2014 Consumer Confidence Report

Water System Name: **Lake Elizabeth Mutual Water Company** Report Date: January 29th, 2015

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2014 and may include earlier monitoring data.

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

Type of water source(s) in use: Surface Water, = State Water Project (Aqueduct). Ground Water, = Well

Name & general location of source(s): Surface Water = Willow turnout, Munz Ranch Road
Ground Water = Brookwood Well

Drinking Water Source Assessment information: An assessment of drinking water source (Brookwood Well) for the Water System was completed in April 2009 conducted by Lake Elizabeth Mutual Water Company and California State Department of Public Health. The source is most vulnerable to activities associated with contaminants; Septic systems. Other vulnerable storage tanks, housing and storm drains. A copy is available at the Water Company office and at California State Department of Public Health office: 500 North Central Ave., Glendale, CA. 91203. Surface water assessment can be viewed at http://www.avek.org/index.cfm?fuseaction=menu&menu_id=5008 or at the office of Antelope Valley-East Kern Water Agency at 6500 W. Ave. N Palmdale, CA. 93551

Time and place of regularly scheduled board meetings for public participation: Shareholders meeting is the second Tuesday in June at 7:00pm @ 14960 Elizabeth Lake Road, Elizabeth Lake, CA. 93532

For more information, contact: Lake Elizabeth Mutual Water Company Phone: (661)724-1806

TERMS USED IN THIS REPORT

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. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

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 the U.S. Environmental Protection Agency (USEPA).

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.

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.

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.

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

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

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

Variances and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

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.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, 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 that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, 7, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	**Highest No. of Detections**	**No. of months in violation**	**MCL**	**MCLG**	**Typical Source of Bacteria**
Total Coliform Bacteria	(In a mo.) 0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Health Effect Language Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.					
Fecal Coliform or *E. coli*	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste
Heath Effect Language Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.					

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	**Sample Date**	**No. of samples collected**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb) 7/19/2012 (Tri-Annual)	7/19/2012	**10**	1.3	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Lead: Health Effects Language Lead-Specific Language for Community Water Systems: 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. Lake Elizabeth Mutual Water Company 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.							
Copper (ppm) 7/19/2012 (Tri-Annual)	7/19/2012	10	0.40	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper: Health Effects Language Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.							

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm) Surface water Ground water	 10/23/14 3/11/14	 78 61	 1 1	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm) Surface water Ground water	 10/23/14 3/11/14	 105 445	 2.5 2.5	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

***Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.*

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL [MRDL]**	**Typical Source of Contaminant**	**Health Effect Language**
Aluminum (µg/L) Surface water Ground water	10/23/14 3/11/14	310 ND	10 10	1000 1000	Erosion of natural deposits; residue from some surface water treatment processes	Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects.
Arsenic (µg/L) Surface water Ground water	10/23/14 3/11/14	7 ND	2 2	10 10	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
Barium (µg/L) Surface water Ground water	10/23/14 3/11/14	34.2 102	.2 .2	1000 1000	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.
Chromium (µg/L) **(Total CR)** Surface water Ground water	10/23/14 3/11/14	1 2	1 1	50 50	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits	Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis.
Fluoride (µg/L) Surface water Ground water	10/23/14 3/11/14	ND .4	.1 .1	2 2	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 mg/L may get mottled teeth.
Nickel (µg/L) Surface water Ground water	10/23/14 3/11/14	ND ND	1 1	100 100	Erosion of natural deposits; discharge from metal factories	Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects.
Nitrate (NO3)(mg/L) Surface water Ground water	10/23/14 3/11/14	4.7 11.7	.4 .4	45 45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.
Perchlorate (µg/L) Surface water Ground water	10/23/14 3/11/14	ND ND	2 2	6 6	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.	Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse affects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**Typical Source of Contaminant**	**Health Effect Language**
Chloride (CI) (mg/L) Surface water Ground water	10/23/14 3/11/14	83 95	.4 .4		Runoff/leaching from natural deposits; seawater influence.	
Color (Unfiltered)(µg/L) Surface water Ground water	10/23/14 3/11/14	ND ND	5 5		Naturally occurring organic material.	
Copper (µg/L) Surface water Ground water	10/23/14 3/11/14	ND ND	10 10	1000 1000	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Short-term exposure: Gastrointestinal distress. Long-term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in water exceeds the action level
Iron (µg/L) Surface water Ground water	10/23/14 3/11/14	50 80	50 50	300 300	Leaching of natural deposits, industrial discharge.	
Manganese (µg/L) Surface water Ground water	10/23/14 3/11/14	10 ND	10 10	50 50	Erosion of natural deposits	The notification level for manganese is used to protect consumers from neurological effects. High levels of manganese in people have been shown to result in effects of the nervous system
Silver (µg/L) Surface water Ground water	10/23/14 3/11/14	ND ND	1 1	100 100	Industrial discharges.	
Sulfate (SO4) (mg/L) Surface water Ground water	10/23/14 3/11/14	75 122	2 2		Runoff / Corrosion of natural deposits, industrial wastes	
Zinc (mg/L) Surface water Ground water	10/23/14 3/11/14	ND ND	20 20		Runoff/leaching for natural deposits; industrial wastes	

