make it through the NEXT one. Future water shortages are inevitable given California's history of recurring drought.

To help, the city is offering residents up to \$195 back on their water bills if they take voluntary steps to reduce outdoor water use. Starting May 1, the city will accept applications for rebates, but simple projects like installing more efficient sprinkler heads and hose timers can be done now. Receipts should be saved for turning in with a device rebate application. More complex projects like turf removal and landscape makeovers need to be approved prior to submitting them for approval starting May 1. Interested homeowners can use the time prior to May 1 to settle on a design and/or attend free water wise workshops as they firm up their plans. Rebate applications are available



online at www.lakewoodcity.org/waterrebates — along with a list of accepted water efficiency devices, extensive FAQs and how-to documents. Forms should be filled out, printed and signed for submission to the city. Lakewood rebates fall into two categories: devices and turf projects. Device rebates run from \$5 to \$50 towards the purchase cost of water-saving irrigation devices like low-waste "rotor" sprinkler heads, drip irrigation kits and hose timers. Additional rebates are available for irrigation timers/controllers and moisture sensors. Turf removal and landscape makeovers are another rebate option. The program offers up to \$80 for the removal of thirsty grass landscaping and the cost of water-wise re-landscaping, irrigation or installation of water-permeable surfaces. This can be done in conjunction with a device rebate.

■ **Need more water quality information? Interested in sharing views on water quality issues? Contact Leon de los Reyes, Water Operations Superintendent, or Nancy van der Linden, Water Administration Manager at 866-9771, extension 2700.**

Opinions on the water supply can also be expressed at Lakewood City Council meetings held the second and fourth Tuesday of each month at 7:30 p.m. in the City Council Chambers, 5000 Clark Avenue.

■ **About 6,000 Lakewood households east of the San Gabriel River are served by Golden State Water Company, an investor-owned water company. For information on Golden State's water quality report, call 1-800-999-4033.**



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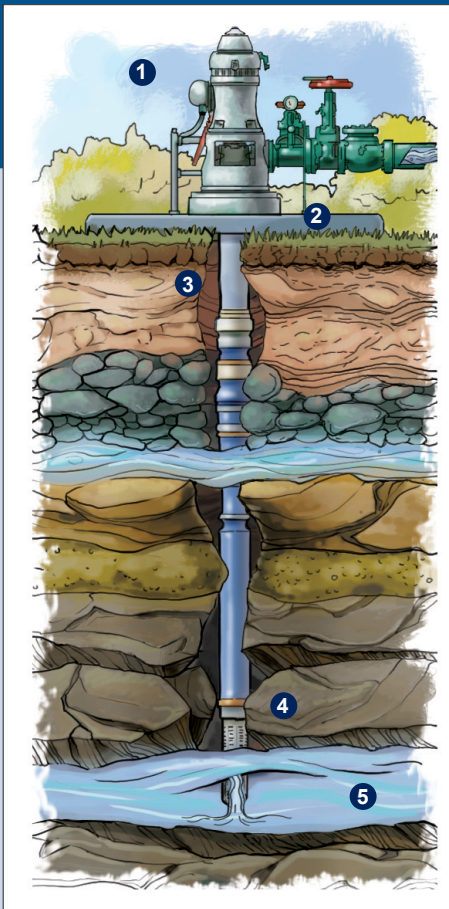
The Lakewood Department of Water Resources completed an assessment of all drinking water wells that serve the city's drinking water system. These studies examined the potential vulnerability of each well to contaminants that could enter the water supply. The table on this page indicates the results. The checks indicate the type of business or activity that could potentially contaminate the groundwater supply. To learn more about the constituents found in the city's

drinking water supply, please refer to the charts located on the center pages of this report.

A copy of the complete assessment is available at the Lakewood City Clerk's Office at 5050 Clark Avenue. You may request a summary of the assessment by contacting the Lakewood Department of Water Resources, at 562-866-9771, extension 2700.

