

Yuima Municipal Water District



Your 2018 Water Quality Report

CONSUMER CONFIDENCE REPORT

Issued July 2019

INSIDE THIS REPORT

- Page 3 -

Regulations
Contaminants
Nitrate
Perchlorate
Lead & Copper

- Page 4 -

Lead & Copper Table
Source Water
Service Map
Protecting your drinking water

- Page 5 -

Protecting your drinking water (cont.)
Water Quality Tables (cont.)

- Page 6 -

Violation Table
Abbreviations in this report

- Page 7 -

Water Quality Tables Continued

OUR MISSION

To provide a diversified, sustainable water supply for water service to our Pauma Valley customers that exceeds all standards of quality and reliability at fair, reasonable, and equitable rates.

Board Meetings

Regular Meetings of the Board of Directors are generally held on the

Dear Valued YMWD Customer,

Yuima Municipal Water District (YMWD) is pleased to present its annual water quality report. Once again, we provided you with consistently high quality drinking water throughout 2018. This annual water quality report shows how YMWD continues to meet or surpass all drinking water quality standards established by the State Water Resources Control Board.

YMWD is committed to providing a safe, high quality and reliable water supply while protecting public health. By efficiently maintaining and operating our facilities, and conducting rigorous monitoring and testing of the water we serve, YMWD is able to provide our customers with high quality water. Water samples are collected throughout the year from YMWD’s water sources to carefully test for contaminants and impurities. YMWD conducted approximately 1150 tests for over 80 contaminants. We only detected 35 of these contaminants, and found only 1 at a higher level than the State allows. During the time the exceedance was detected, the producing well was not in service. For more information, see the Violation table in this report.

The State Water Resources Control Board requires that YMWD customers receive an annual copy of this report which summarizes the results of water quality tests and provides specific details about sources and quality of the water served in your community.

We encourage you to read this report and if you have any questions, please feel free to call contact me at (760) 742-3704.

Thank you for being part of the YMWD family—we’re here to serve you.

Richard S. Williamson

Richard S. Williamson
General Manager
Yuima Municipal Water District



About Regulations

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (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.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

- ◆ **MICROBIAL CONTAMINANTS**, such as viruses and bacteria, WHICH 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 waste water 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 or other activities.

ABOUT NITRATE

Nitrate in drinking water at levels above 10 parts per million 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 PPM 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 is found in all District wells at carrying 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 hyperthyroidism, particularly in developing fetus, infants and young children. The effects of Perchlorate on thyroid function are dose-dependent and reversible. Perchlorate has been detected in 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.

ABOUT LEAD AND COPPER

Lead and copper are rarely found in source waters; however, both of these metals can enter drinking water by leaching from household fixtures. Water that sits in your pipes for long periods of time may dissolve tiny amounts of lead and/or copper (parts per billion (ppb) levels) into household water. The USEPA has developed the Lead and Copper Rule to protect public health by establishing an action level of 15 ppb for lead and 1300 ppb for copper.

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. YMWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your water has been sitting in your household plumbing for several hours, you can minimize 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 and copper in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drink Water Hotline at (800) 426-4791 or at www.epa.gov/lead.

Lead & Copper (testing done in 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				
School	3	ND				
Copper (ppb) Yuima	5	ND	0	15	0.2	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
IDA	5	ND				
School	3	ND				

