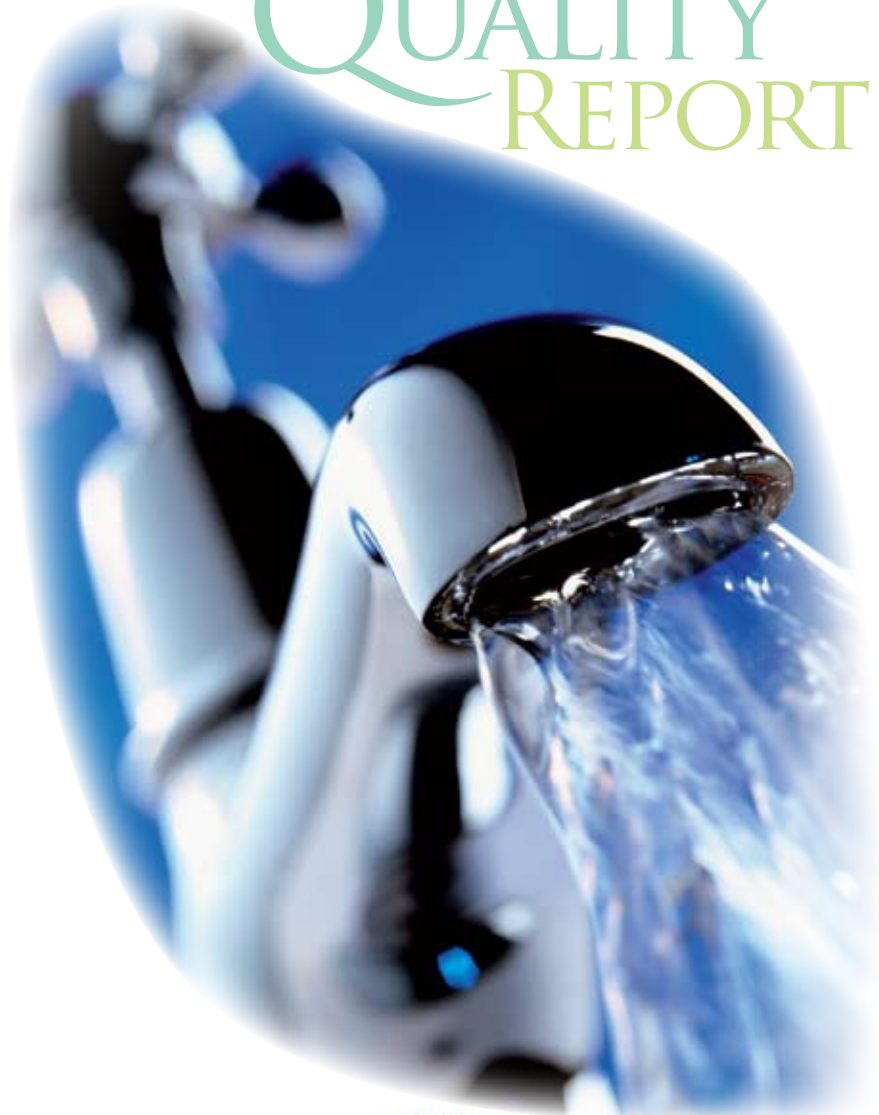


2008 WATER QUALITY REPORT



Proudly Presented by:
LONG BEACH
WATER DEPARTMENT

*Leader in Water Conservation
& Environmental Stewardship*



PWS ID#: 1910065

Board of Water Commissioners:

John D. S. Allen

Paul C. Blanco

Frank Clarke

Suzanne Dallman

William B. Townsend



*THANK
FOR DOING*

*YOU
YOUR PART*

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

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

របាយការណ៍នេះមានព័ត៌មានសំខាន់អំពីទឹកបរិភោគ ។ សូមបកប្រែឬពិគ្រោះជាមួយអ្នកដែលមើលយល់របាយការណ៍នេះ ។

此份有關你的食水報告,內有重要資料和訊息,請找他人為你翻譯及解釋清楚。

The Long Beach Water Department

The Long Beach Water Department (LBWD) has been delivering a safe and dependable water supply to the residents and businesses within the City of Long Beach (City) for almost 100 years and continues to be proactive in protecting and providing a reliable supply of quality water. Currently, LBWD serves a total population of 492,912 through 902 miles of pipelines. This water is tested on a routine basis for microbiological as well as chemical quality.

