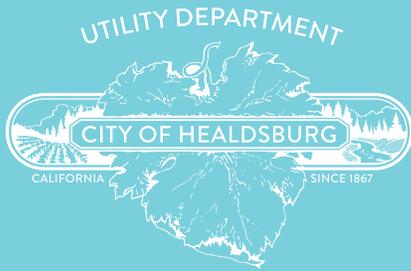


2017

WATER QUALITY REPORT

City of Healdsburg





2017 WATER QUALITY REPORT

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



MESSAGE FROM THE UTILITY DIRECTOR

Healdsburg's 2017 water-quality report provides the City's water customers detailed information about the City's drinking water. As in past years, the City has complied with all state Water Resources Control Board and U.S. Environmental Protection Agency (EPA) water-quality regulations. Compliance with state and federal guidelines requires constant and frequent monitoring and testing of our drinking water throughout the year.

In 2017, the City collected and tested more than 2,600 drinking-water samples. Included in this report is a summary of those many tests demonstrating the quality of the water provided by the City throughout 2017. This report also provides details about where your drinking water comes from, what it contains, and how it compares with the standards set by the regulatory agencies.

Ensuring safe drinking water for Healdsburg's homes and businesses requires a skilled team of employees. These employees constantly monitor the operation of the City's wells, treatment plants, and water system. Before staff can take on the responsibility of providing safe drinking water, they must complete many years of training, hold several layers of state certifications, and continue their education and training to constantly improve their skills and ultimately their ability to better serve the City of Healdsburg. The dedication, efforts, and skills of the City's employees are shown in the City's track record of continually meeting safe drinking water standards year after year.

Thank you for taking the time to review Healdsburg's 2017 water-quality report. We hope this report provides good information and answers questions you may have about the drinking water supplied by the City of Healdsburg. Learn more by visiting ci.healdsburg.ca.us/420/Water.

Sincerely,

Terry Crowley
UTILITY DIRECTOR





MEET YOUR WATER UTILITY TEAM

Front Row (l-r): *Jarrold Dericco, Ryan Alves, Jose Vasquez, Tyler Kettmann, Steve Nelson, Brian Medeiros, Charlie Jurecek*

Middle Row (l-r): *John Sanneman, Eric Webb, Jorge Valencia, Dustin Huse, Rob Scates, Al Ochoa, Allen Roseberry*

Back Row (l-r): *David Hambly, Tyler Dugan, Victor Halverson, Angie Koski, Patrick Fuss*

Not Pictured: *Terry Crowley, Larry Zimmer, Adolfo Espinoza, Chris Worlow, Eddie Uribe, Rich McMahon, Rosa Gutierrez, Felicia Smith*

How does water from our rivers and lakes get treated for safety and delivered reliably to your home? The City has a team of hard-working water treatment (operations) and distribution (maintenance) professionals to do just that.

The utility-operations team conducts the supply and treatment of raw water so it's safe to drink and use. Each team member is certified by the state of California for water treatment and distribution and maintain his or her credentials through testing and continuing education. The operations team is supported by our industrial group consisting of mechanical, electrical and instrumentation technicians, as well as an ELAP-certified laboratory technician.

Our public works maintenance employees monitor the water's distribution through the network of pipes throughout the City. The maintenance team, all certified by the State in water distribution, repairs leaks, replaces service lines, sets meters, and maintains valves, pipes and hydrants to keep the system flowing 24 hours per day, seven days a week.

In 2017, this group produced more than 610 million gallons of high-quality drinking water for the City's residents and businesses. To do that, 2,609 separate samples were analyzed, every leaky water main was repaired, every damaged hydrant was replaced, and every call-out — no matter the time of day or night — was responded to.

NOTICE FROM THE EPA

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.

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 storm water 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 storm water 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 storm water runoff, agricultural application, and septic systems.
- Radioactive contaminants, that 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 (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. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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).

HOW TO READ THE WATER QUALITY TABLE

Highest amount of a contaminant EPA allows in drinking water

The average amount of a constituent detected in the drinking water

The lowest to highest amount of a constituent detected in the drinking water.

Year tests were conducted

TABLE OF DETECTED CHEMICALS OR CONTAMINANTS IN 2017

SUBSTANCE	HIGHEST LEVEL ALLOWED	AVERAGE LEVEL DETECTED	RANGE OF LEVELS DETECTED	TYPICAL SOURCES OF CONTAMINANT
PRIMARY SUBSTANCES Regulated contaminants with primary MCL, MCLG & MRDL				
<small>*Lead/Copper Rule 2017 Data, Next Round of Samples: 2020 *Regulated at the Customers Tap</small>				
Copper*	1.30 PPM (AL)	0.68 PPM (90th Percentile)	0.14 - 0.96 PPM (90th Percentile)	Internal corrosion of household plumbing systems

This describes the most likely ways a constituent enters the drinking water. Wording is provided by the EPA

DEFINITIONS:

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

MCL: Maximum Contaminant Level is 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.

