LINCOLN AVENUE WATER COMPANY
2012 CONSUMER CONFIDENCE REPORT

INTRODUCTION

Lincoln Avenue Water Company (Lincoln Avenue) is committed to keeping you informed about the quality of your drinking water. This report is provided to you annually. It includes information describing where your drinking water comes from, the constituents found in your drinking water and how the water quality compares with the regulatory standards. We are proud to report that during 2012, the drinking water provided by Lincoln Avenue met or surpassed all Federal and State drinking water standards. We remain dedicated to providing you with a reliable supply of high quality drinking water.

Lincoln Avenue, a mutual water company, serves approximately 16,000 people in the northwest region of Altadena, an unincorporated area of Los Angeles County. As a mutual water company, the shareholders are its customers that are served by its distribution system. The General Manager oversees the company's operations and reports to a five person Board of Directors that meets monthly at the company offices located at 564 West Harriet Street, Altadena, California 91001. For more information, you may contact Mr. Robert J. Hayward, General Manager, at 626-798-9101, extension 213.

WHERE DOES MY DRINKING WATER COME FROM?

In 2012, Lincoln Avenue distributed approximately 2,300 acre-feet of water to its customers. This is equivalent to nearly 750 million gallons. One acre-foot is enough water to cover one acre of land, one foot deep with water, or approximately 325,900 gallons. Ninety-two percent of the water came from two well pumping from the Raymond groundwater basin. Eight percent of the total was purchased from the Metropolitan Water District of Southern California (MWD), a regional wholesaler of imported surface water. This water is a blend of Colorado River water delivered through MWD's Colorado River Aqueduct and surface water from Northern California delivered through the State of California Water Project Aqueduct. MWD's water is filtered and disinfected at the Weymouth Filtration Plant in La Verne. Chlorine disinfectant is added to all water served by Lincoln Avenue to kill microorganisms and prevent re-growth of bacteria in storage reservoirs and distribution pipelines.

DRINKING WATER SOURCE ASSESSMENT

In accordance with the Federal Safe Drinking Water Act, an assessment of the groundwater sources for Lincoln Avenue was completed in May 2002. The purpose of the drinking water source assessment is to promote source water protection by identifying types of activities in the proximity of the drinking water sources which could pose a threat to the water quality. The assessment concluded that Lincoln Avenue's groundwater sources are considered most vulnerable to the following activities or facilities associated with contaminants detected in the water supply: gasoline stations, dry cleaners, automobile repair shops, high density housing and parking lots. In addition, the groundwater sources are considered most vulnerable to the following activity or facility not associated with contaminants detected in the water supply: recreational area-surface water source. A copy of the complete assessment is available at Lincoln Avenue Water Company at 564 West Harriet Street, Altadena, California 91001. You may request a summary of the assessment to be sent to you by contacting our office at (626) 798-9101.

Lincoln Avenue began operating a surface water treatment facility in 1997 to receive supplemental water from Millard Canyon. In 2009, the Station Fire destroyed over 150,000 acres in the Angeles National Forest including most of the Millard Canyon watershed. Since that time, the surface water treatment facility has remained offline. However, Lincoln Avenue continues to asses the source water quality.

Every five years, MWD is required by the California Department of Public Health (CDPH) to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters. In 2012, MWD submitted to CDPH its updated Watershed Sanitary Surveys for the Colorado River and State Water Project, which include suggestions for how to better protect these source waters. Both source waters are exposed to stormwater runoff, recreational activities, wastewater discharges, wildlife, fires, and other watershed-related factors that could affect water quality. Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/stormwater runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater. The United States Environmental Protection Agency (USEPA) also requires MWD to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWD completed its SWA in December 2002. The SWA is used to evaluate the vulnerability of water sources to contamination and helps determine whether more protective measures are needed. A copy of the most recent summary of either Watershed Sanitary Survey or the SWA can be obtained by calling MWD at (213) 217-6850.

WHAT ARE WATER QUALITY STANDARDS?