City of Lakewood Groundwater Vulnerability Assessment

POTENTIAL SOURCES OF GROUNDWATER CONTAMINATION					
WELL NUMBER	ASSESSMENT COMPLETION DATE	GAS STATIONS & REPAIR SHOPS	HISTORIC GAS STATION LOCATIONS	STORAGE TANKS	DRY CLEANERS
2A	April, 2003		✓	✓	
4	April, 2003	✓	✓	✓	
8	April, 2003	✓	✓	✓	✓
10	April, 2003	✓	✓	✓	✓
12	April, 2003			✓	✓
13A	July, 2003		✓		
14	April, 2003	✓	✓	✓	
15A	April, 2003	✓	✓		
17	April, 2003	✓	✓	✓	✓
18	April, 2003	✓		✓	✓
22	April, 2003	✓			
27	October, 2006	✓	✓	✓	✓



How a city well works. The wellhead pump 1 sits on a concrete base 2 that protects the well casing and keeps out surface contaminants. Depending on the location and the age of the well, the casing may extend more than 1,000 feet below ground 3. A deep well may draw on several water-bearing zones along the well's length. The underground casing is grouted until it reaches a water-bearing aquifer 4 where the casing is perforated to allow water to be drawn into the well 5.

LAKEWOOD
Water Quality Report

News from the City of Lakewood

www.lakewoodcity.org
CityLine: 925-4357



March 2011 • Volume 33 • No. 2

Lakewood's 2010 water quality report shows that the city's drinking water meets all state and federal drinking water quality standards.

The city's annual water quality report may look highly technical, but it's designed to provide you with a lot of information in a form that can easily be compared. The report lists the results of analyses that describe and quantify the constituents found in Lakewood's water samples.

If you look at all the possible sources of drinking water (including tap water and bottled water), you'll find that water comes from rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or underground through aquifers, 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.

All drinking water, including bottled water, can reasonably be expected to contain at least small amounts of some constituents. The presence of any of these constituents in drinking water does not necessarily indicate that the water poses a health risk.

To ensure that tap water is safe to drink, the United States Environmental Protection Agency and the

California Department of Public Health set regulations that limit the amount of certain constituents in the water provided by public water systems.

Health department regulations also establish limits for contaminants in bottled water to provide the same protection for public health.

Constituents that may be present in source water include:

■ **Microbial contaminants, such as viruses and bacteria,** which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

■ **Inorganic contaminants, such as salts and metals,** which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

■ **Pesticides and herbicides, which may come from a variety of sources,** such as agriculture, urban storm water runoff, and residential uses.

■ **Organic chemical contaminants, including synthetic and volatile organic chemicals** that are by-products of industrial processes and petroleum production, can come from gas stations, urban storm water runoff, agricultural applications, and septic systems.

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

More information about constituents in drinking water and their potential health effects is available by calling the U. S.

California Department of Public Health set regulations that limit the amount of certain constituents in the water provided by public water systems. Health department regulations also establish limits for contaminants in bottled water to provide the same protection for public health. Constituents that may be present in source water include: Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. Pesticides and herbicides, which may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, can come from gas stations, urban storm water runoff, agricultural applications, and septic systems. Radioactive contaminants, which can be naturally occurring, or the result of oil and gas production or mining activities. More information about constituents in drinking water and their potential health effects is available by calling the U. S.

(Continues on flap)



Lakewood's water is drawn from the Central Basin. Spreading grounds north of Lakewood allow recharge of the aquifers in wet years. The freshwater barrier south of Lakewood holds back the inflow of seawater.

Lakewood's 2010 water quality report is available on the city's website, www.lakewoodcity.org, as a PDF document. You can also get additional information about the city's water system by calling City-Line at 925-4357 and pressing 652.

Call city hall at 562-866-9771 to voice water quality concerns or schedule a free appointment for a water shutdown to make plumbing repairs or locate a water leak. Water department staff members provide Lakewood water customers with service 24 hours a day, seven days a week. If you need assistance after normal business hours, call and follow the directions for a water emergency. A department representative will respond to your request.

A note on lead
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Lakewood is responsible for providing high quality drinking water, but cannot control the variety of materials used in home plumbing. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or online at <http://www.epa.gov/safewater/lead>.

