2015 Annual Water Quality Report

Published May 2016

Public Works Department

City of Thousand Oaks

WATER QUALITY DATA

The attached table lists the drinking water contaminants that were detected in City drinking water during 2015. The presence of any of these contaminants in the water does not necessarily constitute a health risk. As you can determine from the results, the quality of the water delivered by the City consistently meets all State Standards. The data presented in this table is from testing performed between January 1 and December 31, 2015, unless otherwise noted.

State of California Standards are either equal to, or more stringent than federal EPA water quality standards. Therefore, federal MCLs are not listed. Applicable Abbreviations, Definitions and Notes are identified at the conclusion of the Table.

ABBREVIATIONS AND NOTES

NS = No Standard | **N/A** = Not Applicable

ND = None Detected. Detection limits for the purposes of reporting (DLRs) available on request

NL = Notification Level | **DBP** = Disinfection By-Product

RAA = Running Annual Average | **LRAA** = Locational Running Annual Average | **TON** = Threshold Odor Number

µS/cm = micro Siemen per Centimeter (to measure conductivity)

[a] The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1.0 NTU at any time. 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. Monthly turbidity values are listed in the Secondary Standards section.

[b] Total coliform MCLs: no more than 5.0% of the monthly samples may be total coliform positive. Fecal coliform/E. coli MCLs: the occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/E. coli, constitutes an acute MCL violation. These MCLs were not violated in 2015. Results are based on the distribution system's highest monthly percent positives. Over 780 samples were analyzed in 2015.

[c] MWD initiated a Flouride Optimization Program in 11/07. See text for further detail.

[d] Results are for 2014, part of a 4-quarter radiological monitoring program. Water utilities are required to make these surveys every three years. The gross beta particle activity MCL is 4milli/rem year annual dose. The screening level is 50 pCi/L.

[e] Compliance for treatment plants that use ozone is based on a running annual average of monthly samples, which was in compliance in 2015.

[f] Compliance was based on the LRAA of data collected at distribution system-wide monitoring locations. The range of all samples collected is included.

[g] AI measures the aggressiveness of water transported through pipes. AI <10 is highly corrosive to the water system. AI at 12 or above indicates non-aggressive water.

SWRCB/ABBREVIATIONS AND DEFINITIONS

AI Aggressiveness Index

AL Federal Regulatory Action Level = The level of contaminant which when exceeded, triggers treatment or other requirements that a water system must follow.

MCL Maximum Contaminant Level = The highest level of 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.

MCLG Maximum Contaminant Level Goal = The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the US Environmental Protection Agency (EPA).

MRDL Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminants.

MRDLG Maximum Residual Disinfectant Level Goal. The level of 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.

NTU Nephelometric Turbidity Units

PHG Public Health Goal = The level of contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency (Cal-EPA).

pCi/L Picocuries per liter (units to measure radiation)

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)

TT Standards are Treatment Techniques with which Metropolitan and Calleguas are in compliance.

