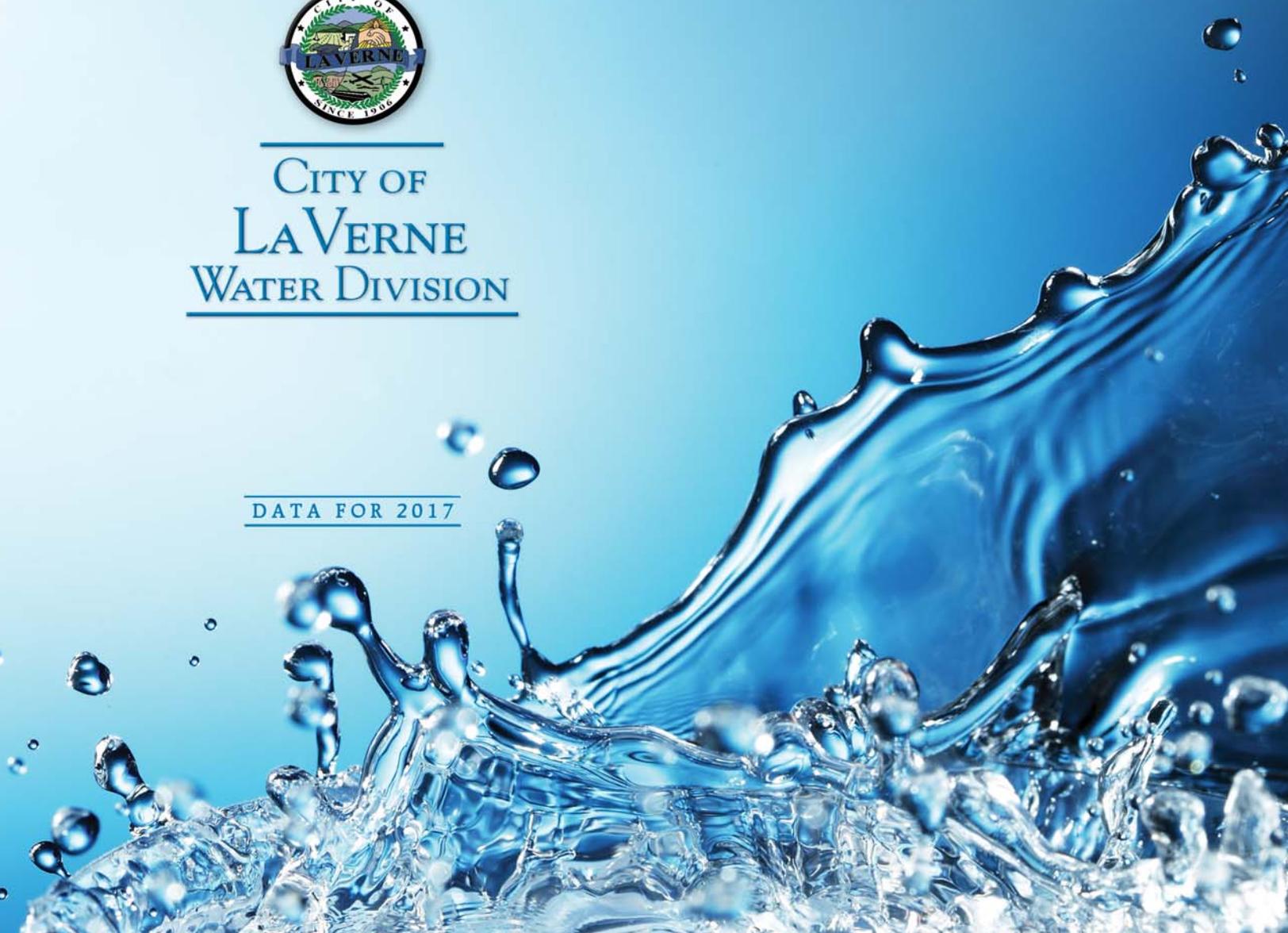


2018 WATER QUALITY REPORT



CITY OF
LAVERNE
WATER DIVISION

DATA FOR 2017



The City of La Verne 2018 Water Quality Report

Since 1990, California public water utilities have been providing annual Water Quality Reports to their customers.

This year's report, also known as the "Consumer Confidence Report," **covers water quality testing from January to December 2017**, unless otherwise specified.