■ **Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para ayuda en Español, por favor llama Alma Varela, 562-866-9771, extensión 2103.**

■ **Mahalaga ang impormasyong ito. Mangyaring ipasalin ito. Kung gusto ninyong makausap sa Tagalog ang kinatawan ng lungsod ng Lakewood, tawagan si Leon de los Reyes sa 562-866-9771, extension 2700.**

City of Lakewood Department of Water Resources 2010 Annual Water Quality Report

DISTRIBUTION SYSTEM ANALYSES (a)

PRIMARY DRINKING WATER STANDARDS (b) HEALTH RELATED STANDARDS

CONSTITUENT (c)	UNIT OF MEASURE	MAXIMUM CONTAMINANT LEVEL (MCL) (d) OR MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL) (e)	PHG (f), (MCLG) (g) OR MRDLG (h)	RANGE	AVERAGE	MAJOR SOURCE IN LAKEWOOD'S DRINKING WATER (i)	HEALTH EFFECTS (j)
MICROBIOLOGICAL							
Total Coliform Bacteria (Non-Fecal Coliform)	% Positive (k)	5%	(0)	0% - 1%	0.3%	Naturally present in the environment	
DISINFECTION BY-PRODUCTS & DISINFECTANT RESIDUALS							
Chlorine	ppm	MRDL=4 as CL ₂	MRDLG=4 as CL ₂	0.1 - 2	1	Drinking water disinfectant added for treatment	
Haloacetic Acids	ppb	NA	NA	ND (l) - 18	7	By-product of drinking water disinfection	
Total Trihalomethanes (TTHMs)	ppb	80	NA	ND - 45	17	By-product of drinking water disinfection	

ppb=parts per billion, or micrograms per liter (ug/l) • ppm=parts per million, or milligrams per liter (mg/l) • NA=Not Applicable

SECONDARY DRINKING WATER STANDARDS (m) AESTHETIC STANDARDS

CONSTITUENT	UNIT OF MEASURE	MCL	PHG OR (MCLG)	RANGE	AVERAGE	MAJOR SOURCE IN LAKEWOOD'S DRINKING WATER
GENERAL PHYSICAL CHARACTERISTICS OF WATER SUPPLY						
Color	units	15	NA	<5	<5	Naturally occurring organic materials
Odor-Threshold	units	3	NA	ND - 1	0.03	Naturally occurring organic materials
Turbidity (n)	units	5	NA	0.06 - 0.4	0.2	Soil runoff

NA=Not Applicable

SOURCE OF SUPPLY ANALYSES (a)

PRIMARY DRINKING WATER STANDARDS (b) HEALTH RELATED STANDARDS

CONSTITUENT	UNIT OF MEASURE	MCL	PHG OR (MCLG)	RANGE	AVERAGE	MAJOR SOURCE IN LAKEWOOD'S DRINKING WATER	HEALTH EFFECTS
RADIOACTIVE							
Gross Alpha particle activity	pCi/l	15	(0)	ND - 5	2	Erosion of natural deposits	
INORGANIC CHEMICALS							
Aluminum	ppm	1	0.6	ND - 0.07	0.01	Erosion of natural deposits	
Arsenic	ppb	10	0.004	2 - 7	5	Erosion of natural deposits	
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 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.							
Barium	ppm	1	2	ND - 0.2	0.1	Erosion of natural deposits	
Fluoride	ppm	2	1	0.3 - 0.5	0.4	Erosion of natural deposits	
Nitrate (as N03)	ppm	45	45	ND - 6	1	Erosion of natural deposits	

pCi/L= picocuries per liter (a measure of radioactivity) • ppb=parts per billion, or micrograms per liter (ug/l) • ppm=parts per million, or milligrams per liter (mg/l)

SECONDARY DRINKING WATER STANDARDS (m) AESTHETIC STANDARDS

CONSTITUENT	UNIT OF MEASURE	MCL	PHG OR (MCLG)	RANGE	AVERAGE	MAJOR SOURCE IN LAKEWOOD'S DRINKING WATER
INORGANIC CHEMICALS						
Chloride	ppm	500	NA	7 - 34	17	Runoff/leaching from natural deposits
Iron	ppb	300	NA	ND - 140	23	Leaching from natural deposits
Manganese	ppb	50	NA	ND - 46	9	Leaching from natural deposits
Specific Conductance	micromhos	1,600	NA	296 - 600	423	Substances that form ions when in water
Sulfate	ppm	500	NA	13 - 79	36	Runoff/leaching from natural deposits
Total Dissolved Solids (TDS)	ppm	1,000	NA	179 - 400	264	Runoff/leaching from natural deposits

ppb=parts per billion, or micrograms per liter (ug/l) • ppm=parts per million, or milligrams per liter (mg/l) • micromhos=micromhos per centimeter (umho/cm) • NA=Not Applicable