PRIMARY STANDARDS - MANDATORY HEALTH-RELATED STANDARDS

Parameter	Units	State MCL	PHG (MCLG)		WATER SUPPLY Jensen Plant	Weymouth Plant	Calleguas LBWFP	Potential Major Sources if Detected in Drinking Water
				Percent of Supply	67%	28%	5%	
CLARITY [a] Combined Filter Effluent Turbidity	NTU	0.3	TT = % of samples <0.3NTU [a]	Highest Value	0.09	0.05	0.07	Soil runoff
MICROBIOLOGICAL [b]	Standards for Cryptosporidium, Giardia lamblia, Legionella, viruses and Heterotrophic Plate Count Bacteria are Treatment Techniques (TT) with which Metropolitan and Calleguas comply. There were no detections of Total Coliform or E. coli bacteria in the distribution system in 2015.							
ORGANIC CHEMICALS								
Pesticides/PCBs	27 chemicals were analyzed – none were detected							
Semi-Volatile Organic Compounds	8 chemicals were analyzed – none were detected							
Volatile Organic Compounds	27 chemicals were analyzed (including MTBE, PCE and TCE) – none were detected							
INORGANIC CHEMICALS Aluminum	ppb	1000	600	RANGE	ND - 84	88 - 200	ND	Erosion of natural deposits; residue from water treatment process
				AVERAGE	ND	156	ND	
Arsenic	ppb	10	0.004	RANGE	3.3	2.1	ND	Erosion of natural deposits; runoff from orchards, electronics production waste
				AVERAGE	3.3	2.1	ND	
Barium	ppm	1	2	RANGE	ND	0.12	ND	Erosion of natural deposits; discharge from oil and metal refineries
				AVERAGE	ND	0.12	ND	
Copper (2013) (at the customer tap)	ppm	Al=1.3	0.3	RANGE / AVERAGE	90th percentile of 42 examples was 0.170, No samples exceeded the AL			Erosion of natural deposits; internal corrosion of household pipes
Fluoride [c] (treatment related)	ppm	2.0	1	RANGE	System Wide	0.7 - 1.0		Erosion of natural deposits; water additive that promotes strong teeth
				Highest RAA		0.9		
Lead (2013) (at the customer tap)	ppb	AL=15	0.2	RANGE / AVERAGE	90th percentile of 42 examples was 1.70, No samples exceeded the AL			Internal corrosion of household pipes; erosion of natural deposits
Nitrate (as NO3)	ppm	45	45	RANGE	0.6 - 0.9	ND	ND	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
				AVERAGE	0.8	ND	ND	
Selenium	ppb	50	30	RANGE	0.6 - 0.9	ND	ND - 6	Erosion of natural deposits; discharge from refineries
				AVERAGE	0.8	ND	5	
	12 other metals and chemicals were analyzed (including Asbestos, Chromium, Perchlorate, Mercury and Cyanide) – none were detected. Copper and Lead were not detected in the water supply.							
RADIONUCLIDES [d]	[analyzed every three years, for four consecutive quarters]							
Gross Alpha Particle Activity	pCi/L	15	(0)	RANGE	ND - 5	ND - 4	4	Erosion of natural deposits
				AVERAGE	3	ND	4	
Gross Beta Particle Activity [d]	pCi/L	50	(0)	RANGE	ND - 5	4 - 6	ND	Decay of natural and manmade deposits
				AVERAGE	ND	5	ND	
Uranium	pCi/L	20	0.43	RANGE	2 - 3	2 - 3	ND	Erosion of natural deposits
				AVERAGE	2	3	ND	
	3 other radionuclides were analyzed – none were detected							
DISINFECTANT RESIDUALS / DISINFECTION BY-PRODUCTS - Federal Rule								
Bromate [e]	ppb	10	0.1	RANGE	1.1 - 13	N/A	ND	By-product of drinking water ozonation
				Highest RAA	8	N/A	ND	
Total Chlorine Residual	ppm	MRDL 4	MRDLG 4	RANGE	System Wide	1.23 - 2.04		Drinking water disinfectant added for treatment
				Highest RAA		1.77		
Haloacetic Acids (HAA5) [f]	ppb	60	N/A	RANGE	System Wide	5 - 10		By-product of drinking water disinfection
				Highest LRAA		8.8		
Total Trihalomethanes (TTHM's) [f]	ppb	80	N/A	RANGE	System Wide	30 - 54.4		By-product of drinking water disinfection
				Highest LRAA		46.2		