MCLG: Maximum Contaminant Level Goal is the level of contaminant in drinking water below which there is no known or expected risk to health. The U.S. EPA sets MCLGs.

MRDL: Maximum Residual Disinfectant Level is the level of disinfectant added for water treatment that may not be exceeded at the customer's tap.

MRDLG: Maximum Residual Disinfectant Level Goal is the level of disinfectant added for water treatment below which there is no known or expected risk to health. The U.S. EPA sets MRDLGs.

NA: Not Applicable.

ND: Not Detected. Constituent was below the detection level of the analytical method.

NS: No Standard. Officials have not developed a Public Health Goal or MCLG standard.

NTU: Nephelometric Turbidity Unit is a measure of the clarity of water. 5 NTU is when the average person can begin to detect turbidity.

pCi/L: Picocuries per Liter. Measures naturally occurring radioactivity from erosion of mineral deposits.

PDWS: Primary Drinking Water Standard. MCLs and MRDLs for contaminants and disinfectants that affect health along with their monitoring and reporting requirements and water treatment requirements.

pH: A measure of a solution's acidity.

PHG: Public Health Goal is the level of contaminant in drinking water below which there is no known or expected risk to health. The U.S. EPA sets PHG's.

PPB: Parts per Billion (or micrograms per liter). One PPB is equal to 1 teaspoon in 1.3 million gallons.

PPM: Parts per Million (or milligrams per liter). One PPM is equal to 1 teaspoon in 1,300 gallons.

TT: Treatment Technique is a required process intended to reduce the level of contaminant in water.

umhos/cm: Micromhos per centimeter. A measure of substances that form ions when in water.

TABLE OF DETECTED CHEMICALS OR CONTAMINANTS IN 2017

2017 TREATED WATER QUALITY SUMMARY - Listed below are 27 substances or water quality characteristics detected in Healdsburg's drinking water. There are nearly 100 organic and inorganic substances that the City tested for but did not detect. Only those substances with detectable amounts are required to be included in this report. For certain substances with concentrations that do not change frequently, the State allows the City to monitor less than once a year. In these cases, the most recent sample data are included. The City of Healdsburg collected and analyzed 307 samples for coliform during 2017 with no positive samples. The City of Healdsburg had NO WATER SYSTEM VIOLATIONS in 2017.

SUBSTANCE	YEAR SAMPLED	HIGHEST LEVEL ALLOWED (AL)	90th PERCENTILE LEVEL DETECTED	RANGE OF LEVELS DETECTED	PUBLIC HEALTH GOALS (MCLG) or (MRDLG)	TYPICAL SOURCES OF CONTAMINANT	HIGHEST LEVEL DETECTED
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*Lead/Copper Rule 2017 Data, Next Round of Samples: 2020 *Regulated at the Customers Tap

REGULATED AT THE CUSTOMERS TAP

COPPER*	2017 (31 samples taken)	1.30 PPM	0.68 PPM	0.14-0.96 PPM	0.3 PPM	Internal corrosion of household plumbing systems.	0.96 PPM
LEAD*	2017 (31 samples taken)	15 PPB	ND	ND	0.2 PPB	Internal corrosion of household plumbing systems.	ND

SUBSTANCE	YEAR SAMPLED	HIGHEST LEVEL ALLOWED (EPA'S MCL, MCLG & MRDL)	AVERAGE LEVEL DETECTED	RANGE OF LEVELS DETECTED	PUBLIC HEALTH GOALS (MCLG) or (MRDLG)	TYPICAL SOURCES OF CONTAMINANT	HIGHEST LEVEL DETECTED
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REGULATED SUBSTANCES