The City of La Verne Water Division's (City) annual Water Quality Report is prepared in compliance with the regulations called for in the 1996 reauthorization of the Safe Drinking Water Act (SDWA). The reauthorization charged the United States Environmental Protection Agency (USEPA) with updating and strengthening the tap water regulatory program. USEPA and the State Water Resources Control Board, Division of Drinking Water (DDW) are the agencies responsible for establishing water quality standards.

To ensure that your tap water is safe to drink, USEPA and DDW prescribe regulations that limit the amount of certain contaminants in water provided by water systems.

DDW regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

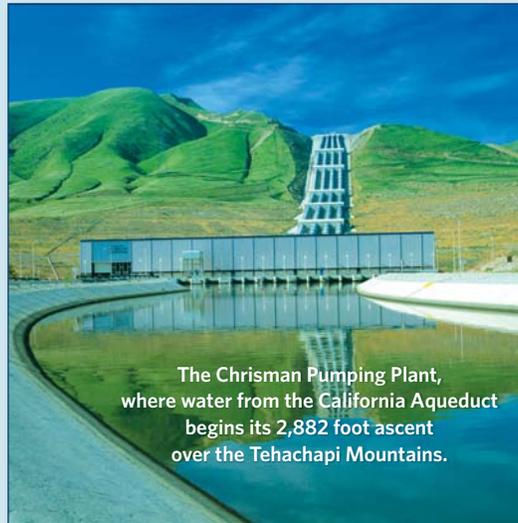
The State and Federal governments require that this annual Water Quality Report be provided to every customer to insure you are informed of the quality of your water. The City is committed to safeguarding its water supply and, as in years past, the water delivered to your home meets or exceeds the standards

required by the state and federal regulatory agencies.

In some cases, the City goes beyond what is required by testing for unregulated chemicals that may have known

health risks but do not have drinking water standards. Unregulated chemical monitoring helps USEPA and DDW determine where certain chemicals occur and whether new standards need to be established for those chemicals to protect public health.

We encourage you to read this report and to contact us with any questions you may have.



The Chrisman Pumping Plant, where water from the California Aqueduct begins its 2,882 foot ascent over the Tehachapi Mountains.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.



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

Questions about your water? Contact us for answers.

If you would like more information, or have any questions regarding the quality or delivery of your water service, please contact Richard Martinez, Utilities Manager, City of La Verne, 3660 "D" Street, La Verne, California 91750, or by phone at (909) 596-8741.

The City Council meets on the first and third Mondays of the month in the Council Chambers at the same address above. Public attendance and participation is encouraged and welcomed.

For more information about the health effects of the listed constituents in the following tables, call the U.S. Environmental Protection Agency hotline at (800) 426-4791.

Additional Resources for Water Information

The City of La Verne cares about our customers and the water we supply to them. We always welcome any calls or questions regarding the quality or delivery of our water. Our customer service office can be reached at (909) 596-8744. For more information about water use efficiency and available rebates, please visit the City's website at www.cityoflaverne.org and look for environmental programs in the Public Works Department section.

The Quality of Your Water Is Our Primary Concern

Sources of Supply

Local groundwater provides approximately 28 percent of our water; however, most of our supply (72 percent) is purchased from the Three Valleys Municipal Water District (TVMWD) who treats water received from the Metropolitan Water District of Southern California (MWD). MWD provides supplemental water to about 300 cities and unincorporated areas in Southern California, importing water from two separate sources: the Colorado River and the State Water Project. The water we purchase is treated by Three Valleys Municipal Water District at the Miramar Treatment Plant.

Basic Information About Drinking Water Contaminants

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 land or through the layers of the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal and human activity.



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 wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production or mining activities.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural application and septic systems.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791.

About Lead in Tap Water

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the

community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the USEPA Safe Drinking Water Hotline (1-800-426-4791).



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. The City of La Verne 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 www.epa.gov/safewater/lead.

Special Risk Populations

Some individuals may be more vulnerable to the effects of possible contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, some elderly persons, infants, persons infected with HIV/AIDS, or persons with other immune system disorders can be particularly at risk from infections. These persons should seek advice from their health care providers about drinking water.



