Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550
661-947-4111

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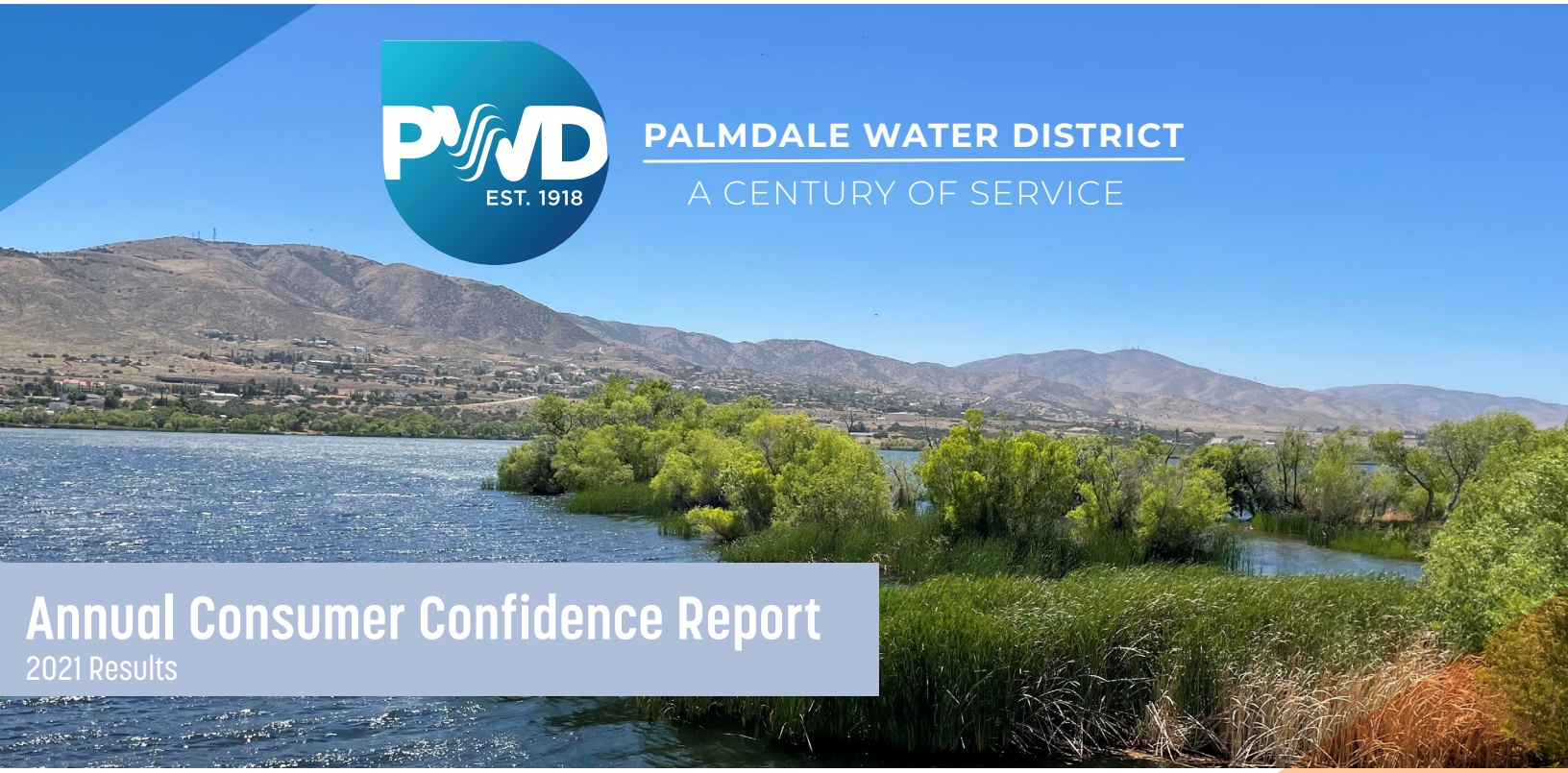
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Division 5

General Manager
Dennis D. LaMoreaux



Annual Consumer Confidence Report

2021 Results

Our mission is to provide high-quality water to our current and future customers at a reasonable cost.

Questions or comments on the contents of this report are encouraged. Please contact Operations Manager Mynor Masaya at 661-947-4111 x1185 or Water Quality & Regulatory Affairs Supervisor Amanda Thompson at 661-947-4111 x1178, Monday through Thursday, 8:00 a.m. to 6:00 p.m.