In order to ensure that 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 standards established by USEPA and CDPH set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The chart in this report shows the following types of water quality standards:

- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.
- **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.
- **Secondary MCLs** are set to protect the odor, taste, and appearance of drinking water.
- **Primary Drinking Water Standard:** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.
- **Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- **Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Notification Level (NL):** An advisory level which, if exceeded, requires the drinking water system to notify the governing body of the local agency in which users of the drinking water reside (i.e. city council, county board of supervisors).

WHAT IS A WATER QUALITY GOAL?

In addition to mandatory water quality standards, USEPA and CDPH have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart in this report includes the following types of water quality goals:

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

WHAT CONTAMINANTS MAY BE PRESENT IN SOURCES OF DRINKING WATER?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land 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 from 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 uses.
- **Radioactive contaminants,** that can be naturally-occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants,** including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural applications, and septic systems.

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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).

WHAT IS IN MY DRINKING WATER?

As in past years, the Water Quality Charts compare the quality of your tap water to State and Federal drinking water standards. The water quality charts list all the regulated drinking water contaminants and other contaminants of interest that were **detected** during the 2012 calendar year or from the results of the most recent testing done in accordance with the monitoring regulations. Some regulated chemicals are monitored less frequently than once each year. Some of the results, although more than one year old, are representative of the current drinking water quality. More than 100 regulated contaminants have been tested that **were not detected** in drinking water delivered by Lincoln Avenue; the list of non-detected contaminants is not included in the chart.

Most contaminants detected in our groundwater and surface water sources occur in your drinking water from erosion of natural deposits in soils. However, several detected contaminants are present in tap water as the result of the treatment process itself, corrosion of plumbing fixtures, or from industrial discharges:

- **Aluminum in the MWD treated surface water** comes from a treatment chemical used to assist in the removal of soil particles and microorganisms.

- **Trihalomethanes and Haloacetic Acids** are organic chemicals that form when chlorine is added to disinfect the water. These chemicals are monitored in the distribution system.

- **Nitrate in groundwater** could come from fertilizers or leakage from old septic tanks.

- **Perchlorate is an inorganic chemical** that is used in solid rocket propellants, fireworks, explosives and flares, which originated from past discharges at the Jet Propulsion Laboratory (JPL), the known perchlorate plume site. Levels of perchlorate detected in our wells in May 2004 exceeded the then CDPH Notification Level of 6 micrograms per liter (µg/L). In June of 2004, Lincoln Avenue's customers were notified that water from these wells would not be delivered to them and the wells would remain off-line. In July of 2004, Lincoln Avenue completed the installation of an Ion Exchange treatment system to remove perchlorate from our well water to a non-detectable level. The system is now working in tandem with our existing Granular Activated Carbon (GAC) System to remove volatile organic contaminants in our well water. With this arrangement, Lincoln Avenue provides safe drinking water to its customers.

- **The groundwater pumped by our two wells contains several volatile organic chemicals (VOCs),** including Carbon Tetrachloride (CTC), Tetrachloroethylene (PCE), and Trichloroethylene (TCE). The untreated groundwater exceeds the MCL for CTC. In order to use this important component of our total water supply, in 1992, we constructed a GAC treatment plant for the removal of the VOCs. A condition of our permit to operate this plant states that the treatment process must remove all the VOCs to non-detectable levels. PCE, CTC and TCE in the treated water of the GAC treatment plant were monitored on a weekly basis and no VOCs were detected in the fully-treated water during 2012.

- **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. Lincoln Avenue 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 Hot Line or at http://water.epa.gov/drink/info/lead/index.cfm.