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	**Health Effects Language**
Calcium (Ca) (mg/L) Surface water Ground water	10/23/14 3/11/14	34 96	1 1		
Magnesium (Mg)(mg/L) Surface water Ground water	10/23/14 3/11/14	5 50	1 1		
Potassium (K) (mg/L) Surface water Ground water	10/23/14 3/11/14	2 3	1 1		

***Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.*

Additional General Information on Drinking Water

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 the 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).

Some people may be more vulnerable to contaminants 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 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).

Lead-Specific Language for Community Water Systems: 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. [INSERT NAME OF UTILITY] 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.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
NONE				

For Water Systems Providing Ground Water as a Source of Drinking Water

TABLE 7 – SAMPLING RESULTS SHOWING FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLES					
Microbiological Contaminants (complete if fecal-indicator detected)	**Total No. of Detections**	**Sample Dates**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
E. coli	(In the year) 0	Monthly	0	(0)	Human and animal fecal waste

Summary Information for Fecal Indicator-Positive Ground Water Source Samples, Uncorrected Significant Deficiencies, or Ground Water TT

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLE				
NONE				
SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES				
NONE				
VIOLATION OF GROUND WATER TT				
TT Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
NONE				

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique [(a)] (Type of approved filtration technology used)	
Turbidity Performance Standards [(b)] (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to .3 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU for more than eight consecutive hours. 3 – Not exceed 5.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	99.9%
Highest single turbidity measurement during the year	.23 NTU
Number of violations of any surface water treatment requirements	(0) NONE

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

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

** Any violation of a TT is marked with an asterisk. Additional information regarding the violation is provided below.*

Summary Information for Violation of a Surface Water TT

VIOLATION OF A SURFACE WATER TT				
TT Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
NONE				

Summary Information for Operating Under a Variance or Exemption

NONE

DISINFECTION RESIDUAL, PRECURSORS, and BYPRODUCTS					
Type of Sample(s)	Parameter	Units	MCL/MRDL/AL	MRDLG	RESULTS Range / Average
Distribution	Chlorine (as total CL2)	mg/L	4.0**	4.0	0.86 - 1.30 / 1.08
Treated Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement		0.66 – 2.24 / 1.1
Source Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement		0.99 – 3.4 / 1.8
Distribution	Total Trihalomethanes	µg/L	80**		21.6 – 90.1 / 49.225#
Distribution	Total Haloacetic Acids (5)	µg/L	60**		ND – 22 / 9#

** Running Annual Average of distribution system samples. The MCLs are based upon Running Annual Averages.
# This average is a system-wide value.

Contaminant	**Typical Source of Contaminant**	**Health Effects Language**
TTHMs (Total Trihalomethanes)	By-product of drinking water disinfection	Some people who drink 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.
Haloacetic Acids	Byproduct of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.