Attencion Residentes!
Esta publicación está disponible en español en nuestro sitio web en palmdalewater.org.
Para obtener una copia impresa en español, visite nuestra oficina o llame al 661-947-4111.



OUR WATER SUPPLY

PWD acquires its water from one of three sources or a combination of these sources.

1. Surface water from the State Water Project (SWP/CA Aqueduct)

This water source begins in northern California, flows into the Delta near Sacramento, and is pumped south to Lake Palmdale. PWD is entitled to take a maximum of 21,300 acre-feet, or 6.9 billion gallons of water, per year. Based on the amount of rain & snowfall in the Sierra Nevada mountains and the amount of water stored in northern California reservoirs, PWD is granted a percentage of the annual entitlement. In 2021, PWD received 10,105 acre-feet from the SWP/CA Aqueduct. The water is drawn from the SWP/CA Aqueduct and stored in Lake Palmdale prior to treatment.

2. Surface water from Littlerock Reservoir

Littlerock Dam was built in 1924 and renovated in 1994 to strengthen the dam and increase the reservoir capacity to 3,500 acre-feet, or 1.1 billion gallons of water. In 2021, PWD diverted 674 acre-feet from this source. Littlerock Reservoir is fed by natural runoff from snowpacks in the local San Gabriel Mountains and from rainfall. The water is then transferred from Littlerock Reservoir to Lake Palmdale through a ditch connecting the two bodies of water for storage prior to treatment.

3. Groundwater

Groundwater is pumped from the Antelope Valley groundwater basin through 22 wells. In 2021, PWD pumped 9,844 acre-feet. This water is treated with chlorine before being pumped directly into the distribution system.

All three sources are constantly tested and treated in compliance with all applicable regulations to ensure high-quality water and dependability of the water system. The Palmdale Water District delivered approximately 53% surface water and 47% groundwater to its consumers in 2021.

SOURCES OF DRINKING WATER

The sources of drinking water, both tap and bottled, 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.

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 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Water Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking Water Source Assessment and Protection Program

Palmdale Water District's Sanitary Survey, including a Source Water Assessment of surface waters, was updated in 2017 in compliance with state of California regulations. The assessment of surface water sources included Littlerock Reservoir and Lake Palmdale. A Groundwater Assessment and Protection Program was completed in January of 1999, and a Wellhead Protection Plan was completed in November 2000.

PWD's drinking water sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: illegal activities, such as unauthorized dumping; recreation; highways; railroads; and sewer collection systems. A comprehensive source water protection program can prevent contaminants from entering the public water supply, reduce treatment costs, and increase public confidence in the quality, reliability and safety of drinking water.

You can help prevent water contamination and pollution by properly disposing of trash and waste materials.

Remember, many common household products can contaminate surface and groundwater supplies. Anything you throw in the trash, dump on the ground, pour down the drain, or wash down the driveway can eventually reach water sources and cause contamination.

The Sanitary Survey, Source Water Assessment, Groundwater Assessment, and Wellhead Protection Plan are available for review on PWD's website at palmdalewater.org or at PWD's office by calling Assistant General Manager Adam Ly at 661-947-4111 x1062.



STATE OF OUR WATER

With California in an extreme drought, water shortage is currently at the forefront of most conversations about water. At Palmdale Water District (PWD), staff is faced with ensuring that the community has enough water to meet needs this year. Our customers want to know about water restrictions and ways to conserve. Sufficient water supply is a critical issue, but the topic of water quality is just as important.

While PWD's Resource and Analytics Department has been working overtime to find enough water supply, the Laboratory staff was behind the scenes collecting more than 3,500 water samples and conducting 18,000 tests throughout 2021. The team of one Supervisor and three Lab Analysts are responsible for the collection and testing to make sure the water is safe and to provide the detailed data in this report.

Each year, we take pride in announcing that the water we distribute to the 126,000 people who depend on us daily for their water continues to meet or exceed all federal and state guidelines. It is our goal to always be proactive about meeting current and future regulatory requirements so that we may continue to provide the highest quality water in the Antelope Valley.

As the only water agency in the area using granular activated carbon (GAC), PWD's use of the advanced water treatment process removes chemicals that can leave water with an unfavorable taste or smell and form carcinogens in the water system. This is after the treatment plant removes and kills viruses, bacteria and other pathogens. Because of this process, your tap water is safe to drink. In California, tap water is more regulated than bottled water.