Groundwater is protected from many infectious organisms, such as the parasite *Cryptosporidium*, by the natural filtration action of water percolating through soils. Current conventional surface water treatment methods remove most *Cryptosporidium* organisms when they are present, but 100 percent elimination can not be guaranteed. MWD has detected *Cryptosporidium* in some areas of their watershed but has never detected the organism in their treated water. There is no evidence that *Cryptosporidium* has entered the Lincoln Avenue water supply. However, **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 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 risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

DRINKING WATER FLUORIDATION

"*Community water fluoridation continues to be the most cost-effective, practical and safe means for reducing and controlling the occurrence of tooth decay in a community.*" **U.S. Surgeon General**

In November 2007, MWD joined a majority of the nation's public water suppliers by adding fluoride to drinking water in order to prevent tooth decay. In line with recommendations from CDPH, as well as the U.S. Centers for Disease Control and Prevention, MWD began adjusting the natural fluoride level in imported water, which ranges from 0.1 to 0.4 parts per million (ppm), to the optimal range of 0.7 to 1.3 ppm. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 ppm.

Lincoln Avenue does not add additional fluoride to the local water delivered to you because fluoride occurs naturally in groundwater. As shown on the water quality table, the average fluoride concentration in Lincoln Avenue's groundwater is 0.56 ppm.

Fluoride has been added to U.S. drinking water supplies since 1945. Of the 50 largest cities in the U.S., 43 fluoridate their drinking water. There are many places to go for additional information about the fluoridation of drinking water. They include:

U.S. Centers for Disease Control and Prevention: http://www.cdc.gov/fluoridation/

American Water Works Association: www.awwa.org

California Department of Public Health: www.cdph.ca.gov/certlic/drinkingwater/Pages/Fluoridation.aspx

Este informe contiene información muy importante sobre su agua potable. Para más información ó traducción, favor de contactar a Maria Autran. Telefono: 626-798-9101, extensión 218.

LINCOLN AVENUE WATER COMPANY 2012 DRINKING WATER QUALITY

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA TREATED SURFACE WATER

Chemical	MCL	PHG or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Tests	Typical Source of Contaminant
Primary Drinking Water Standards -- Health Related Standards							
Radiologicals							
Gross Alpha Particle (pCi/L)	15	(0)	ND	ND - 3	No	2011	Erosion of natural deposits
Gross Beta Particle (pCi/L)	50	(0)	4	ND - 6	No	2011	Decay of natural and man-made deposits
Uranium (pCi/L)	20	0.43	2	1 - 2	No	2011	Erosion of natural deposits
Inorganic Chemicals							
Aluminum (ppm)	1	0.6	0.12	ND - 0.21	No	2012	Water treatment process residue
Fluoride (ppm) Treatment Optimal Control Range 0.7 - 1.3			0.8	0.6 - 1.1	No	2012	Treatment additive for dental health
Secondary Drinking Water Standards -- Aesthetic Standards, Not Health-Related							
Aluminum (ppb)	200	600	120	ND - 210	No	2012	Water treatment process residue
Chloride (ppm)	500	n/a	90	85 - 95	No	2012	Runoff or leaching from natural deposits
Color (Color Units)	15	n/a	1	1	No	2012	Naturally-occurring organic materials
Odor (threshold odor number)	3	n/a	2	2	No	2012	Naturally-occurring organic materials
Specific Conductance (µmho/cm)	1,600	n/a	740	350 - 930	No	2012	Substances that form ions in water
Sulfate (ppm)	500	n/a	140	130 - 160	No	2012	Runoff or leaching from natural deposits
Total Dissolved Solids (ppm)	1,000	n/a	470	450 - 490	No	2012	Runoff or leaching from natural deposits
Unregulated Chemicals Requiring Monitoring							
Boron (ppm)	NL=1	n/a	0.13	0.13	No	2012	Runoff or Leaching from Natural Deposits
Hardness (ppm as CaCO3)	Not Regulated	n/a	200	80 - 270	No	2012	Runoff or leaching from natural deposits
Sodium (ppm)	Not Regulated	n/a	78	74 - 82	No	2012	Runoff or leaching from natural deposits