The USEPA/Center for Disease Control guidelines on appropriate means to lessen the risks of infection by *Cryptosporidium* or other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Additional General Drinking Water Information

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 visiting the USEPA Safe Drinking Water website (www.epa.gov/ground-water-and-drinking-water) or by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Water Quality Issues that Could Affect Your Health

Contaminants Exceeding MCL or AL

The range for Nitrate and other constituents in the groundwater sample results may be above the MCL. These values are for wells which account for approximately 28 percent of the total water supplied to our customers. The content at your tap is well below the MCL, ranging from ND – 7.2* parts per million (ppm) for Nitrate with an average of 4.22 ppm and ND – 4.9* parts per billion (ppb) for Perchlorate with an average of 0.37 ppb. The range for Trichloroethylene in the groundwater sample results may also be above the MCL; however, the groundwater goes through an air stripping process that reduces the Trichloroethylene to between 0.56 to 2.1 ppb with an average of 1.26 ppb.

Nitrate as Nitrogen in drinking water at prolonged levels above 10 ppm 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 as Nitrogen in drinking water at prolonged 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 ask advice from your healthcare provider.

Perchlorate in drinking water at prolonged levels above 6 ppb can disrupt the normal function of the thyroid gland in both children and adults. In adults, the thyroid plays an important role in metabolism, making and storing hormones that help regulate the heart rate, blood pressure, body temperature, and the rate at which food is converted into energy. In fetuses and infants, thyroid hormones are critical for normal growth and development of the central nervous system.

*On July 26, 2017, a routine water quality sample obtained from the Old Baldy Well blending station exceeded the State water quality standards for perchlorate. The State has established a Maximum Contaminant Level (MCL) of 6 ppb and the sample analysis received contained 7 ppb.

Additionally, on August 2, another routine water quality sample obtained from the City's Old Baldy Well blending station exceeded the State water quality standard for Nitrate. The State has established an MCL of 10 ppm and the sample analysis received contained 11 ppm.

These exceedances were caused by an abnormally high and unexpected spike in Perchlorate and Nitrate levels from the Old Baldy Well.

Immediately upon learning of the sample results on August 9, the City removed the Old Baldy

Well from service and conducted additional testing throughout the City's water distribution system. This additional testing of 20 sampling sites throughout the community found waters within the entire distribution system to be under the MCL for both Perchlorate and Nitrate. This additional testing demonstrated that the water was safe to consume as of August 9, however, it's possible that consumers within the immediate vicinity of the Old Baldy Well site, located on the corner of Fifth and C Streets, may have received water above the MCL for Perchlorate during the period from July 26 to August 9, and Nitrate during the period from August 2 to August 9.

Fluoride

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. In December 2007, MWD joined a majority of the nation's public water suppliers in adding fluoride to drinking water in order to prevent tooth decay. In line with recommendations from the DDW, as well as the U.S. Centers for Disease Control and Prevention, MWD adjusted the natural fluoride level in imported treated water from the Colorado River and State Water Project to the control range for dental health of 0.6 to 1.2 parts per million. Our local water is not supplemented with fluoride. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 parts per million.

Additional information about the fluoridation of drinking water can be found through the following sources:

U.S. Centers for Disease Control and Prevention:

www.cdc.gov/fluoridation • 1-800-CDC-INFO (1-800-232-4636)

State Water Resources Control Board, Division of Drinking Water

www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html

For more information about MWD's fluoridation program, please contact Edgar G. Dymally at edymally@mwdh2o.com or you may call him at (213) 217-5709.



All affected consumers received letters notifying them of the incident.

Source Water Assessments

Imported (MWD) Water Assessment

Every five years, MWD is required by DDW to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters.

The most recent watershed sanitary surveys of its source water supplies from the Colorado River was updated in 2015 and the State Water Project was updated in 2016.



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.

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 (800) CALL-MWD (225-5693).

Groundwater Assessment

A source water assessment was conducted for all city owned wells including Beech Street Well, La Verne Heights Well 01, La Verne Heights Well 02, La Verne Heights Well 03, Lincoln Well, Mills Tract Well, Old Baldy Well, Amherst Well, and Walnut Well for the City of La Verne Water Department in March 2002.

These sources are considered most vulnerable to the following activities not associated with any detected contaminants: hospitals, high density housing, storm drain discharge points, transportation corridors — road-right-of-ways, sewer collection systems, high density septic systems, dry cleaners, historic gas stations, confirmed leaking underground fuel tanks, automobile gas stations, and plastics/synthetics producers.