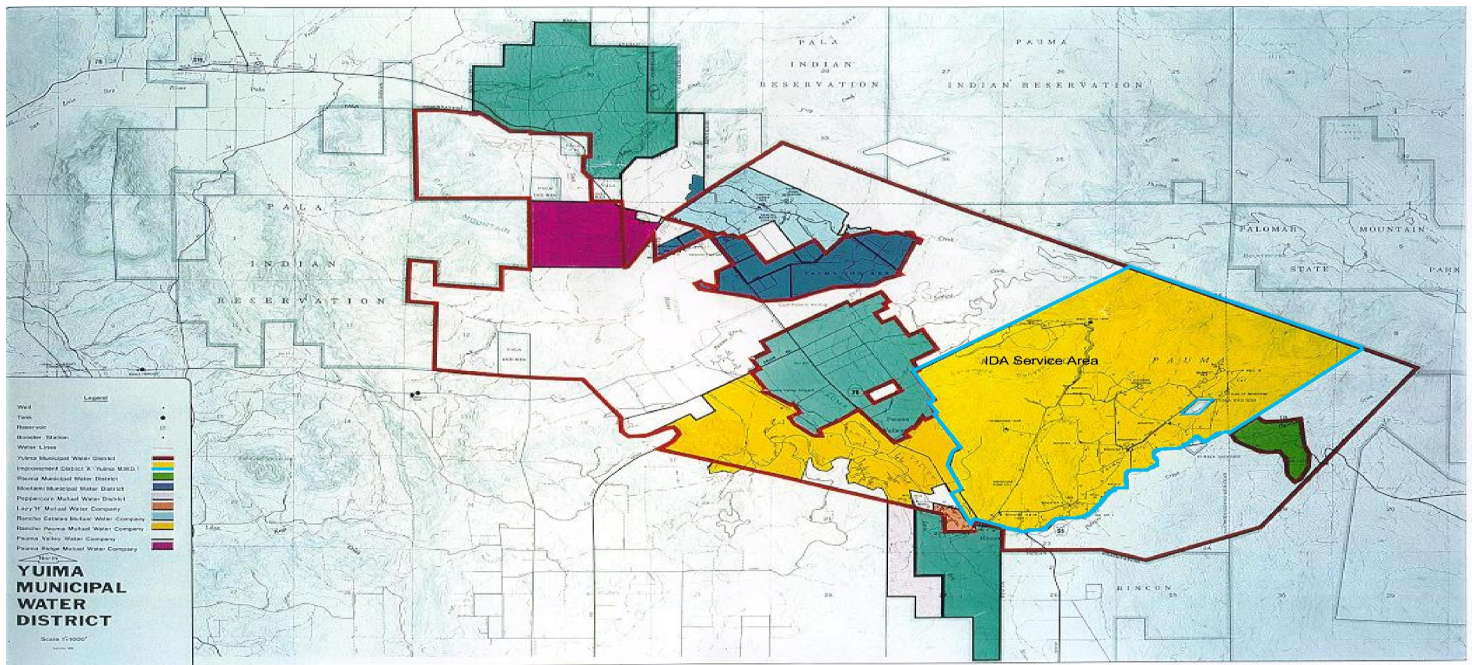
Where Your Water Comes From

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

- ◆ LOCAL GROUNDWATER is pumped from underground wells throughout Pauma Valley. This aquifer is known as the Pauma Valley Groundwater Basin. YMWD uses a sodium hypochlorite solution (chlorine) to treat and disinfect its well water to remove potential bacteria contamination found naturally in the environment.
- ◆ IMPORTED WATER is purchased by YMWD 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: the Colorado River, and the State Water Project (SWP).

YMWD Service Area

- ◆ Yuima Municipal Water District Service Area is all lands that fall within the red outlined area below. YMWD primarily relies on imported treated surface water, with a portion of the northwestern part of the service area that also is supplied by the Schoepe wells. If you live in YMWD service area, please read the “Yuima” and “Imported Water” columns of the water quality tables.
- ◆ The Improvement District A (IDA) service area is the yellow highlighted area that falls within the blue outlined area below. IDA uses a blend of imported water and the IDA wells. If you live in the IDA service area, please read the “IDA” and “Imported Water” columns of the Water Quality Tables.



This report contains important information about your drinking water. Please contact Yuima Municipal Water District at (760) 742-3704 for assistance in Spanish. Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Yuima Municipal Water District a (760) 742-3704 o vicitenos a 34928 Valley Center Road., Pauma Valley, CA. para asistirlo en español.

PROTECTING YOUR 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 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 at (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 provider.

The sources of drinking water (both tap and bottled) include rivers, lakes, 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. The land that the water comes into contact with is called the watershed; everything that happens to or in the watershed can affect the quality of your drinking water supply.

PROTECTING YOUR DRINKING WATER—CONTINUED

In 2016, YMWD 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 and are used to help protect treated water from recontamination as it flows through the distribution network to the customer.

Total Coliform Bacteria are naturally present in the environment and are generally not harmful. Coliform bacteria may occur in soil, vegetation, animal waste, sewage, and surface waters. YMWD routinely tests for the presence of coliform bacteria as an indicator of the sanitary quality of drinking water. YMWD also tests for *E. coli* bacteria, which indicates fecal or sewage contamination. A positive coliform test result does not necessarily mean a maximum contaminant level (MCL) has been exceeded, or that there is a problem in the water system. More information and general guidelines on ways to lessen the risk of infection by microbes are available from the Safe Drinking Water Hotline at (800) 426-4791.