During 2008, the staff of skilled water scientists, engineers, and technicians performed 81,378 tests to analyze for more than 120 drinking water contaminants to ensure that the water quality meets or better all Federal and State standards. We are pleased to inform you that no constituent was detected over the enforceable limit that the California Department of Public Health (CDPH) has set.

This report contains important and useful information about the sources, quality, and supply of LBWD drinking water and the conservation efforts within the City, including the role residents and businesses play to ensure a reliable supply of this natural resource. We are committed to providing you with information because informed customers are our best allies. Please share with us your thoughts about the information in this report.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The USEPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Questions?

If you have any questions about your water quality or this report, please call the LBWD at (562) 570-2491 (TDD 570-2499), Monday through Friday between 8 a.m. and 4:30 p.m. This information is available in an alternative format by request to Ms. Melissa Keyes at (562) 570-2309, or write to:

Long Beach Water Department
1800 E. Wardlow Road
Long Beach, CA 90807

Source Water Assessment



As required under the 1996 Safe Drinking Water Act amendments, a source water assessment must be completed for all active drinking water sources. The goal of the source water assessment is to inventory all potential activities that may degrade the source water quality. MWD completed its source water assessment of its Colorado River and State Water Project supplies in December 2002. It was found that Colorado River supplies are most vulnerable to recreation, urban/stormwater runoff, increasing urbanization in the watershed, and wastewater. State Water Project supplies are considered to be most vulnerable to urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater. A copy of the assessment can be obtained by contacting MWD by phone at (213) 217-6850.

The LBWD completed the required source water assessments for its active wells in April 2003. New wells that are constructed after this date must also undergo a similar assessment. To summarize, the assessment concluded that all active wells are considered most vulnerable to the community sewer collection system. Depending on location, some wells are considered vulnerable to gas stations, dry cleaners, confirmed leaking underground fuel tanks, airport activities, and historic landfills. However, although the wells are considered vulnerable to the aforementioned activities, the LBWD performs water quality monitoring for each active well annually and has not detected any constituents that suggests contamination. Please contact the LBWD by phone at (562) 570-2300 for more details if you would like to review this document.

Public Meetings

The Long Beach Water Department Board of Water Commissioners meets the first Thursday of each month at 9:15 a.m. and on the third Thursday at 7:00 p.m. of each month at our Administration Building. Please feel free to participate in these meetings. For further information, please call (562) 570-2300.

Board of Water Commissioners:

John D. S. Allen
Paul C. Blanco
Frank Clarke
Suzanne Dallman
William B. Townsend

Source of Drinking Water

Approximately 47 percent of the potable water serving the City is supplied by groundwater, and the remaining 53 percent is through purchased imported surface water. The sources of drinking water (for both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As the water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

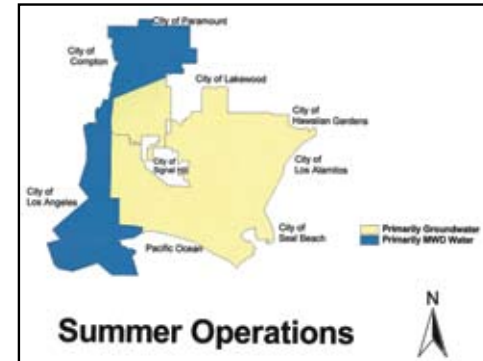
LBWD purchases treated surface water from the Metropolitan Water District of Southern California (MWD) and treats groundwater pumped from 30 wells around the Long Beach area at our Groundwater Treatment Plant. Both the purchased surface water and the treated groundwater better Federal and State water quality standards. The Federal regulations are set by the U.S. Environmental Protection Agency (USEPA) and the State standards are set by the California Department of Public Health (CDPH).

Two major aqueducts supply the surface waters feeding MWD's five regional treatment plants. Colorado River water, which has a higher mineral content of the two supplies, is brought into Southern California through the 242-mile-long Colorado River Aqueduct. This aqueduct, constructed and operated by MWD, originates at Lake Havasu and terminates in Southern California at Lake Mathews. State Project water, which contains a lower mineral content but higher organic matter content, is conveyed through the California Aqueduct. This aqueduct, constructed and operated by the California Department of Water Resources, transfers water originating from Lake Oroville in Northern California through 441 miles before terminating in Southern California.