A copy of the complete assessment may be viewed at: State Water Resources Control Board, Division of Drinking Water, 500 N. Central Avenue, Suite 500, Glendale, California 91203. You may request a summary of the assessment be sent to you by contacting Chi P. Diep, District Engineer, Metropolitan District, (818) 551-2016.



Table 1 – Sampling Results Showing the Detection of Coliform Bacteria

Microbiological Contaminants	Groundwater (28%)	Miramar Plant (72%)	MCL	PHG (MCLG)	MCL Violation	Typical Source of Contaminant
Total Coliform Bacteria Highest percent of positive samples in one month: 5%	No acute violation, 0 positive sample	No acute violations, 0 positive samples	More than 5% of samples collected in one month with positive detection	0	No	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	0 acute violation, 0 positive sample	No acute violations, 0 positive samples	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	No	Human and animal fecal waste

Table 2 – Sampling Results Showing the Detection of Lead and Copper at Residential Taps

Lead and Copper Last sampled 2015; next sampling due 2018	Action Level (AL)	Public Health Goal	90th Percentile Level Detected	Sites Exceeding AL / Number of Sites	AL (MCLG)	Typical Source of Contaminant Violation
Lead* (ppb)	15	0.2	8.8	2 / 35	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)	1.3	0.3	0.16	0 / 35	No	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

*In 2017, nine schools submitted requests and were sampled for lead.

Table 3 – Sampling Results for Sodium and Hardness

Chemical or Constituent	Groundwater (28%) (Range)	Miramar Plant (72%) (Average)	MCL	PHG (MCLG)	MCL Violation	Typical Source of Contaminant
Sodium (ppm)	31 – 89	28	none	none	No	Generally found in ground and surface water
Hardness (as CaCO ₃) (ppm)	110 – 430	74	none	none	No	Generally found in ground and surface water

Table 4 – Detection of Contaminants with a Primary Drinking Water Standard

Chemical or Constituent	Groundwater (28%) (Range/Average)	Miramar Plant (72%) (Range/Average)	MCL	PHG (MCLG)	MCL Violation	Typical Source of Contaminant
CLARITY						
Combined Filter Effluent Turbidity (NTU)	—	0.14	TT	NS	No	Soil runoff
ORGANIC CHEMICALS						
1,1 Dichloroethane (ppb)	ND – 0.66 / 0.22	ND	5	3	No	Extraction and degreasing solvent, fumigant
Tetrachloroethylene (PCE) (ppb)	ND – 0.76 / 0.46	ND	5	0.06	No	Discharge from factories, dry cleaners & auto shops
Trichloroethylene (ppb)	3.9 – 21 / 10.34	ND	5	1.7	No	Discharge from metal degreasing sites and other factories
Total Trihalomethanes (ppb)	ND – 0.64 / 0.57	28.7 – 65.9 / 58.5	80	N/A	No	By-product of drinking water disinfection
INORGANIC CHEMICALS						
Fluoride (ppm) (naturally occurring)	0.2 – 0.8 / 0.4	ND	2	1	No	Erosion of natural deposits; water additive that promotes strong teeth
Nitrate as Nitrogen (ppm)	6.1 – 23 / 14.97	ND – 0.8 / 0.5	10	10	Yes	Runoff & leaching from fertilizer; leaching from septic tanks & sewage; erosion of natural deposits
Perchlorates (ppb)	ND – 21 / 7.51	ND	6	1	Yes	Industrial waste discharge
Hexavalent Chromium (ppb)	ND – 6.8 / 3.0	ND	None	0.02	No	Industrial waste discharge; could be naturally present as well
RADIONUCLIDES (testing required every six to nine years; last tested 2012)						
Gross Beta Particle Activity (pCi/L)	NR	ND	50	(0)	No	Decay of natural and manmade deposits
Uranium (pCi/L)	3.5 – 6.1 / 2.7	due 2019	20	(0)	No	Erosion of natural deposits
Radium 226	NR	due 2022	N/A	0.05	No	Erosion of natural deposits
Radium 228	NR	due 2022	N/A	0.019	No	Erosion of natural deposits
Tritium (pCi/L)	NR	89.5	20,000	400	No	Decay of natural and manmade deposits
Strontium-90	NR	0.137	8	0.35	No	Decay of natural and manmade deposits

The Presence of Contaminants Does Not Necessarily Indicate a Health Risk

The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The DDW requires the City to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are more than one year old.