SECONDARY STANDARDS - AESTHETIC STANDARDS

Parameter	Units	State MCL	PHG (MCLG)		Jensen Plant	Weymouth Plant	Calleguas LBWFP	Potential Major Sources if Detected in Drinking Water
Aluminum	ppb	200	N/A	RANGE	ND - 84	88 - 200	ND	Erosion of natural deposits; residue from water treatment process
				AVERAGE	ND	156	ND	
Chloride	ppm	500	N/A	RANGE	85 - 86	98 - 102	91 - 103	Runoff/leaching from natural deposits; seawater influence
				AVERAGE	86	100	97	
Color	Units	15	N/A	RANGE	1	1	ND	Naturally occurring organic materials
				AVERAGE	1	1	ND	
Odor Threshold	TON	3	N/A	RANGE	2	2	ND	Naturally occurring organic materials
				AVERAGE	2	2	ND	
Specific Conductance	µS/cm	1600	N/A	RANGE	692 - 703	1030 - 1060	673 - 744	Substances that form ions when in water; seawater influence
				AVERAGE	698	1040	703	
Sulfate	ppm	500	N/A	RANGE	108 - 112	252 - 261	74 - 94	Runoff/leaching from natural deposits; industrial wastes
				AVERAGE	110	257	84	
Total Dissolved Solids	ppm	1000	N/A	RANGE	405	654 - 665	350 - 400	Runoff/leaching from natural deposits; seawater influence
				AVERAGE	405	660	373	
Turbidity (Monthly)	NTU	5	N/A	RANGE	ND	ND	ND - 0.3	Soil runoff
				AVERAGE	ND	ND	0.2	
	8 other metals and constituents were analyzed - none were detected							

ADDITIONAL PARAMETERS (UNREGULATED)

Parameter	Units	State MCL	PHG (MCLG)		Jensen Plant	Weymouth Plant	Calleguas LBWFP	Potential Major Sources if Detected in Drinking Water
Alkalinity	ppm	NS	NS	RANGE	89 - 92	123 - 129	90 - 100	
				AVERAGE	91	126	97	
Boron	ppm	NL=1	NS	RANGE	0.24	0.12	0.20	
				AVERAGE	0.24	0.12	0.20	
Calcium	ppm	NS	NS	RANGE	36	77 - 78	33 - 35	
				AVERAGE	36	78	34	
Chlorate	ppb	NL=800	NS	RANGE	70	104	ND - 24	
				AVERAGE	70	104	ND	
Corrosivity [g]	AI	NS	NS	RANGE	12.1 - 12.3	12.5	11.2 - 12.3	
				AVERAGE	12.2	12.5	11.8	
Hardness (Total Hardness)	ppm	NS	NS	RANGE	130 - 134	296 - 304	144 - 153	132 ppm = 7.7 grains per gallon (gpg)
				AVERAGE	132	300	149	
Magnesium	ppm	NS	NS	RANGE	10 - 11	26 - 28	15 - 16	
				AVERAGE	11	27	16	
N-Nitrosodimethylamine (NDMA)	ppt	NL=10	NS	RANGE	2.1 - 2.2	ND	ND - 2.1	
				AVERAGE	2.2	ND	ND	
pH	pH units	NS	NS	RANGE	8.2 - 8.4	8.1	7.3 - 8.4	
				AVERAGE	8.2 - 8.4	8.1	7.3 - 8.4	
Potassium	ppm	NS	NS	RANGE	2.5 - 2.9	4.8 - 5.0	3.0 - 4.0	
				AVERAGE	2.7	4.9	4.0	
Sodium	ppm	NS	NS	RANGE	90 - 92	97 - 102	74 - 90	
				AVERAGE	91	100	82	
Total Organic Carbon	ppm	TT	NS	RANGE	1.2 - 2.4	2.4 - 2.8	1.9 - 2.3	
				AVERAGE	1.6	2.6	2.1	
Vanadium	ppb	NL=50	NS	RANGE	7.7	ND	ND	
				AVERAGE	7.7	ND	ND	
	5 other metals and constituents were analyzed (including Radon) – none were detected							

PURITY AND CONTAMINANTS (Cont)

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City does not use or install lead service lines but cannot control the variety of materials used in private residential plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap before using the 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 (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

More information about contaminants and potential health risks may also be obtained by calling the Safe Drinking Water Hotline at (1-800-426-4791).

MWD has conducted a source water assessment of its State Water Project supplies. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting MWD by phone at (213) 217-6850.

In order to ensure that tap water is safe to drink, the SWRCB prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The quality of our drinking water meets all State requirements for safe water.