The groundwater treated at the LBWD Groundwater Treatment Plant originates from the San Gabriel watershed. The watershed is fed by the rain and snow melt, and flows through washes and creeks into the San Gabriel River and Whittier Narrows before percolating into the underground aquifer of the central basin area of Los Angeles. The City of Long Beach is a part of the Central Basin service area.



For hydraulic reasons, the Long Beach service area may be divided up into two main regions, the MWD zone, which primarily receives purchased treated surface water, and the blended zone, which may receive a combination of treated groundwater and purchased treated surface water. Additionally, because the price of the water that LBWD purchases from MWD is less expensive in the winter season (from October to April), the blended zone may receive more surface water than groundwater during this time. Between May to September, defined as summer operations, we treat and distribute more of the local groundwater to the blended zone than purchase treated surface water in order to keep the rates to our consumers low. For this reason, residents living in different areas of Long Beach may receive different blends of water throughout the year. Regardless of the area in Long Beach that you work or live in, LBWD's goal is to provide water meeting or bettering all water quality regulations to our consumers at the most reasonable cost. The following graphs show the areas that may be affected by the change in the water blend.



Natural Contaminants Present in Source Water Prior to Treatment May 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 can 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 uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

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

In order to ensure that tap water is safe to drink, the CDPH prescribes regulations which limit the amount of specific contaminants in water provided by public water systems. The Long Beach Water Department takes these regulations very seriously and in all instances treats our water to comply or be better than CDPH's regulations.

More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791.

Fluoridation

Fluoride is one of the most plentiful elements on earth, and occurs naturally in water supplies throughout California and elsewhere. When fluoride is present in drinking water at optimal levels, it has been shown to promote oral health by preventing tooth decay. Water systems are considered naturally fluoridated when the natural level of fluoride is greater than 0.7 ppm, and water fluoridation refers to the practice of adjusting the level of fluoride to 0.7 to 1.2 ppm. Blending fluoridated water from different sources does not increase total fluoride levels in drinking water. Currently, about 67 percent of the U.S. population on public water supplies has access to fluoridated water.

The CDPH, as well as the U.S. Centers for Disease Control and Prevention, strongly agree that fluoridated water helps promote dental hygiene and reduces the risk of caries (cavities) in children and adults. For these reasons and because it is a cost-effective public health measure, the Long Beach City Council in 1971 mandated that LBWD add fluoride at a dose to achieve a level of 1.00 mg/L in the drinking water, the level recommended by the American Dental Association. Please refer to www.ada.org/public/topics/index.asp if you have questions regarding fluoride and fluoridation.

Lead and Drinking Water



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. Long Beach Water Department is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components. 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 or at <http://www.epa.gov/safewater/lead>.

Monitoring for Cryptosporidium

Cryptosporidium is a microscopic organism that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. The risk of the microorganisms being in LBWD's water supply is extremely low. Groundwater, which makes up 47 percent of LBWD's potable water supply, is free of these organisms because of natural filtration through the soil. With respect to imported surface water supplies, MWD has found *Cryptosporidium* levels in the untreated surface water supplies to be 100 to 1,000 times lower than those reported in other parts of the country. Additionally, MWD has initiated an extensive effort to prevent *Cryptosporidium* and other microorganisms from reaching its treated water.



While the general public is not at risk from *Cryptosporidium*, immunocompromised 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 and may choose to boil their water for one minute before consumption. USEPA or Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Declaration of Imminent Water Supply Shortage

The Board of Water Commissioners of the City of Long Beach has declared that a water supply shortage for the City of Long Beach is imminent. In doing so, the Board has activated the City's Emergency Water Supply Shortage Plan, triggering strict prohibitions on certain uses of potable water. These citywide prohibitions on the use of potable water are being implemented as a proactive measure, to forestall or lessen the local impact of an imminent water supply shortage.