UNREGULATED CONSTITUENTS (o)

CONSTITUENT	UNIT OF MEASURE	NOTIFICATION LEVEL (NL) (p)	PHG OR (MCLG)	RANGE	AVERAGE
Tert-Butyl Alcohol (TBA)	ppb	12	NA	ND - 3.7	0.5

ppb=parts per billion, or micrograms per liter (ug/l) • NA=Not Applicable

ADDITIONAL PARAMETERS

CONSTITUENT	UNIT OF MEASURE	MCL	PHG OR (MCLG)	RANGE	AVERAGE	MAJOR SOURCE IN LAKEWOOD'S DRINKING WATER
Alkalinity, Total (as CaCo3)	ppm	NS (q)	NA	130 - 200	165	Natural or industrially influenced balance of hydrogen, carbon and oxygen in the water, affected by temperature and other factors
Calcium	ppm	NS	NA	25 - 73	49	
Corrosivity	SI Units	Non-corrosive	NA	12 - 13	12	
Hardness (CaCo3) (r)	ppm	NS	NA	80 - 240	153	
Magnesium	ppm	NS	NA	3 - 14	7	
pH	units	6.5 - 8.5	NA	7.82 - 8.39	8.1	
Potassium	ppm	NS	NA	2 - 3	3	
Sodium (s)	ppm	NS	NA	22 - 42	30	

SI Units= Saturation Index Units • ppm=parts per million, or milligrams per liter (mg/l) • NA=Not Applicable

AT-THE-TAP MONITORING PROGRAM (t)

CONSTITUENT	UNIT OF MEASURE	REGULATORY ACTION LEVEL (AL) (u)	PHG OR (MCLG)	HIGHEST LEVEL DETECTED	90TH PERCENTILE VALUE (v)	# OF SITES WITH ANALYSES ABOVE THE AL	MAJOR SOURCE IN LAKEWOOD'S DRINKING WATER
Copper	ppm	1.3	0.3	0.36	0.256	0 of 31	Internal corrosion of household plumbing systems
Lead	ppb	15	0.2	6	0	0 of 31	Internal corrosion of household plumbing systems

ppb=parts per billion, or micrograms per liter (ug/l) • ppm=parts per million, or milligrams per liter (mg/l)

DEFINITIONS

- (a) **Distribution System and Source of Supply Analyses:** The city draws most water quality samples from 12 wells, the source of the city's water supply. The California EPA also requires water quality monitoring throughout the city's 167 miles of water mains each week. Those constituents listed in the section entitled Distribution System Analyses are monitored quarterly or weekly. The city conducts over 3,100 water quality tests on water in the distribution system annually. The remaining constituents are sampled at the city's well sites. The results of these analyses are listed in the section entitled Source of Supply Analyses.
- (b) **Primary Drinking Water Standards:** Maximum Contaminant Levels (MCLs) and Maximum Residual Disinfectant Levels (MRDLs) for constituents that affect health along with monitoring and reporting requirements, and water treatment requirements. The city tested for 96 additional regulated chemicals in 2010.
- (c) **Constituent:** A constituent is any naturally occurring or manmade substance found in drinking water. The USEPA and the California EPA establish the list of constituents that require testing and the frequency of each test. Some data, though representative of current water quality conditions, are five years old. The state allows water utilities to monitor some constituents less than once per year, because the concentrations of these constituents do not change frequently. All data included in this report was collected between January 1, 2006 and December 31, 2010. Only samples with detectable levels of a constituent are listed in the tables. The California Department of Public Health waived groundwater monitoring requirements for 37 additional chemicals.
- (d) **Maximum Contaminant Level (MCL):** Highest level of a constituent allowed in drinking water. Primary MCLs are set as close to Maximum Contaminant Level Goals (MCLGs) and Public Health Goals (PHGs) as technically and economically feasible. (See definitions (f) and (g) for further information on MCLGs and PHGs.)
- (e) **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- (f) **Public Health Goal (PHG):** The level of a constituent in drinking water below which there is no known or expected risk to health. The California EPA establishes PHGs.
- (g) **Maximum Contaminant Level Goal (MCLG):** The level of a constituent in drinking water below which there is no known or expected risk to health. The USEPA establishes MCLGs. MCLGs are indicated in ().
- (h) **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- (i) **Major Source in Lakewood's Drinking Water:** This column indicates the likely source of the constituent listed.
- (j) **Health Effects:** The USEPA and the California EPA require water utilities exceeding an MCL to list potential health effects caused by the ingestion of any constituent that fails to meet a primary drinking water standard.
- (k) **% Positive:** Laboratory analysis for coliform bacteria measures the presence or absence of bacteria. The MCL is exceeded when over 5 percent of the samples drawn in a distribution system during a month detect the presence of coliform bacteria.
- (l) **Non Detectable (ND):** Laboratory analyses cannot confirm zero detection of a constituent in drinking water. A non detectable result indicates that the constituent is not contained in the sample or the