TOTAL HALOACETIC ACIDS	2017	60 PPB	6.65 PPB	<1.0 - 21.66 PPB	NS	Byproduct of drinking water disinfection.	21.66 PPB
TOTAL TRIHALOMETHANES	2017	80 PPB	15.4 PPB	1.0 - 37.42 PPB	NS	Byproduct of drinking water disinfection.	37.42 PPB
CHLORINE	2017	4 PPM	0.79 PPM	0.22 - 1.76 PPM	4 PPM	Disinfectant added for drinking water treatment	1.76 PPM
FLUORIDE	2017	2 PPM	0.74 PPM	0.42 - 0.90 PPM	1 PPM	Leaching from natural deposits. Our water system treats your water by adding fluoride in order to help prevent dental caries. The fluoride levels in the treated water are maintained within a range of 0.60 to 1.20 ppm as required by Department regulations.	0.90 PPM
NITRATE (as NO3)	2017	10 PPM	0.92 PPM	<0.40 - 2.4 PPM	10 PPM	Runoff and leaching from fertilizer use, septic tanks, and erosion of natural deposits	2.4 PPM
GROSS ALPHA EMITTERS	2017	15 pCi/L	3.0 pCi/L	3.0 pCi/L	0 pCi/L	Erosion of natural deposits.	3.0 pCi/L
TURBIDITY-Dry Creek Well Field (Groundwater)	2017	TT =95% of samples <1.0 NTU	0.10 NTU	0.01 - 0.59 NTU	N/A	Turbidity is the measure of the cloudiness of the water. We monitor it because it is an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.	0.59 NTU
TURBIDITY-Fitch Mtn. Well Field (Groundwater Under Surface Water Influence)	2017	TT =95% of samples <0.30 NTU	0.06 NTU	0.01 - 0.59 NTU	N/A	Turbidity is the measure of the cloudiness of the water. We monitor it because it is an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.	0.59 NTU
TURBIDITY-Gauntlett/Fitch Micro-Filtration Facility	2017	TT =95% of samples <0.10 NTU	0.03 NTU	0.01 - 0.09 NTU	N/A	Turbidity is the measure of the cloudiness of the water. We monitor it because it is an indicator of the effectiveness of our filtration system.	0.09 NTU

SECONDARY SUBSTANCES AND OTHERS SAMPLED IN 2017

ALKALINITY (TOTAL)	2017	NS	114 PPM	83 - 160 PPM	Not regulated	Natural geology	160 PPM
ALUMINUM	2017	200 PPB	<50 PPB	ND- <50 PPB	200 PPM	Erosion of natural deposits.	< 50 PPB
ARSENIC	2017	10 PPB	<2 PPB	ND - <2 PPB	0.004 PPB	Erosion of natural deposits, runoff from orchards, and glass and electronics production wastes	<2 PPB
BARIUM	2017	1 PPM	<1.0 PPM	<0.100 - 0.170 PPM	2 PPM	Erosion of natural deposits.	0.170 PPM
BICARBONATE	2017	NS	155 PPM	100 - 190 PPM	Not regulated	Natural geology	190 PPM
CALCIUM	2017	NS	25.1 PPM	18 - 42 PPM	Not regulated	Natural geology	42 PPM
CHLORIDE	2017	500 PPM	6.56 PPM	4.9 - 8.8 PPM	500 PPM	Runoff / Leaching from natural deposits.	8.8 PPM
HARDNESS	2017	NS	151 PPM	97- 232 PPM	Not regulated	Natural geology	232 PPM
IRON	2017	300 PPB	<100 PPB	<100 PPB	300 PPB	Leaching from natural deposits	<100 PPB
MANGANESE	2017	50 PPB	<20 PPB	<20 - 36 PPB	50 PPB	Leaching from natural deposits	36 PPB
MAGNESIUM	2017	NS	21.3 PPM	12 - 31 PPM	Not regulated	Natural geology	31 PPM
pH units	2017	6.5 to 8.5 pH units	7.20 pH units	7.00 - 7.45 pH units	6.5 to 8.5 pH units	A measure of the acidity of water	7.45 pH Units
SODIUM	2017	NS	9.15 PPM	7.7 - 11 PPM	Not regulated	Natural geology	11 PPM
SPECIFIC CONDUCTANCE	2017	1600 umhos/cm	297 umhos/cm	240 - 420 umhos/cm	1000 umhos/cm	A measure of substances that form ions when in water.	420 umhos/cm
SULFATE	2017	500 PPM	24 PPM	12- 63 PPM	500 PPM	Runoff / Leaching from natural deposits.	63 PPM
TOTAL DISSOLVED SOLIDS	2017	1000 PPM	192 PPM	140 - 290 PPM	1000 PPM	Runoff / Leaching from natural deposits.	290 PPM

MANGANESE: The concentration in some production wells exceeds the secondary MCL. Manganese in excess of the secondary MCL can chemically react with the chlorine added to disinfect the water and form a dark colored precipitate. This precipitate can stain plumbing fixtures such as sinks and toilet bowls, and may cause staining of light colored laundry. By blending water from a number of

sources, the average manganese concentration was <20 PPB in 2017. The MCL for Manganese is 50 PPB.