The following uses of water are illegal in the City of Long Beach:

1. It is illegal to wash driveways, sidewalks, parking areas, patios, or any other paved areas with a garden hose.
2. It is illegal to irrigate landscaped areas with potable water between the hours of 9:00 a.m. and 4:00 p.m. Please, no more than 10 minutes per station.
3. It is illegal to irrigate landscaped areas on any day other than Monday, Thursday, and Saturday.
4. It is illegal to over-water landscaped areas to the point of causing significant runoff.

Our shared water supplies are becoming less reliable. The water we are wasting today is the water we will need for our future. A change in the way we think about and use our precious shared water supplies is needed. We are all in this together.

For more information on water supply conditions and helpful conservation tools, and to report violations of new citywide water use rules, visit www.lbwater.org.



Contaminants of Public Interest

Disinfection Byproducts (TTHMs and HAA5s)

The Stage 1 Disinfectants/Disinfection Byproducts (D/DBP) Rule became effective as of January 2002. DBPs, including total trihalomethanes (TTHM) and haloacetic acids (HAA5), are byproducts of the disinfection process and suspected human carcinogens. Some people consuming water containing TTHM 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. To lower the risk from ingesting water containing DBPs, the USEPA lowered the TTHM level from 100 ppb to 80 ppb, and also regulated another class of DBPs known as HAA5 at 60 ppb.

The Stage 1 regulations require that these DBPs be reported as running annual averages to the CDPH. The running annual average is obtained by averaging the present quarter's data together with the data obtained from the three previous quarters. LBWD's 2008 TTHM values in the distribution system ranged from 28 to 73 ppb (including IDSE values), and the highest running annual average was 43 ppb, or well below the MCL of 80 ppb. LBWD's 2008 distribution system HAA5 concentrations ranged from 7.7 to 21 ppb (including IDSE values), and the highest running annual average was 13 ppb, also well below the MCL of 60 ppb.

Bromate

Systems using ozone to treat drinking water are required to monitor for bromate, a disinfection byproduct, at the treatment plant's effluent. Bromate is formed when ozone reacts with naturally occurring bromide found in the source water. LBWD does not ozonate our waters; however, the purchased treated MWD surface water may have detectable levels of bromate.

Exposure to high concentrations of bromate over a long period of time caused cancer in rats, kidney effects in laboratory animals, and is suspected of potential reproductive effects in human. The USEPA developed an MCL of 10 ppb that it considers protective of non-cancer health effects from long-term exposure to humans. MWD's drinking water bromate levels, reported as the running annual average, were as high as 7.8 ppb in 2008. LBWD blends the purchased MWD surface water with treated groundwater before distribution, and bromate in our distribution water was not detected in 2008.

Boron and Vanadium

Boron and vanadium are naturally present in the environment. Exposure to high concentrations of boron or vanadium in excess of the notification levels in women who are pregnant may result in increased risk of having babies with developmental effects, based on studies in laboratory animals. The levels found in LBWD's water, 170 ppb for boron and 4 ppb for vanadium, are well below the State's notification level of 1000 ppb and 50 ppb for boron and vanadium, respectively.

Perchlorate

Perchlorate is an inorganic chemical used in the manufacturing of rocket fuels and explosives. At high concentrations in drinking water, it can interfere with the thyroid gland's ability to produce hormones necessary for normal growth and development. Perchlorate was first detected in drinking water wells in northern California in 1997 and was later detected in many water wells throughout the state as well as in the Colorado River. The source of contamination of the Colorado River has been determined to be an industrial site in Nevada. Colorado River water is an important source of drinking water for southern California, and much of the water that Long Beach purchases from MWD comes from this source.

MWD initiated voluntary monitoring for perchlorate in 1997. Levels found in the Colorado River supply have ranged between 4 and 9 ppb. No perchlorate has been detected in MWD's State Project water, or in LBWD's wells. Since 1997, the Nevada EPA has taken significant steps to mitigate the leaching of perchlorate into the river, and as a result, there were no detectable levels in MWD's water in 2008. Currently, the best laboratories can detect perchlorate reliably at 4 ppb, and on October 18, 2007, CDPH adopted an MCL for perchlorate at 6 ppb.



