2019 Consumer Confidence Report
Jackson Valley Irrigation District

We're pleased to present to you this year's annual Consumer Confidence Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is Lake Pardee (Primary) and Lake Amador (Secondary), which undergoes disinfection and filtration.

If you have any questions about this report or concerning your water utility, please contact Mike Thompson/ Chris Esmond (209) 274-2037

Espanol – (Spanish): Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

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, the U.S. Environmental Protection Agency (USEPA) and the State Department of Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

Contaminants that may be present in source water include:

- *Microbiological 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 a result of oil and gas production and mining activities.

A source water assessment was conducted in 2002 by Amador County Environmental Health Department (ACEHD). The following are some activities the source is considered most vulnerable to: septic systems, historic mining, underground storage tanks, and wastewater treatment plants. A copy of the assessment can be obtained by contacting ACEHD at 209/223-6439.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Operational Citation 2019:

Failure to monitor and/or report the required effluent turbidity for Month of August 2019

Reason for citation:

- Monitoring system failure aka (SCADA)System Supervisory Control and Data Acquisition
- Cause of failure was result of ‘‘Ransomware attack’’
- Resulted in loss of water treatment plant monthly monitoring information for August 2019

Corrective Actions:

- Installed integrated Antivirus/Anti-ransomware software
- Implemented incremental hourly and monthly backups for all monitoring information
- Isolate monitoring system behind firewall

W A T E R Q U A L I T Y D A T A

Jackson Valley Irrigation District routinely monitors for constituents in your drinking water according to Federal and State laws. Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected above the DLR 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 table does not include contaminants that were not detected by laboratory testing. Unless otherwise indicated, the data contained in this report are for the monitoring period of January 1 to December 31st, 2019. The Department 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 results in this report, though representative, may be more than a year old.

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.

Primary Drinking Water Standards (PDWS): MCLs 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.

ND: not detectable at testing limit

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

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

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

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 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).

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 which a water system must follow.

DLR: Detection Limit for purposes of Reporting. The DLR is set by state regulation for each reportable analyte.

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 (state Total Coliform Rule)	(In a mo.) 0	0	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or *E. coli* (state Total Coliform Rule)	(In the year) 0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive	0	Human and animal fecal waste
E. coli (federal Revised Total Coliform Rule)	(In the year) 0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

Total Coliform: *Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments*.

❖ Table 2 – Sampling Results Showing The Detection Of Lead And Copper

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Lead (ppb)	AL = 15	0.2	ND	5 sites sampled; 0 sites over action level	2017	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	AL = 1.3	0.3	0.21	5 sites sampled; 0 sites over action level	2017	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

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.

Lead – 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 Amador Resort 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.

Table 3 – Sampling Results For Sodium and Hardness in Raw Water Lakes

Chemical or Constituent (reporting units)	Sample Date	Level Detected	Range of Detections	PHG (MCLG)	MCL	Typical Source of Contamination
Sodium (ppm)	02/04/19 05/23/19	8.1/ 2.2	NA	none	none	Generally found in ground and surface water
Hardness (ppm)	02/04/19 05/23/19	77/ 13	NA	none	none	Generally found in ground and surface water

Table 4 – Detection Of Contaminants With A Primary Drinking Water Standard (Raw Water Lakes)

Chemical or Constituent (reporting units)	Violation Y/N	Level Detected	Range of Detection	PHG	MCL	Typical Source of Contaminant
Inorganic Contaminants **Sampled 2019**						
Aluminum (ppb)	N	265 (Ave.)	260 - 270	600	1000	Erosion of natural deposits; residue from some surface water treatment processes
Fluoride (ppm) (sampled 2/23/2016)	N	<0.10	NA	1.0	2.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as N (sampled 2/23/2016)	N	<0.22	NA	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Disinfection Byproducts*, Disinfectant Residuals, and Disinfection Byproduct Precursors, Treated Water 2019						
Total Trihalomethanes (ppb)	N	32.1	16 – 43.5	NA	80	By-product of drinking water chlorination
Haloacetic Acids (ppb)	N	35.1	23 – 48	NA	60	By-product of drinking water disinfection
Chlorine residual (ppm) (Sampled monthly by Lab)	N	0.5 average	0.1 – 1.1	MRDLG = 4.0	MRDL = 4.0	Drinking water disinfectant added for treatment

Table 5 - Detection Of Contaminants With A Secondary Drinking Water Standard [a] Lake Amador Raw Lake Water - Sample Date 2/04/2019 Lake Pardee Raw Lake Water – 5/23/2019						
Chemical or Constituent (reporting units)	**Violation Y/N**	**Level Detected**	**Range of Detection**	**PHG**	**MCL**	**Typical Source of Contaminant**
***Aluminum (ppb)**	**Y**	260/ 270	NA	NA	200	Erosion of natural deposits; residue from some surface water treatment processes
Chloride (ppm)	N	8.4/ 1.3	NA	NA	500	Runoff/leaching from natural deposits; sea water influence
Conductivity (Micromhos per cm)	N	200 /36	NA	NA	1600	Substances that form ions when in water; sea water influence
Color (color units)	N	10 10	NA	NA	15	Naturally-occurring organic materials
Iron (ppb)	N	ND/ ND	NA	NA	300	Leaching from natural deposits; industrial wastes
Manganese (ppb)	N	ND/ ND	NA	NA	50	Leaching from natural deposits
***Odor – Threshold (units)**	N	4.0/ 3.2	NA	NA	3	Naturally-occurring organic compounds
Sulfate (ppm)	N	27/ 1.2	NA	NA	500	Runoff/leaching from natural deposits; industrial wastes
Turbidity (units)	N	2.1/ 0.44	NA	NA	5	Soil runoff
Total Dissolved Solids (ppm)	N	160/ 35	NA	NA	1000	Runoff/leaching from natural deposits

***** There are no PHGs, MCLGs, or mandatory standard health effects language for constituents with secondary drinking water standards because secondary MCLs are set on the basis of aesthetics.

For Systems Providing Surface Water as a Source Of Drinking Water:

Table 6 - Sampling Results Showing Treatment Of Surface Water Sources	
Treatment Technique [a] (Type of approved filtration technology used)	Conventional Filtration
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 0.3 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	0.052 NTU (September 8, 2019)
Violations of any surface water treatment requirements	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.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

On 9/14/2016, Hexavalent Chromium was sampled at Lake Amador to meet regulatory sampling requirements. The results were all less than the reporting limits with none detection.

On 6/1/2017, Asbestos was sampled at Lake Amador to meet regulatory sampling requirements. The results were less than the reporting limits with none detection.

On 3/5/2018, 6/4/2018, 9/4/2018, & 12/3/2018, Synthetic Organic Contaminates was sampled to meet regulatory sampling requirements. The results were less than the reporting limits with none detection.

Chemical	Detected Level	Health Effects Language
1,2,3-Trichloropropane (ng/L or PPT)	ND	Some people who drink water containing 1,2,3-trichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

If you have any questions about this report or concerning your water utility, please contact our office at (209) 274-2037.

Report prepared 5/09/2020 by Alpha Analytical Laboratories, Inc., using *CCR Guidance for Water Suppliers* available at, http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/CCR.shtml, employing due diligence with instructions given. Data contained in this report are based on the analytical results generated by Alpha Analytical Laboratories and its subcontract laboratories.