We add 3 substances directly to drinking water following State guidelines:

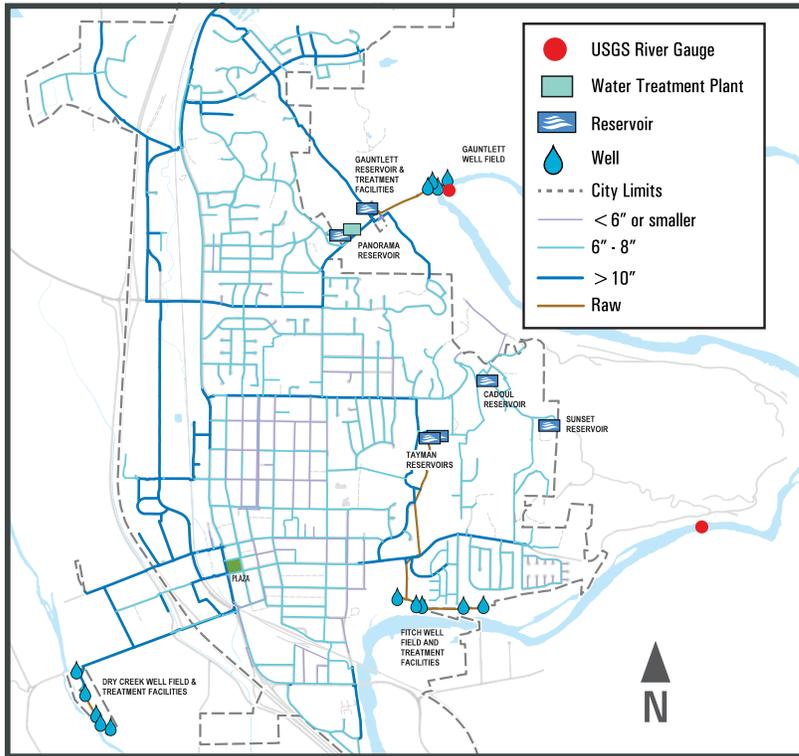
CHLORINE: a highly effective disinfectant that prevents the

spread of waterborne diseases, and kills any microbes or bacteria entering the water supply.

SODIUM FLUORIDE: added for the prevention of tooth decay and promotion of dental health.

CORROSION CONTROL INHIBITOR: an orthophosphate compound that reduces pipeline corrosion by laying a microfilm along interior surfaces of pipelines and plumbing fixtures to prevent corrosion and the leaching of copper and lead in residential plumbing.

WATER SYSTEM MAP



WATER SOURCES

The City of Healdsburg's drinking water is sourced from three well fields: two located along the Russian River and one located on Dry Creek. Before entering the water distribution system, the water is chemically treated and ultra-filtered to improve its quality and remove most contaminants. The water is then stored at various locations throughout the City, ready to be delivered to our homes and businesses. Because the wells are influenced by the flows of both the Russian River and Dry Creek, it's very important for us to remain aware of the health of these watersheds and the impact we have on them.

Due to consistent rain events this winter, both Lake Mendocino and Lake Sonoma storage levels are higher than last year. While this is good news, we still need to be keenly aware of our water usage as we do not know what next winter will bring. Combined with conservation efforts and watershed protection, the City's wells can supply Healdsburg's water needs for years to come. Even though the drought appears to be over, we still are in a fairly arid climate; there is never enough to waste. Water is a precious resource for us and makes the quality of life here in Healdsburg possible.

In 2017, the City pumped, treated and distributed 610 million gallons of water. In that same year, we treated and reclaimed approximately 497 million gallons of wastewater. Approximately 13 million gallons of the reclaimed water was recycled for beneficial reuse.

Even though the drought appears to be over, we still are in a fairly arid climate; there is never enough to waste. Water is a precious resource for us and makes the quality of life here in Healdsburg possible.



The City periodically samples water from consumer taps. In 2017, samples were collected from 31 homes and businesses and tested for lead and copper.

LEAD AND COPPER

The City of Healdsburg historically has experienced low incidences of lead and copper in the drinking-water system.

State regulators, in acknowledgment of this track record, require the City to sample for lead and copper only every three years. The City's most recent sampling of lead and copper was in 2017. In 2017, 31 water customers were sampled for lead and copper, and none of the sites exceeded the action level.

Copper, present in most household piping and fixtures, was detected at levels from 0.14 to 0.96 parts per million, all below the action level of 1.3 parts per million required by the state.

LEAD WATER-SAMPLING IN SCHOOLS

In 2017, the Healdsburg Unified School District requested the City of Healdsburg Water-Utility Department to sample its water for lead at 12 locations at four schools.