MCL = Maximum Contaminant Level; **MCLG** = federal MCL Goal; **n/a** = not applicable; **ND** = not detected; **NL** = Notification Level; **pCi/L** = picoCuries per liter; **PHG** = California Public Health Goal; **ppb** = parts-per-billion; **ppm** = parts-per-million; **µmho/cm** = micromhos per centimeter

Turbidity - combined filter effluent Metropolitan Water District Weymouth Filtration Plant	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
1) Highest single turbidity measurement	0.3 NTU	0.04	No	Soil Runoff
2) Percentage of samples less than 0.3 NTU	95%	100%	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a **"treatment technique" (TT)**. A treatment technique is a required process intended to reduce the level of contaminants in drinking water that are difficult and sometimes impossible to measure directly.

LINCOLN AVENUE WATER COMPANY GROUNDWATER QUALITY

Chemical	MCL	PHG or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Tests	Typical Source of Contaminant
Primary Drinking Water Standards -- Health Related Standards							
Radiologicals							
Gross Alpha Particle (pCi/L)	15	(0)	5.8	3.2 - 7.6	No	2009	Erosion of natural deposits
Uranium (pCi/L)	20	0.43	6.8	5.7 - 8.2	No	2009	Erosion of natural deposits
Inorganic Chemicals							
Nitrate (ppm as NO3)	45	45	17	7 - 21	No	Monthly	Runoff and leaching from fertilizer use
Fluoride (ppm)	2	1	0.56	0.43 - 0.68	No	2011	Erosion of natural deposits
Secondary Drinking Water Standards -- Aesthetic Standards, Not Health-Related							
Chloride (ppm)	500	n/a	41	35 - 46	No	2011	Erosion of natural deposits
Odor (threshold odor number)	3	n/a	1	1	No	2011	Naturally-occurring organic materials
Specific Conductance (µmho/cm)	1600	n/a	610	580 - 640	No	2011	Substances that form ions in water
Sulfate (ppm)	500	n/a	59	55 - 62	No	2011	Erosion of natural deposits
Total Dissolved Solids (ppm)	1000	n/a	360	340 - 380	No	2011	Erosion of natural deposits
Turbidity (NTU)	5	n/a	<0.1	ND - 0.11	No	2011	Soil run-off
Unregulated Chemicals Requiring Monitoring							
Sodium (ppm)	Not Regulated	n/a	23	20 - 25	No	2011	Erosion of natural deposits
Hardness (ppm as CaCO3)	Not Regulated	n/a	250	240 - 260	No	2011	Erosion of natural deposits

MCL = Maximum Contaminant Level; **MCLG** = Federal MCL Goal; **n/a** = not applicable; **pCi/L** = picoCuries per liter; **PHG** = California Public Health Goal; **ppb** = parts-per-billion; **ppm** = parts-per-million; **µmho/cm** = micromhos per centimeter; **NTU** = nephelometric turbidity units; **<** = detected but average is below the detection limit for purposes of reporting (DLR)

LINCOLN AVENUE WATER COMPANY DISTRIBUTION SYSTEM WATER QUALITY

Chemical	MCL or (MRDL)	PHG or (MRDLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Tests	Typical Source of Contaminant
Total Trihalomethanes (ppb)*	80	n/a	35	ND - 32	No	Quarterly	Byproducts of chlorine disinfection
Haloacetic Acids (ppb)*	60	n/a	18	ND - 10	No	Quarterly	Byproducts of chlorine disinfection
Total Chlorine Residual (ppm)*	(4)	(4)	0.99	0.2 - 1.57	No	Weekly	Drinking water disinfectant
Odor (threshold odor number)**	3	n/a	1	1	No	Monthly	Runoff or leaching from natural deposits
Turbidity (NTU)**	5	n/a	<0.1	ND - 0.6	No	Monthly	Runoff or leaching from natural deposits

* Regulated with a primary MCL; ** Regulated with a secondary MCL; **NTU** = nephelometric turbidity units; **ppb** = parts-per-billion; **ppm** = parts-per-million; **MCL** = Maximum Contaminant Level; **MRDL** = Maximum Residual Disinfectant Level; **MRDLG** = Maximum Residual Disinfectant Level Goal; **PHG** = California Public Health Goal; **n/a** = not applicable. Four locations in the distribution system are tested quarterly for Total Trihalomethanes and Haloacetic Acids; thirteen locations are tested monthly for color, odor, and turbidity. Color was not detected in 2012. In addition, thirteen locations are tested weekly for coliform bacteria and chlorine residual.