The City also participated in unregulated contaminant monitoring. Unregulated contaminant monitoring helps EPA determine where certain contaminants occur and whether it needs to establish regulations for those contaminants. All constituents for this testing were non-detectable (ND) in our groundwater supply with the exception of vanadium.

Table 5 – Detection of Contaminants with a Secondary Drinking Water Standard

Chemical or Constituent (and reporting units)	Groundwater (28%) (Range/Average)	Miramar Plant (72%) (Range/Average)	MCL	PHG (MCLG)	MCL Violation	Typical Source of Contaminant
AESTHETIC STANDARDS						
Chloride (ppm)	25 – 95 / 55.6	28	500	NA	No	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	ND – 210 / 23.3	ND	300	NA	No	Leaching from natural deposits; industrial waste
Odor Threshold (units)	ND	1	3	NA	No	Naturally occurring organic materials
Specific Conductance (mS/cm)	620 – 1000 / 827	240 – 290 / 265	1600	NA	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	64 – 120 / 89	24	500	NA	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	400 – 730 / 567	180	1000	NA	No	Runoff/leaching from natural deposits; seawater influence
ADDITIONAL PARAMETERS						
Alkalinity (ppm)	140 – 240 / 194	49 – 64 / 57	NA	NA	No	Measure of water quality
Calcium (ppm)	37 – 130 / 94	13 – 17 / 15	NA	NA	No	Measure of water quality
Magnesium (ppm)	4.5 – 31 / 21	7.6	NA	NA	No	Measure of water quality
pH (units)	7.3 – 8.1 / 7.6	7.7 – 8.59 / 8.13	NA	NA	No	Measure of water quality
Potassium (ppm)	1.4 – 2.0 / 1.7	1.5 – 2.9 / 2.2	NA	NA	No	Measure of water quality
Total Organic Carbon (ppm)	—	1.8 – 3.3 / 2.3	NA	NA	No	Various natural and manmade sources
UNREGULATED CHEMICALS OF NOTE REQUIRING MONITORING						
Boron (ppb)	NR	120 – 150 / 135	NL = 1000	NA	No	Runoff/leaching from natural deposits; industrial wastes
Vanadium	ND-5.1 / 2.2	ND	NL = 50	NA	No	Naturally occurring; industrial waste discharge

1) MWD has developed a flavor profile analysis method that can more accurately detect odor occurrences. For more information, contact Three Valleys Municipal Water District (909) 621-5568
 2) NL = Notification Level

Table Legend

What is a Water Quality Goal?

In addition to mandatory water quality standards, USEPA and the DDW 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 guidance and directions for water management practices. The chart in this report includes three 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 the 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 Goals (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 are Water Quality Standards?

Drinking water standards established by the USEPA and DDW 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. **Secondary MCLs** are set to protect the odor, taste, and appearance of drinking water.
- ◆ **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.
- ◆ **Primary Drinking Water Standard (PDWS):** MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
- ◆ **Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

- ◆ **Secondary Drinking Water Standards (SDWS):** MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWS 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
- ◆ **Variances and Exemptions:** Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

Measurement Information

In order to ensure that tap water is safe to drink, USEPA and DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

The tables list all the drinking water contaminants that the City detected above the reporting limits during the 2017 calendar year.

The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done for the period January 1 through December 31, 2017.

How are Contaminants Measured?

- ◆ Parts per million (**ppm**) or milligrams per liter (**mg/L**)
- ◆ Parts per billion (**ppb**) or micrograms per liter (**µg/L**)
- ◆ Parts per trillion (**ppt**) or nanograms per liter (**ng/L**)

What Do the Abbreviations Represent?

- ◆ **pCi/L** = picoCuries per liter
- ◆ **µmho/cm** = micromhos per centimeter
- ◆ **NTU** = nephelometric turbidity units
- ◆ **ND** = not detected
- ◆ **NA** = not applicable
- ◆ **NR** = Not Required
- ◆ **NC** = not collected
- ◆ **NL** = Notification Level