amount of a constituent found in drinking water is lower than the testing procedure can detect.

- (m) **Secondary Drinking Water Standard:** The USEPA and the California EPA set guidelines for constituents found in drinking water that may cause aesthetic or cosmetic effects. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

- (n) **Turbidity:** A measure of the cloudiness of water. Turbidity serves as an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

- (o) **Unregulated Constituents:** Monitoring unregulated constituents helps the USEPA and the California Department of Public Health determine where certain constituents occur and whether the constituents need to be regulated. The city tested for 58 additional non-regulated chemicals in 2010.

- (p) **Notification Level (NL):** The concentration of a constituent which, if exceeded, triggers notification to the public.

- (q) **No Standard (NS):** Constituent for which no regulation established by the USEPA and the California EPA exists.

- (r) **Hardness:** Hardness is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally-occurring. Hardness is also measured in grains per gallon. This form is used when calculating hardness levels to operate irons and dishwashers. Hardness levels in Lakewood's water average 10 grains per gallon.

- (s) **Sodium:** Sodium refers to the salt present in the water and is generally naturally occurring. Intake from drinking water is not considered a factor for healthy individuals. However, the American Heart Association recommends a sodium intake of 20 ppm in drinking water for high risk populations, e.g. a person on a low-sodium diet. Home water softeners that use the ion-exchange method increase the amount of sodium in water.

- (t) **At-the-Tap Monitoring:** The California Department of Public Health and the USEPA require water utilities to conduct at-the-tap monitoring for lead and copper. The results from 31 samples drawn by customers indicate that levels of both lead and copper are below the state and federal standards.

- (u) **Regulatory Action Level (AL):** The concentration of a constituent which, if exceeded, triggers treatment or other requirements that a water system must follow.

- (v) **90th Percentile Value:** The Action Level for Lead and Copper is exceeded if 10% of the sample results are greater than 15 ppb for lead and 1.3 ppm for copper.

Don't flush pharmaceuticals!

It was common at one time to flush old medications (also known as pharmaceuticals) down the toilet. In the past doctors and pharmacists may even have recommended this as the best way to keep old drugs from being misused.

Now we know that these substances can reappear as water contamination

that may possibly get into drinking water supplies. So, what should you do?

One important first step is to take all medications as directed and to finish the prescription under a doctor's guidance. That way, there'll be less chance of un-used medications

needing disposal.

If you have unused medications, they can be left in the drop box at the entrance to the Lakewood Sheriff's Station (5130 Clark Avenue at Hardwick Street). The drop boxes also accept medical "sharps."

Medications also can be taken to a county-sponsored household hazardous waste roundup. Information is available by calling 888-CLEAN-LA or from www.888cleanla.com.

Some medications are "controlled substances" (such as codeine, Phenobarbital, and anabolic steroids). These

cannot be taken to a roundup, but they can be put in your regular trash if you follow some precautions:

- **Remove the patient's name, drug name, prescription number, and other personal information before disposal.**
- **"Spoil" the medications –**

add water to a container of pills; put salt in a container of liquid medication. Put the containers in a sturdy box and tape it shut. Put the box in the trash where children and animals can't easily reach it. □

Sensitive populations may be more vulnerable

Some people may be more vulnerable to constituents in drinking water than the general population.

Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These

people should seek advice about drinking water from their health care provider.

The United States Environmental Protection Agency and the national Centers for Disease Control have guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial constituents. These are available by calling the Safe Drinking Water Hotline at 1-800-426-4791.

These