Sampling Results

During the past year we have collected thousands of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water. The State requires us to monitor for certain contaminants less than once per year because concentrations of these contaminants are not expected to vary significantly from year to year.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	MWD Zone		Blended Zone		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Aluminum ¹ (ppb)	2008	1000	600	150	110–170	130	110–210	No	Erosion of natural deposits; residue from water treatment processes
Chloramines (ppm)	2008	[4.0 (as Cl ₂)]	[4.0 (as Cl ₂)]	City-wide range: 0.87–2.8; highest running annual average: 2.2				No	Drinking water disinfectant added for treatment
Fluoride (ppm)	2008	2.0	1	0.87	0.3–1.0	0.84	0.51–1.1	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids ² (ppb)	2008	60	NA	City-wide range: 7.7–21; highest running annual average: 13				No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] ² (ppb)	2008	80	NA	City-wide range: 28–73; highest running annual average: 43				No	By-product of drinking water chlorination
Total Coliform Bacteria ³ (% positive samples)	2008	More than 5.0% of monthly samples are positive	(0)	City-wide range: ND–0.44%; highest monthly: 0.44%				No	Naturally present in the environment
Turbidity ⁴ (NTU)	2008	TT	NA	0.15	0.05–0.15	0.14	0.07–0.14	No	Soil runoff
Turbidity (Lowest monthly percentage of samples meeting limit)	2008	TT	NA	100	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper ⁵ (ppb)	2007	1300	300	140	0/156	No	Internal corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2007	15	2	ND	0/156	No	Internal corrosion of household water plumbing systems; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	MWD Zone		Blended Zone		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Chloride (ppm)	2008	500	NS	96	92–101	52	40–87	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2008	15	NS	1	ND–5	1	ND–4	No	Naturally occurring organic materials
Odor-Threshold (TON)	2008	3	NS	2	NA	1	NA	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2008	1600	NS	906	742–1068	581	400–941	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2008	500	NS	207	158–268	79	41–180	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2008	1000	NS	563	468–700	346	276–504	No	Runoff/leaching from natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	NL	MWD Zone		Blended Zone		TYPICAL SOURCE
			AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Boron (ppb)	2008	1000	170	NA	130	NA	Naturally present in the environment
Carbon Disulfide (ppb)	2008	160	16	NA	ND	NA	Electroplating waste and other industrial processes
Chlorate (ppb)	2008	800	60	NA	22	NA	Byproduct of drinking water chlorination; industrial processes
N-nitrosodimethylamine (NDMA) (ppt)	2008	10	6	NA	2	NA	Formed through natural, industrial and disinfection processes
Vanadium (ppb)	2008	50	4	NA	ND	NA	Naturally present in the environment

ADDITIONAL CONSTITUENT OF INTEREST

PARAMETER	MWD Zone		Blended Zone	
	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
Alkalinity (ppm)	112	99–142	129	122–138
Calcium (ppm)	63	56–76	37	24–61
Hardness (ppm)	252	217–306	131	80–235
Hardness (gpg)	14.7	12.7–17.9	7.7	4.7–13.7
Magnesium (ppm)	23	19–28	9.4	4.8–20
pH	7.9	7.4–8.2	8.1	7.8–8.2
Potassium (ppm)	4.8	4.4–5.4	2.8	1.8–4.6
Silica (ppm)	8.3	4.6–12	17	12–22
Sodium (ppm)	97	88–109	77	72–92

Footnotes:

¹ SMCL = 200 ppb.

² During 2007-2008, we were required by the USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify other locations in our distribution system that may have elevated TTHMs and HAAs, outside of the Stage 1 sites under regulatory monitoring since January 2002. All the TTHM and HAA values from the designated 24 IDSE sites in Long Beach were below the MCL set by the USEPA, of 80 ppb and 60 ppb, respectively. Range includes IDSE values.

³ The results reported to the CDPH are based on distribution system monthly sampling.

⁴ Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Amount detected is the highest single measurement in 2008.

⁵ SMCL = 1000 ppb.

Definitions

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

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

gpg: grains per gallon (17.1 mg/L).

MCL (Maximum Contaminant Level): 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 (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): 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.

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

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the USEPA.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NL (Notification Level): NLs are health-based advisory levels established by CDPH for chemicals in drinking water that lack MCLs. When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply.

NS: No standard.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

PHG (Public Health Goal): 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 EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

TON (Threshold Odor Number): A measure of odor in water.

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