Source Water Vulnerability Assessment

◆ Imported Treated Surface Water—The Colorado River water is vulnerable to factors such as urbanization in the watershed, and waste water. The State Water Project supplies are considered most

vulnerable due to urban storm runoff, wildlife, agriculture, recreation, and waster water. The most recent surveys for MWD’s source waters are the Colorado River Watershed Sanitary Survey—2015 Update, and the State Water Project Watershed Sanitary Survey—2016 Update. For more info, a copy of MWD’s CCR can be obtained online at <http://www.mwdh2o.com>.

◆ YMWD Wells—The most significant identified sources of possible contamination are fertilizer and pesticide use from agriculture groves in the areas surrounding District wells. All drinking water sources in YMWD are secured from vandalism by locked entrance gates and fencing. The initial vulnerability assessments are completed in 2003 and 2011. You can view the vulnerability assessments online at https://meritt.cdlib.org/m/ucd_ice_swap and then search for “Yuima”.

Protecting the sources of drinking water helps protect our health. It’s everyone’s responsibility, and here are a few ways you can help:

- ◆ Eliminate excess use of lawn and garden fertilizers and pesticides—they can contain hazardous chemicals that can reach your drinking water source.
- ◆ Pick up after your pets.
- ◆ Dispose of chemicals properly; take used motor oil to a recycling center.

YUIMA MWD 2018 WATER QUALITY INFORMATION								
Parameter	Units	State MCL [MRDL]	PHG (MCLG)	State DLR (RL)	Yuima Range	IDA Range	Imported Water Range	Major Sources in Drinking Water
					Yuima Average	IDA Average	Imported Water Average	
PRIMARY STANDARDS—Mandatory Health-Related Standards								
CLARITY								
Combined Filter Effluent (CFE)	NTU	TT	NA	NA	NA	NA	0.08 ⁽¹⁾	Soil runoff
Turbidity	%						100	
MICROBIOLOGICAL								
Total Coliform Bacteria (state)	Number of samples	1 Positive Monthly Sample	MCLG = (0)	NA	0	0	NA	Naturally present in the environment
<i>Escherichia coli</i> (<i>E. coli</i>)(state)	Number of samples	a routine sample and a repeat sample are total coliform positive and one of these is also fecal coliform or <i>E. coli</i> positive	MCLG = (0)	NA	0	0	NA	Human and animal fecal waste
Total Coliform Bacteria (Federal)	Number of samples	1 Positive Monthly Sample	MCLG = (0)	NA	0	0	NA	Naturally present in the environment
<i>Escherichia coli</i> (<i>E. coli</i>)(Federal)	Number	a routine sample and a repeat sample are total coliform positive and one of these is also fecal coliform or <i>E. coli</i> positive	MCLG = (0)	NA	0	0	NA	Human and animal fecal waste
<i>E. coli</i> (groundwater rule)	Number of samples	0	MCLG = (0)	NA	0	0	NA	Human and animal fecal waste
<i>Giardia</i>	cysts/200 L	TT	MCLG = (0)	(1)	NA	NA	ND-1 ND	Human and animal fecal waste
ORGANIC CHEMICALS								
Volatile Organic Compounds								
Trichlorofluoromethane (Freon-11)	ppb	150	1,300	5	ND ND	20-63 36.50	ND	Industrial factory discharge; degreasing solvent; propellant and refrigerant
INORGANIC CHEMICALS								
Aluminum	ppb	200	600	50	ND	ND-150 7.1	ND-100 51	Residue from water treatment process; natural deposits erosion
Arsenic	ppb	10	0.004	2	ND	ND-3.7 0.2	ND	Natural deposits erosion; glass and electronics production wastes
Barium	ppb	1,000	2,000	100	ND	0-150 35.70	ND	Oil and metal refineries discharge; natural deposits erosion
Fluoride (tests taken 2016,2017)	ppm	2.0	1	0.1	.11-.31 0.18	0.13-0.3 0.19	0.6-0.9 0.7	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel	ppb	100	12	10	ND	ND-13 0.60	ND	Erosion of natural deposits; discharge from metal factories

