Yuima Municipal Water District

2017 Consumer Confidence Report

Annual Report on Water Quality for 2017

Dated: May 1, 2018

We test the quality of your drinking water 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, 2017.

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

Since 1990, all water utilities in the State of California have been required to distribute to all customers an annual Consumer Confidence Report that provides information regarding the quality of water they serve. In 1996, Congress amended the Safe Drinking Water Act and added a similar requirement for a brief annual water quality report.

This report, the *2017 Consumer Confidence Report* (CCR) is more specific and detailed in content. The State Water Resources Control Board (SWRCB), in order to implement state and national policy, oversees the issuance of this report. Yuima Municipal Water District (Yuima or District) is a community water system providing the public water supply that serves much of the community of Pauma Valley. The following report provides information to Yuima's customers regarding test results available through December 31, 2017.

To receive more information about your water, to ask questions, or to receive additional copies of this report, please call Yuima's General Manager, Richard Williamson at (760) 742-3704. Written questions should be addressed to the General Manager at P.O. Box 177, Pauma Valley, CA 92061.

Board of Directors Meetings

Regular meetings of the Board of Directors are generally held monthly on the fourth Monday at 2:00 pm at the District office, 34928 Valley Center Road, Pauma Valley. Each monthly agenda has a scheduled time for public comments during the meeting and is posted at the District Office and is available on the District website.

This report explains:

- ***Where your water comes from***
- ***How water quality is evaluated***
- ***Regulations that protect your health***
- ***How your drinking water measures up against State and Federal drinking water standards for safety, appearance, taste and odor, and***
- ***Where to go if you have questions***

Where your water comes from: Yuima relies on two main sources: local groundwater and imported surface water. The water quality issues that affect groundwater and imported surface water are somewhat different.

Local groundwater is pumped from deep underground wells located throughout Pauma Valley. This underground aquifer is known as the Pauma Groundwater Basin. Yuima uses a sodium hypochlorite solution (chlorine) to treat and disinfect its well water to remove potential bacteria contamination found naturally in the environment.

The District is not required to do any further treatment. Other agencies that use surface source water must provide additional treatment. Surface water by definition is water from lakes and streams usually impounded in open reservoirs where the water is subject to the pollutants in the watershed of its origin.

Imported water is purchased by Yuima from the San Diego County Water Authority (SDCWA), which in turn purchases the majority of its imported water from Metropolitan Water District of Southern California (MWD). MWD imports water into Southern California from two sources: a 242 mile-long aqueduct that brings water from the Colorado River's Lake Havasu, and a 444 mile-long aqueduct that carries water from the State Water Project (SWP). Water from these sources is conveyed to the MWD system through pressurized large diameter pipes, open aqueduct canals and open reservoirs. The supply is then treated at the MWD Skinner Filtration Plant located in Western Riverside County. After treatment at the Skinner Filtration Plant, the water flows into an aqueduct pipeline and is delivered to the Yuima Municipal Water District. Once in the Yuima system, which includes 42 miles of water mains, 10 water storage tanks, and 9

pumping stations; the water remains in the pressurized pipelines and tanks, further protecting its quality.

These imported surface water sources are potentially vulnerable to contamination. MWD has determined that the Colorado River supplies are most vulnerable due to recreation, urban/storm water runoff, increasing urbanization in the watershed and wastewater. State Project water supplies are considered most vulnerable due to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of MWD's assessment of these vulnerabilities can be obtained through contacting MWD by phone at (213) 217-7426.

How Water Quality is Evaluated: Water quality is evaluated by performing periodic laboratory analyses on water samples to determine the physical characteristics of the water and the presence or absence of chemical, biological and radiological contaminants. 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/or wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining and/or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban storm water runoff and/or residential uses.
- *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, agricultural operations, urban storm water runoff and septic systems.
- *Radioactive contaminants*, which can be naturally occurring or present as a result of contamination from mining and/or other activities.

Additional Information on Drinking Water

All 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 Environmental Protection Agency (USEPA) 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 those with cancer and undergoing chemotherapy, organ transplant recipients, and those with HIV/AIDS or other immune system disorders, including elderly and infants who can be particularly at risk. These people should seek advice about drinking water from their health care providers.

The 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).