Bacterial Quality	MCL	MCLG	Highest Monthly Percent Positives	MCL Violation?	Most Recent Sampling	Typical Source of Contaminant
Total Coliform Bacteria	5%	0	1%	No	2012	Naturally present in the environment

No more than 5% of the monthly samples may be positive for total coliform bacteria. The occurrence of two consecutive total coliform positive samples, one of which contains fecal coliform/E.coli, constitutes an acute MCL violation. One sample collected in December 2012 was detected positive for total coliform. However, fecal coliform/E.coli was not detected. Total coliform was also not detected in the repeat samples. Therefore there was no violation on bacterial quality.

Lead / Copper	Action Level (AL)	PHG	90th Percentile Value	Sites Exceeding AL/ Number of Sites Tested	AL Violation?	Typical Source of Contaminant
Lead (ppb)	15	0.2	ND	0/30	No	Corrosion of household plumbing
Copper (ppm)	1.3	0.3	0.09	0/30	No	Corrosion of household plumbing

Every three years, 30 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2010. Lead was not detected in any samples. Copper was detected in twelve samples; however, none of the results exceeded the AL. A regulatory action level is the concentration of a chemical which, if exceeded in more than 10 percent of the samples, triggers treatment or other requirements that a water system must follow.

LINCOLN AVENUE WATER COMPANY MILLARD CANYON SOURCE WATER

Chemical	MCL	PHG or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Tests	Typical Source of Contaminant
Primary Drinking Water Standards -- Health Related Standards							
Radiologicals							
Gross Alpha Particle (pCi/L)	15	(0)	6.2	ND - 11	No	2009	Erosion of natural deposits
Gross Beta Particle (pCi/L)	50	(0)	4.1	4 - 4.2	No	2010	Decay of natural and man-made deposits
Uranium (pCi/L)	20	0.43	6.8	6.8	No	2012	Erosion of natural deposits
Inorganic Chemicals							
Arsenic (ppb)	10	0.004	3	3	No	2012	Runoff or leaching from natural deposits
Color (Color Units)	15	n/a	3	3	No	2012	Naturally-occurring organic materials
Fluoride (ppm)	2	1	1.6	1.6	No	2012	Runoff or leaching from natural deposits
Secondary Drinking Water Standards -- Aesthetic Standards, Not Health-Related							
Chloride (ppm)	500	n/a	8.1	8.1	No	2012	Runoff or leaching from natural deposits
Odor (threshold odor number)	3	n/a	1	1	No	2012	Naturally-occurring organic materials
Sulfate (ppm)	500	n/a	31	31	No	2012	Runoff or leaching from natural deposits
Specific Conductance (umho/cm)	1,600	n/a	440	440	No	2012	Substances that form ions in water
Total Dissolved Solids (ppm)	1,000	n/a	250	250	No	2012	Runoff or leaching from natural deposits
Unregulated Chemicals Requiring Monitoring							
Sodium (ppm)	Not regulated	n/a	18	18	n/a	2012	Runoff or leaching from natural deposits
Hardness (ppm as CaCO3)	Not regulated	n/a	183	183	n/a	2012	Runoff or leaching from natural deposits

MCL = Maximum Contaminant Level; **MCLG** = Federal MCL Goal; **n/a** = not applicable; **pCi/L** = picoCuries per liter; **PHG** = California Public Health Goal; **ppb** = parts-per-billion; **ppm** = parts-per-million; **µmho/cm** = micromhos per centimeter