PWD promises you that our staff of 88 will continue to dedicate ourselves to providing the community with clean, safe, reliable water – just as we have for the past 104 years. Currently, we are challenged with water supply issues. We need your help to conserve at least 20% compared to 2020. You can start by reducing your outdoor watering to the allowed days of Monday, Wednesday and Saturday before 10 a.m. and after 6 p.m. We will continue to update you on ways to conserve. Together, we can successfully get through this challenge.

Please continue to help us Save Water Today for Our Tomorrow.

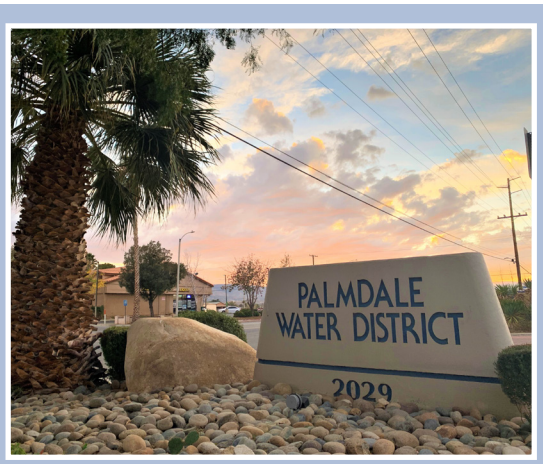
Gloria Dizmang (PWD Board President)
Dennis D. LaMoreaux (PWD General Manager)

The Palmdale Water District is pleased to announce 100% regulatory compliance in 2021 and is confident its drinking water is of the highest quality.

This Consumer Confidence Report is a snapshot of PWD's 2021 water quality and will provide you with a better understanding of the excellent quality of your drinking water. This report includes details about where your water comes from, what it contains, and how it compares to drinking water standards as set by the state of California. We are committed to providing you with this information because informed customers are our best allies. Stringent water-quality testing is performed before the water is delivered to consumers. Last year, PWD completed more than 18,000 tests for over 80 regulated contaminants. Only nine primary standard contaminants were detected in 2021, and all were at levels below the Maximum Contaminant Level allowed by the state.

LAST YEAR, PWD completed more than **18,000** tests for over 80 regulated contaminants.

Please take the time to review this Consumer Confidence Report and Water Quality Data Chart to become an informed consumer. The Water Quality Data Chart is divided into two standards – Primary and Secondary. Primary standards are set to protect public health from contaminants in water that may be immediately harmful to humans or affect their health if consumed for long periods of time. Secondary standards govern aesthetic qualities of water, such as taste, mineral content, odor, color, and turbidity.



How to contact PWD:

- Attend Board of Directors meetings the second and fourth Mondays of each month. Board meetings start at 6:00 p.m. and are held at the PWD office, 2029 East Avenue Q, Palmdale.
- Call 661-947-4111 with questions about PWD or to file a water quality complaint.
- Call 661-947-4111 x5002 for information on water-use efficiency, including conservation and water education.

For more information, visit our website at palmdalewater.org.

THE WATER QUALITY DATA CHART LISTS ALL DRINKING WATER CONTAMINANTS DETECTED DURING THE 2021 CALENDAR YEAR.

The presence of these contaminants in the water does not necessarily indicate the water poses a health risk. PWD tests for many contaminants in addition to those listed in the chart. Test results for these additional contaminants were all "Non-Detected" (ND) and are not required to be included in the chart. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. As a result, some of the data, though representative of the water quality, is more than one year old. Unless otherwise notes, the data presented in this chart is from testing performed January 1 to December 31, 2021.

Parameter Treatment Techniques	Regulation	Meets Standard?	MRL	Sample Frequency	Water Treatment Plant	PHG (MCLG)	Typical Source of Contaminant
					Level Found		
Turbidity (Water Clarity)	TT = 1 NTU	Y	0.1	Continuous	0.2	NA	Soil Runoff
	TT = 95% of monthly samples ≤0.3 NTU	Y	NA		100% ≤ 0.3 NTU		

Turbidity is a measure of the cloudiness of the water. We measure it because it is a good indicator of the effectiveness of our filtration system. Treated surface water range and average are of daily maximum.