ABBREVIATIONS USED IN THIS REPORT

- **PDWS = "Primary Drinking Water Standards"** The highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the PHG's (or MCLG's) as is economically and technologically feasible. Secondary MCL's are set to protect the odor, taste, and appearance of drinking water.
- **SDWS = "Secondary Drinking Water Standards"** Limits established by regulation that set the maximum amount of specific contaminants that affect the taste, odor, or appearance of the drinking water.
- **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 Environmental Protection Agency.
- **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 U.S. Environmental Protection Agency.
- **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 are set to protect the odor, taste, and appearance of drinking water.
- **MRDL = "Maximum Residual Disinfectant Level" The** level of a disinfectant added for water treatment that may not be exceeded at the consumer'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. MRDLG's are set by the U.S. Environmental Protection Agency.
- **RAL = "Regulatory Action Level"** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **NA** = not applicable.
- **NC** = not collected.
- **ND** = not detectable at testing limit.
- **NTU** = Nephelometric Turbidity Units, a measure of the suspended material in water.
- **ppb** = parts per billion.
- **µg/l** = micrograms per liter.
- **ppm** = parts per million or milligrams per liter.
- **pCi/l** = picocuries per liter (a measure of radiation).
- **CFU/100 ml** = colony forming units per 100 milliliters.
- **µmho/cm** = micromho per centimeter; a measure of electrical conductivity.
- **TT = "Treatment Technique"** A required process intended to reduce the level of a contaminant in 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.

In order to ensure that tap water is safe to drink, USEPA and the SWRCB have issued regulations that limit the amount of certain contaminants in water provided by public water systems. SWRCB regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. The USEPA's drinking water website is http://water.epa.gov/drink/index.cfm. A *Source Water Assessment* was conducted for the Yuima Municipal Water District system in 2010 and updated in 2012. A copy may be obtained by contacting the office.

In 2016, Yuima started using Ammonia as well as Chlorine for disinfection in the water treatment. Chloramine is produced by combining chlorine and ammonia. Chloramine is chiefly a secondary disinfectant. Secondary disinfectants are added to water that has already been disinfected with a primary disinfectant, often chlorine. Secondary disinfectants are used to help protect treated water from recontamination as it flows through the distribution network to the consumer.

Nitrate: Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should seek advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Nitrate is found in all District wells at varying levels but is blended down below 10 mg/L before it is supplied to District customers.

Perchlorate: At high levels, Perchlorate has been shown to interfere with thyroid function by reducing iodine uptake by the thyroid gland, thereby reducing the production of thyroid hormones and leading to adverse effects associated with hyper-thyroidism, particularly in developing fetus, infants and young children. The effects of perchlorate on thyroid function are dose-dependent and reversible.

Perchlorate has been detected at low levels in certain District wells, most likely as a result of heavy applications of fertilizers over a period of many years by commercial agriculture on overlying lands. Though present at levels well below those associated with adverse health effects in humans, the perchlorate concentration is further reduced by blending with perchlorate-free water from other sources before delivery to any of the District's customers.

Lead and Copper: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Health effects of copper include stomach and intestinal distress and prolonged exposure can result in liver damage or the inability to metabolize copper also known as Wilson's disease. Lead and copper in drinking water is primarily from materials and components associated with service lines and home plumbing. Yuima Municipal Water District 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 and copper exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead and/or copper in your water, you may wish to have your water tested. Information on lead and copper 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.

*The results of testing performed in 2017 as part of the 1991 Lead and Copper Rule are summarized in the table below.

In 2017, Lead and Copper testing was also done at the Pauma School with very good results. Please see the table below.

Discussion of Vulnerability – Although no contaminants other than nitrates have been detected in the local water supply, the system is still considered vulnerable to activities carried out near the drinking water sources. The most significant identified sources of possible contamination are fertilizer and pesticide use from agriculture groves in the area surrounding District wells. All drinking water sources in Yuima Municipal Water District are secured from vandalism by locked entrance gates and fencing with barbed wire.

Lead and Copper (testing done June 2017)		**No. of samples collected**	**90th percentile level detected**	**No. sites exceeding RAL**	**RAL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb)	Yuima	5	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
	IDA	5	ND				
	Pauma School	3	ND				
Copper (mg/L)	Yuima	5	ND	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
	IDA	5	0.55				
	Pauma School	3	ND				