YUIMA MWD 2018 WATER QUALITY INFORMATION

Parameter	Units	State MCL [MRDL]	PHG (MCLG)	State DLR (RL)	Yuima Range	IDA Range	Imported Water Range	Major Sources in Drinking Water
					Yuima Average	IDA Average	Imported Water Average	
PRIMARY STANDARDS—Mandatory Health-Related Standards								
Nitrate (as Nitrogen)*	ppm	10	10	0.4	7.9-12 8.65	0-8.6 4.10	ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
Perchlorate	ppb	6	1	4	ND	0-4.6 0.10	ND	Yuima values are treated; industrial waste discharge
Selenium (tests taken 2016,2017)	ppb	50	30	5	7.2-9.9 8.97	ND-7.6 0.90	ND	Refineries, mines, and chemical waste discharge; runoff from livestock lots
RADIOLOGICALS								
Gross Alpha Particle Activity (tests taken in 2011, 2013, 2014, 2015, 2016)	pCi/L	15	MCLG = 0	3	4.69-6.04 5.33	ND-4.48 1.40	ND-4 ND	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50	MCLG = 0	4	4.3 ²	3.68-4.63 4.1 ³	ND-5 ND	Decay of natural and man-made deposits
Radium-226 (tests taken 2014)	pCi/L	NA	0.05	1	0.095 ²	NA	ND	Erosion of natural deposits
Radium-228	pCi/L	NA	0.05	1	ND	ND-0.303 0.07 ⁴	ND	Erosion of natural deposits
Uranium (tests taken 2015)	pCi/L	20	0.43	1	3.4 ²	ND-1 .5 ⁵	ND	Erosion of natural deposits
DISINFECTION BYPRODUCTS,								
Total Trihalomethanes (TTHM)	ppb	80	NA	1.0	16-20 LRAA = 20	15-35 24		Byproduct of drinking water chlorination
Sum of Five Haloacetic Acids (HAA5)	ppb	60	NA	1.0	6.2-7.9 LRAA = 7.9	1.2-18 8.6		Byproduct of drinking water chlorination
Chloramine	ppm	MRDL = 4.0	MRDL = 4.0	(0.05)	0.2-2.9 1.44	0.39-3.27 1.65	NA	Drinking water disinfectant added for treatment
Total Chlorine Residual	ppm	MRDL = 4.0	MRDL = 4.0	(0.05)	0.2-2.9 1.44	0.39-3.27 1.65	NA	Drinking water disinfectant added for treatment
Bromate	ppb	10	0.1	1.0	NA	NA	ND-5.9 3.7	Byproduct of drinking water ozonation
Total Organic Carbon (TOC)	ppm	TT	NA	0.30	NA	NA	2.0-2.7 2.4	Various natural and man-made sources; TOC is a precursor for the formation of disinfection byproducts
SECONDARY STANDARDS—Aesthetic Standards								
Aluminum	ppb	200	600	50	ND	ND-150 7.1	ND-100 51	Residue from water treatment process; natural deposits erosion
Chloride (tests taken 2016,2017)	ppm	500	NA	(2)	81-140 102.00	7.4-160 61.90	90-93 92	Runoff/leaching from natural deposits; seawater influence
Color	Color Units	15	NA	(1)	ND	0-10 1.36	ND-1 ND	Naturally-occurring organic materials
Copper	ppm	1.0	0.3	0.05	ND	ND-52 2.48	ND	Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching
Iron	ppb	300	NA	100	ND	ND-300 16.4	ND	Yuima values are treated Leaching from natural deposits; industrial waste
Manganese*	ppb	50	NL = 500	20	ND	ND-53 8.70	22	Yuima values are treated; Leaching from natural deposits
Odor Threshold	TON	3	NA	1	ND	ND-1 0.05	3	Naturally-occurring organic materials
Specific Conductance (tests taken 2016,2017)	µS/cm	1,600	NA	NA	960-1500 1150.00	360-1300 748.60	841-851 846	Substances that form ions in water; seawater influence
Sulfate (tests taken 2016,2017)	ppm	500	NA	0.5	230-390 290.00	85-280 140.00	168-175 172	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS) (tests taken 2016,2017)	ppm	1,000	NA	(2)	690-1100 846.67	250-880 513.80	510-526 518	Runoff/leaching from natural deposits
Turbidity (tests taken 2016,2017)	NTU	5	NA	0.1	0-0.21 0.13	ND-4 0.80	ND	Soil runoff
Zinc	ppm	5.0	NA	0.05	ND	ND-290 162.30	ND	Runoff/leaching from natural deposits; industrial wastes
OTHER PARAMETERS								
General Minerals								
Alkalinity (as CaCO ₃) (test taken 2016,2017)	ppm	NA	NA	(1)	140-200 163.30	62-200 130.10	104-109 106	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide,
Calcium (test taken 2016,2017)	ppm	NA	NA	(0.1)	92-150 124.00	12-140 75.50	54-58 56	Runoff/leaching from natural deposits
Hardness (as CaCO ₃) (test taken 2016,2017)	ppm	NA	NA	(1)	310-610 450.00	34-560 278.30	218-238 228	Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
Magnesium (test taken 2016,2017)	ppm	NA	NA	(0.01)	20-58 35.00	1.2-50 21.80	21-22 22	Runoff/leaching from natural deposits
Potassium	ppm	NA	NA	(0.2)	ND	ND	4.0-4.5 4.2	Salt present in the water; naturally-occurring
Sodium (test taken 2016,2017)	ppm	NA	NA	(1)	66-130 88.33	18-91 45.20	85-92 88	Salt present in the water; naturally-occurring
Unregulated Contaminants								
Boron	ppb	NL = 1,000	NA	100	ND	ND	120	Runoff/leaching from natural deposits; industrial wastes
Miscellaneous								
Aggressiveness Index (AI) - Corrosivity (tests taken 2016,2017,2018)	AI units	NA	NA	NA	12-13 12.67	11-13 12.00	12.3-12.4 12.4	Elemental balance in water; affected by temperature, other factors
Bicarbonate Alkalinity	ppm	NA	NA	(1)	170-240 196.67	64-240 159.80	NA	Runoff / leaching from natural deposits
Carbonate Alkalinity	ppm	NA	NA	(1)	ND	ND-5.8 0.28	NA	Runoff / leaching from natural deposits
Corrosivity (as Saturation Index, SI)	SI units	NA	NA	NA	NA	NA	0.54-0.59 0.56	Elemental balance in water; affected by temperature, other factors
N-Nitrosodimethylamine (NDMA)	ppt	NL = 10	3	(2.0)	NA	NA	4.1	Byproduct of drinking water chloramination; industrial processes
pH (tests taken 2016,2017)	pH Units	NA	NA	NA	7.8-8.2 8.00	6.9-8.32 7.60	8.1-8.2 8.2	NA