OUR MISSION

The City Public Works Department distributes up to 15 million gallons of water each day to roughly 17,000 residences and businesses. Our mission is to provide high quality water that meets the stringent water quality standards established by the U.S.-Environmental Protection Agency (EPA) and the State Water Resources Control Board (SWRCB). The Public Works Department is dedicated to providing you a dependable supply of safe, high quality water.

OUR WATER SOURCE

The City of Thousand Oaks had three sources of water in 2015. 67% of our water supply was from the State Water Project imported from Northern California. The State Water Project transports water from the Sacramento River Delta through the California Aqueduct to Southern California. It is treated, filtered and disinfected at Metropolitan Water District's (MWD) Jensen Filtration Plant in Granada Hills. 28% of our water supply was imported from the Colorado River that was then blended with the State Water Project water. The Colorado River water is transported through MWD's Colorado River Aqueduct to MWD's F.E. Weymouth Treatment Plant in La Verne (San Gabriel Valley) where the water is treated, filtered and disinfected. The two water supplies from MWD are piped directly to Thousand Oaks through the transmission facilities of the Calleguas Municipal Water District (CMWD). 5% of our water supply was from CMWD's Lake Bard Water Filtration Plant and Reservoir located in the hills between Simi Valley and Thousand Oaks. This source was used on a limited basis when MWD shut down their transmission lines for maintenance.

Should the two supplies from MWD be interrupted by earthquake or other calamity, among other options, CMWD can deliver water to the City from the Lake Bard Water Filtration Plant and Reservoir on a more long term basis.

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PUBLIC EDUCATION

The City of Thousand Oaks is pleased to present to you this year's Annual Water Quality Report. We are committed to providing you this information in the sincere belief that informed customers are our best partners. Included in this report are details about where your water comes from, what it contains and how it compares to State standards. The City works very hard with our neighbors, our partners and suppliers to continually improve the quality of the water supply, the protection of our water sources, the dependability of supply and the integrity of our storage and distribution system.

Este informe contiene información muy importante sobre su agua para beber. Tradúzcalo ó hable con alguien que lo entienda bien. Para mas informacion, puede llamar al (805) 449-2400.

For additional information about your drinking water, contact the Water Quality Supervisor in the Public Works Department at (805) 449-2400.

PUBLIC HEALTH

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

Immuno-compromised persons such as those with cancer who are 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 their drinking water from their health care providers.

The EPA and the Centers for Disease Control guidelines on appropriate means to lessen the risk from infection by Cryptosporidium and other microbial contaminants are available from the US-EPA Safe Drinking Water Hotline (800) 426-4791.

PURITY AND CONTAMINANTS

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.

The sources of drinking water (both tap 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.

Last year, over 4000 tests were conducted on our drinking water for over 80 drinking water constituents and contaminants to ensure the safety of your drinking water. Prior to filtration and treatment, contaminants that may be present in source water include:

- **Inorganic contaminants,** such as salts and metals that can be naturally occurring or result from urban stormwater run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Organic chemical contaminants,** including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater run-off, agricultural application and septic systems.
- **Microbial contaminants,** such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Radiological contaminants,** that can be naturally occurring or the result of oil and gas production and mining activities.
- **Pesticides and Herbicides,** that may come from a variety of sources such as agriculture, urban stormwater run-off and residential uses.
- **Lead** was not detected in the water supply. However, if present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children.

FLUORIDE

MWD initiated a Fluoride Optimization Program in November of 2007. Naturally occurring fluoride level ranges from 0.1 to 0.3 mg/L (parts per million). MWD has adjusted the level to the optimal range for dental health of 0.7 mg/L.

If you or your children are taking Fluoride supplements, please consult with your dentist or dental healthcare provider for further direction.

For additional information about your drinking water, contact the Public Works Department at (805) 449-2400.

PUBLIC PARTICIPATION

The City of Thousand Oaks drinking water system is managed as an enterprise fund by the elected City Council.

Operations are conducted by the Public Works Department. The City Council meets on Tuesday evenings at 6PM in the Scherr Forum Theater in the Civic Arts Plaza, 2100 Thousand Oaks Blvd.

For information about Council meeting schedules, please call (805) 449-2151.