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Parameter	Units	State or Federal MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR	Range Average	Testing Date Range	Combined Sources Yuima/IDA	Imported Colorado State Project	Major Sources in Drinking Water
Percent State					Range	2017	NA	0-100	
Project Water	%	NA	NA	NA	Average		NA	62	
PRIMARY STANDARDS--Mandatory Health-Related Standards									
MICROBIOLOGICAL									
Total Coliform					Range	2017	ND	ND	
Bacteria	%	5.0	(o)	NA	Average		ND	ND	Naturally present in the environment
ORGANIC CHEMICALS									
Pesticides/PCBs - none to report									
Semi-Volatile Organic Compounds- none to report									
Volatile Organic Compounds									
Trichlorofluoromethane					Range	2017	ND-38	ND	Industrial factory discharge; degreasing solvent;
(Freon-11)	ppb	150	1300	5	Average		ND	ND	propellant
INORGANIC CHEMICALS									
					Range	2017	ND-150	ND	Residue from water treatment process;
Aluminum	ppb	1000	600	50	Average		ND	ND	natural deposits erosion
					Range	2017	ND-4	ND	Natural deposits erosion, glass and electronics
Arsenic	ppb	10	0.004	2	Average		ND	ND	production wastes, runoff from orchards
					Range	2017	0.11-0.2	0.5-0.9	Erosion of natural deposits;
Fluoride	ppm	2.0	1	0.1	Average		0.16	0.7	water additive that promotes strong teeth
					Range	2017	ND-200	ND	Erosion of natural deposits; discharge from
Nickel	ppb	100	12	10	Average		ND	ND	metal factories
					Range	2017	ND-9.7	ND	Runoff and leaching from fertilizer use; septic tank
Nitrate (as N) (i)	ppm	10	10	0.4	Average		2.08	ND	and sewage; natural deposits erosion
					Range	2017	ND-4.3	ND	
Perchlorate	ppb	6	6	4	Average		ND	ND	Industrial waste discharge
RADIOLOGICALS									
Gross Alpha					Range	2017	ND-6.48	ND	
Particle Activity	pCi/L	15	(0)	3	Average		ND	ND	Erosion of natural deposits
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUAL, AND DISINFECTION BY-PRODUCTS PRECURSORS									
Total Trihalomethanes					Range	2017	7.7-15	14-38	
(TTHM)	ppb	80	NA	1	Average		11.3	19	By-product of drinking water chlorination
Haloacetic Acids					Range	2017	ND-7.2	4-8.8	
(HAA5)	ppb	60	NA	1	Average		3.6	5.4	By-product of drinking water chlorination
					Range	2017	0.23-2.9	1.1-3.1	
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	Average		1.69	2.4	Drinking water disinfectant added for treatment
SECONDARY STANDARDS--Aesthetic Standards									
					Range	2017	ND-150	ND	Erosion of natural deposits; residual from some
Aluminum	ppb	200	NA	50	Average		ND	ND	surface water treatment processes
					Range	2017	7.4-99	56-72	Runoff/leaching from natural deposits;
Chloride	ppm	500	NA	NA	Average		43.9	64	seawater influence
					Range	2017	ND-10	NA	
Color	Units	15	NA	NA	Average		3.25	1	Naturally occurring organic materials
					Range	2017	ND-26000	ND	
Iron*	ppb	300	NA	100	Average		1310	ND	Leaching from natural deposits; industrial wastes
					Range	2017	87-280	66-81	Runoff/leaching from natural deposits;
Sulfate	ppm	500	NA	0.5	Average		162	74	industrial wastes
					Range	2017	ND-22	ND	
Turbidity	NTU	5	NA	NA	Average		4.6	ND	Soil runoff
					Range	2017	ND-0.29	ND	Runoff/leaching from natural deposits;
Zinc	ppm	5.0	NA	0.05	Average		ND	ND	industrial wastes

FEDERAL UNREGULATED CHEMICALS REQUIRING MONITORING (UCMR2) OTHER PARAMETERS									
MICROBIOLOGICAL									
					Range	2017	ND-740	ND-1	
HPC	CFU/mL	TT	NA	NA	Median		65.4	ND	Naturally present in the environment
CHEMICAL									
					Range	2017	68-170	62-78	
Alkalinity	ppm	NA	NA	NA	Average		121.4	70	
					Range	2017	38-130	27-32	By-product of drinking water chlorination;
Calcium	ppm	NA	NA	NA	Average		79.1	30	industrial processes
Corrosivity					Range	2017	11-13	11.8-12	Elemental balance in water; affected
(as Aggressiveness Index)	AI	NA	NA	NA	Average		11.9	11.9	by temperature, other factors
					Range	2017	130-430	109-129	
Hardness	ppm	NA	NA	NA	Average		273.8	119	Municipal and industrial waste discharges
					Range	2017	7.6-27	11-13	
Magnesium	ppm	NA	NA	NA	Average		18.6	12	
	pH				Range	2017	6.9-8	NA	
pH	Units	NA	NA	NA	Average		7.50	8.2	
					Range	2017	4.2-8.4	2.8-3.2	
Potassium	ppm	NA	NA	NA	Average		6.1	3	
					Range	2017	18-69	48-56	Salt present in the water and is generally
Sodium	ppm	NA	NA	NA	Average		45.3	52	naturally occurring

Notes:

The iron MCL was set to protect you against unpleasant aesthetic effects (e.g., color, taste and odor) and the staining of plumbing fixtures and clothing while washing. The high iron levels are due to leaching of natural deposits. The high iron well has been taken off line indefinately.

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(760) 742-3704

If appropriate, please post this report so others may view its contents. Additional copies may be obtained by contacting the District at (760) 742-3704.