None of the sites exceeded the action level for lead. These schools were:

1. Healdsburg High School
2. Healdsburg Junior High School
3. Fitch Mountain Elementary School
4. Healdsburg Elementary School

PRECAUTIONS FOR VULNERABLE POPULATIONS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those: undergoing chemotherapy; who have undergone organ transplants; with HIV/AIDS or other immune system disorders; as well as some elderly and infants, may have an increased risk of infections. These people should seek advice about drinking water from their healthcare providers. The U.S. EPA/CDC (Environmental Protection Agency/Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available online at epa.gov/safewater or from the U.S. EPA's Safe Drinking Water Hotline at 800.426.4791.



Fluoride has been part of Healdsburg water since 1952 and provides dental protection for the community.

FLUORIDE

Fluoride is added to Healdsburg's water for dental benefits pursuant to a 1952 City of Healdsburg voter initiative (Ordinance No. 1952-14) the 2014 voter initiative, and the 2016 ballot measure. State regulations require the fluoride levels in the treated water be maintained within a range of 0.6 to 1.20 PPM with an optimum level of 0.70 PPM. The City of Healdsburg's average level of fluoride in 2017 was 0.74 PPM. For info on fluoridation, oral health, and current issues visit: waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html

ORTHOPHOSPHATE BLEND

Orthophosphate is a proprietary liquid blend that is added to the water to reduce pipeline corrosion and plumbing fixture corrosion. This is added to the water to comply with the EPA's "Lead and Copper Rule" (LCR).



The City analyzes water for lead in accordance with EPA guidelines.

NOTICE FROM THE EPA: LEAD

The "lead and copper rule" or LCR was introduced by the Environmental Protection Agency in 1991 to limit the concentration of lead and copper allowed in public drinking water at the consumer's tap as well as limit the corrosivity due to the water itself. Lead originates from the solder used to connect plumbing fittings inside the home, and copper is used widely in small diameter plumbing pipe. Lead and copper levels are consistently below the action level in Healdsburg.

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. We are responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. If you are concerned about lead in your water, you may want to have the water in your home tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available online at epa.gov/safewater/lead or you may call the Safe Drinking Water Hotline at 800.426.4791.

Copper: The governing regulation to determine whether copper is present above or below the standard is based on the 90th percentile value for the most recent testing. The 90th percentile is the ninth highest value measured of ten test results. The 90th percentile value for the 2017 testing performed in Healdsburg was 0.68 PPM. The MCL, or action level for copper was 1.3 PPM. None of the 31 test sites exceeded the action level.

Lead: The governing regulation to determine whether lead is present above or below the standard is based on the 90th percentile value for the most recent testing. The 90th percentile is the ninth highest value measured of ten test results. The 90th percentile value for the 2017 testing performed in Healdsburg was Non-Detect. The MCL, or action level for lead is 15 PPB. None of the 31 sites tested exceeded the action level.



2017 WATER QUALITY REPORT

FPO - Goode to
add

Electric, Water & Wastewater

401 Grove Street, Healdsburg, CA 95448

707.431.3346 | healdsburgutilities.org

FOR UP-TO-DATE INFORMATION ON CONSERVATION:

 /[smartlivinghealdsburg](https://www.facebook.com/smartlivinghealdsburg)

PARTICIPATE!

If you are interested in learning more about your water utility or water quality, you can direct your questions, concerns or comments to the Utilities Department at 401 Grove Street, Healdsburg or by calling 707.431.3346.

You may also present comments directly to the Healdsburg City Council, which meets on the first and third Monday of each month at 6:00 pm, at 401 Grove Street. City Council meetings are open to the public. For meeting dates and agendas, visit cityofhealdsburg.org.

VIEW AND PAY YOUR UTILITY BILL FROM HOME OR WHEREVER IS CONVENIENT

- Receive email notifications of new bills
- Make one-time payments or setup automatic payments with a credit/debit card or a bank account
- Save paper and the environment by going paperless with your utility bill

SIGN UP for online bill pay:

onlinebiller.com/healdsburg



24-HOUR UTILITY RESPONSE HOTLINE

707.431.7000 or

Toll-Free 855.755.6586

NEVER ENOUGH TO WASTE

GOOD WATER CONSERVATION PRACTICES

- Do not apply outdoor irrigation water any day between the hours of 7 am and 8 pm
- Routinely inspect irrigation systems for leaks & repair within 72 hours
- Replace shower heads with low flow showerheads

STATE PROHIBITED WATER USE

- Washing sidewalks or driveways with drinking water
- Washing vehicles with a hose not fitted with a shut-off nozzle
- Watering landscapes during & within 48 hours to measurable rainfall