Disinfection Byproduct (DBP)								
Control of DBP Precursor (Total Organic Carbon, TOC)	TT = ratio of actual TOC removal to required TOC removal shall be ≥ 1	Y	1	Monthly	2.2 - 3.2	2.7	NA	Various natural and manmade sources

Parameter Primary Standards	MCL or [MRDL]	Meets Standard?	MRL	Sample Frequency	Distribution System		PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Disinfectant Residual					All Sample Range	RAA		
Chlorine (as Cl2)	[4.0 mg/L]	Y	0.1	Weekly	0.2 - 1.6	1.0	[4]	Drinking water disinfectant added for treatment
Disinfection Byproducts					All Sample Range	Highest RAA		
TTHMs (Total Trihalomethanes)	80 µg/L	Y	0.5	Monthly	ND - 73	66	NA	Byproduct of drinking water disinfection
HAA5 (Sum of 5 Haloacetic Acids)	60 µg/L	Y	2	Monthly	ND - 11	9		

Parameter Primary Standards	MCL	Meets Standard?	DLR	Sample Frequency* Surface Water / Groundwater	Treated Surface Water Plant Effluent Summary Sampled in 2021		Groundwater Summary Results from Wells Sampled in 2019 - 2021		PHG (MCLG)	Typical Source of Contaminant
					Range	Average	Range	Average		
Inorganic Chemicals										
Aluminum	1.0 mg/L	Y	0.05	Annually / Triennially	ND - 0.1	ND	ND - 0.4	ND	0.6	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic	10 µg/L	Y	2	Annually / Triennially	NA	ND	ND - 3	ND	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (naturally occurring)	2.0 mg/L	Y	0.1	Quarterly/ Quarterly	0.1 - 0.2	0.1	ND - 0.5	0.2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	10 mg/L	Y	0.4	Quarterly/ Quarterly	NA	ND	ND - 6	1	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radioactivity										
Gross Alpha Particle Activity	15 pCi/L	Y	3	**See comment	NA	ND	ND - 6	ND	(0)	Erosion of natural deposits
Uranium	20 pCi/L	Y	1	***See comment	NA	ND	ND - 1	ND	0.43	

Tap Monitoring Lead & Copper	Action Level	Meets Standard?	DLR	Lead and Copper Rule Sampled in 2021		Lead Testing in Schools Sampled in 2018			PHG	Typical Source of Contaminant
				Range	90th Percentile	No. of Schools requesting lead sampling in 2018	Range	Average		
Lead	15 µg/L	Y	5	50 sites sampled; 0 sites over AL	ND	29	88 sites sampled; 0 sites over AL	ND	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper	1.3 mg/L	Y	0.05	50 sites sampled; 0 sites over AL	0.5	NA	NA	NA	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Parameter	MCL	Meets Standard?	MRL	Sample Frequency* Surface Water/ Groundwater	Treated Surface Water Plant Effluent Summary Sampled in 2021		Groundwater Summary Results from Wells Sampled in 2019 - 2021		Typical Source of Contaminant
					Range	Average	Range	Average	
Secondary Standards - Inorganic Chemicals									
Chloride	500 mg/L	Y	0.5	Quarterly/ Quarterly	97 - 120	111	ND - 96	27	Runoff/leaching from natural deposits; seawater influence
Color	15 units	Y	3	Weekly / Triennially	NA	ND	ND - 10	ND	Naturally occurring organic materials
Iron	300 µg/L	Y	100	Monthly / Quarterly	NA	ND	ND - 104	ND	Leaching from natural deposits; industrial wastes
Odor-Threshold	3 units	Y	1	Weekly / Triennially	ND - 1	ND	ND - 2	ND	Naturally occurring organic materials
Specific Conductance	1600 µS/cm	Y	2	Annually / Triennially	NA	570	240 - 790	396	Substances that form ions when in water; seawater influence
Sulfate	500 mg/L	Y	0.5	Quarterly/ Quarterly	33 - 52	43	16 - 128	41	Runoff; leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	1000 mg/L	Y	10	Annually / Triennially	NA	310	130 - 470	240	Runoff/leaching of natural deposits
Turbidity	5 units	Y	0.1	Annually / Triennially	NA	0.3	ND - 3.6	0.3	Soil Runoff
Additional Constituents Analyzed									
Boron	NL = 1 mg/L	Y	0.1	Annually / Triennially	NA	0.1	NA	ND	Erosion of natural deposits
Vanadium	NL = 50 µg/L	Y	3	Annually / Triennially	NA	ND	7 - 36	16	
Alkalinity	(NA) mg/L	NA	20	Weekly / Triennially	61 - 94	72	80 - 180	113	Dissolved as water passes through deposits which contain carbonate, bicarbonate, and hydroxide compounds
Calcium	(NA) mg/L	NA	1	Annually / Triennially	NA	27	10 - 78	38	Dissolved as water passes through limestone deposits
Chromium (Hexavalent)	(NA) µg/L	NA	1	Quarterly / Quarterly	NA	ND	ND - 13	4	Steel and pulp mill discharges, chrome plating, natural erosion
Hardness	(NA) mg/L	NA	5	Weekly / Triennially	87 - 141	110	27 - 240	121	Sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.
Magnesium	(NA) mg/L	NA	0.1	Annually / Triennially	NA	13	1 - 15	6	Dissolved as water passes through magnesium bearing minerals
pH	(NA) units	NA	0.1	Continuous / Triennially	6.9 - 7.6	7.0	7.5 - 8.4	8.1	Generally natural changes due to interactions with the environment
Potassium	(NA) mg/L	NA	1	Annually / Triennially	NA	3	ND - 3	1	Leaching from natural deposits
Sodium	(NA) mg/L	NA	1	Annually / Triennially	NA	64	19 - 80	37	Generally naturally occurring salt present in water
Special Testing									
UCMR 4 (Sampled in 2018 - 2019)					Effluent & Dist. System		Groundwater		Environmental Source
					Range	Average	Range	Average	
HAA5	(NA) µg/L	NA	NA	Special	0.4 - 8.9	5.2	-	-	Byproduct of drinking water disinfection
HAA6Br	(NA) µg/L	NA	NA	Special	ND - 20	12	-	-	Byproduct of drinking water disinfection
HAA9	(NA) µg/L	NA	NA	Special	0.4 - 22	13	-	-	Byproduct of drinking water disinfection
Manganese	50 µg/L	Y	0.4	Special	ND - 3.4	1.4	ND - 2.1	ND	Leaching from natural deposits