Footnotes: (1) Results reported by MET (2) only Well PV3R Data available (3) only Wells 44, 46, 48 data available (4) only Wells 7A, 10, 29, 41, 42, 44, 46, 47, 48, 50 data available (5) only Wells 29 & 42 data available

2018 VIOLATION INFORMATION

Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
10/15/2018 Citations 05-14-18C-012 and 05-14-18C-013 for Failing to Test All Backflow Preventers Annually	Regulations require that all water systems have a cross connection control plan, including testing all backflow preventer devices annually.	Years that not all devices were tested: 2013, 2014, 2015, 2016, 2017	Yuima is currently working on updating its cross connection control plan to meet regulations and is working on a creating a schedule to test all backflow preventer devices.	Cross connections can potentially introduce bacteriological contamination.
08/10/2018 Citation No. 05-14-18C-010 for Nitrate MCL violation	Nitrate MCL was exceeded at the Schoepe Blending Tank.	July 2018	Yuima is currently working on a blending operations plan for Division review and approval.	Infants below the age of 6 months who drink water containing nitrate in excess of MCL may quickly become seriously ill, and if untreated, may die because high nitrate levels can interfere with the capacity of the infants 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
Manganese MCL Exceedance	Manganese MCL was exceeded at Dunlap Tank	April & November 2018	Yuima is currently working on a blending operations plan for Division Review	Manganese is a secondary standard with no health effects associated (aesthetics only).

ABBREVIATIONS USED IN THIS REPORT

- ◆ PDWS: Primary Drinking Water Standards - MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
- ◆ SDWS: Secondary Drinking Water Standards - MCLs for contaminants that do not affect health but are used to monitor the aesthetics of the 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 contaminant in drinking water below which there is no known expected risk to health. MCLG's 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 MCL's 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.
- ◆ 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.
- ◆ ppm: parts per million.
- ◆ pCi/l: picocuries per liter - a measure of radioactivity
- ◆ μS/cm: microSiemens per centimeter - a measure of conductivity
- ◆ CFU/100 ml: colony forming units per 100 milliliters.
- ◆ μmho/cm: micromho per centimeter - a measure of electrical conductivity.



P.O. Box 177, Pauma Valley, CA

Your 2018
Water Quality
Consumer Confidence Report
Issued July 2019

Do you want an electronic copy of
this report? Please contact the
District Office at (760) 742-3704 or
yuima@yuimamwd.com