* Wells are sampled every 3 years except for Chloride, Fluoride, Nitrate and Sulfate, which are sampled quarterly.
** Sampled between 2012 and 2021. Individual sites are sampled every 6 or 9 years. Range is from individual sample results.
*** Sample collected only when Gross Alpha Activity exceeds 5 pCi/L.

EDUCATIONAL INFORMATION AND POSSIBLE DRINKING WATER 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 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 (1-800-426-4791). 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

NITRATE: In the Primary Standards Inorganic Chemicals section of the chart for Nitrate (as Nitrogen), treated surface water is ND . In the groundwater column, the range is ND to 6 mg/L, and the average is 1 mg/L. The State Water Boad requires annual sampling if results are less than 50% of the MCL. If the result from any one source is greater than 50% of the MCL, then sampling must be done quarterly at that source. PWD samples all its wells on a quarterly basis (4 times per year) even when they test below 50% of the MCL. The numbers expressed on the chart are derived from quarterly sampling of all PWD wells, except those that are out of service.

Health effects of 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 ask advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

Lead and Copper: Palmdale Water District (PWD) is required to draw new sample sets of tap samples for lead and copper every 3 years. The last samples were taken in 2021 (50 samples). The 90th percentile results of ND for lead and 0.5 ppm for copper are well within the AL of 15 ppb for lead and the AL of 1.3 ppm 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. PWD is responsible for providing high quality drinking water, but is unable to 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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.

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/lead.

Health Effects of Lead: Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.

Health Effects of Copper: 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.

DEFINITIONS:

The following definitions of key terms are provided to help you understand the data used in this report.

Detection Limit for purposes of Reporting (DLR): The smallest concentration of a contaminant that can be measured and reported. DLRs are set by State Water Board (same as MRL, Minimum Reporting Level, set by USEPA).

Locational Running Annual Average (LRAA): The running annual arithmetic average, computed quarterly, of quarterly arithmetic averages of samples taken at a particular monitoring location.

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 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 (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.

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.

Minimum Reporting Level (MRL): A set concentration that is acceptable to the data user and the laboratory as long as reliable measurement is achieved.

Notification Level (NL): State guidelines developed by State Water Board that addresses the concentration of a contaminant which, if exceeded, triggers public notification.

Primary Drinking Water Standard (PDWS): MCLs, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.

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 EPA.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Running Annual Average (RAA): The running annual arithmetic average, computed quarterly, of quarterly arithmetic averages of all samples collected.

Secondary Drinking Water Standard (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 level.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Unregulated Contaminant Monitoring (UCMR): Unregulated contaminant monitoring helps USEPA and the State Water Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

ADDITIONAL ABBREVIATIONS USED IN WATER QUALITY DATA CHART:

< Less Than

> Greater Than

NA: Not Applicable

ND: Not detectable or Non-Detected at testing limit (DLR or MRL)

TOC: Total Organic Carbon

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

NTU: Nephelometric Turbidity Units

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

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

µS/cm: microsiemens per centimeter (a measure for conductivity)



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