2019 ANNUAL WATER QUALITY REPORT

April 30, 2020

Dublin San Ramon Services District
Water, wastewater, recycled water

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 potable. Tradúzcalo o hable con alguien que lo entienda bien.

此份有關你的食水報告,
內有重要資料和訊息, 請找
他人為你翻譯及解釋清楚.

A MESSAGE FROM THE GENERAL MANAGER

The Dublin San Ramon Services District is pleased to present the 2019 Water Quality Report (Consumer Confidence Report) to provide our water customers with important information about their drinking water. The District purchases all of its drinking water from Zone 7 Water Agency. The results of the water quality monitoring performed by Zone 7 Water and the District confirm that water delivered to District water customers met all state and federal standards in 2019.

Lead and Copper Testing

The District regularly tests for lead in drinking water in compliance with the United States Environmental Protection Agency's Lead and Copper Rule (LCR), which requires water agencies to test for lead at customer taps every three years. If lead concentrations exceed an action level of 15 parts per billion in more than 10 percent of customer taps sampled, the agency must take action to notify the public and reduce corrosion of lead within the distribution system. An action level for lead is defined as the level of lead which, if exceeded, triggers treatment or other requirements that a water agency must follow to reduce the presence of lead in drinking water. The most recent round of lead sampling for the District was undertaken in 2019, and the overall results were below the action level.

Constituents of Emerging Concern

While the water industry is committed to providing safe drinking water, we are challenged by constituents of emerging concern (CECs) that often come from everyday household products that make their way into the water supply. One category of CECs that grabbed the headlines last year are commonly referred to as PFAS, per- and polyfluoroalkyl substances. These manmade chemical compounds are used by both industry and residential households because they resist heat, water, and oil. PFAS are commonly found in American households: nonstick cookware (Teflon); stain-resistant upholstered furniture, carpeting and clothing; water-resistant and wrinkle-free clothing; dental floss; cosmetics; lubricants; polishes, waxes and paints; and fast food wrappers, to name a few.

While more needs to be done to eliminate PFAS from our environment, the water industry is committed to providing safe, healthy drinking water. Exposure to PFAS through drinking water has become an increasing concern because PFAS tend to accumulate in groundwater.

Zone 7 monitors its surface water and groundwater basin for the presence of PFAS. Zone 7 did not detect PFAS in its surface water but did detect PFAS in a few groundwater wells and was able to blend or treat the water, as recommended by the state Division of Drinking Water. Read the article entitled, "Zone 7 Water Agency Monitors Groundwater for PFAS" on page four for more details.

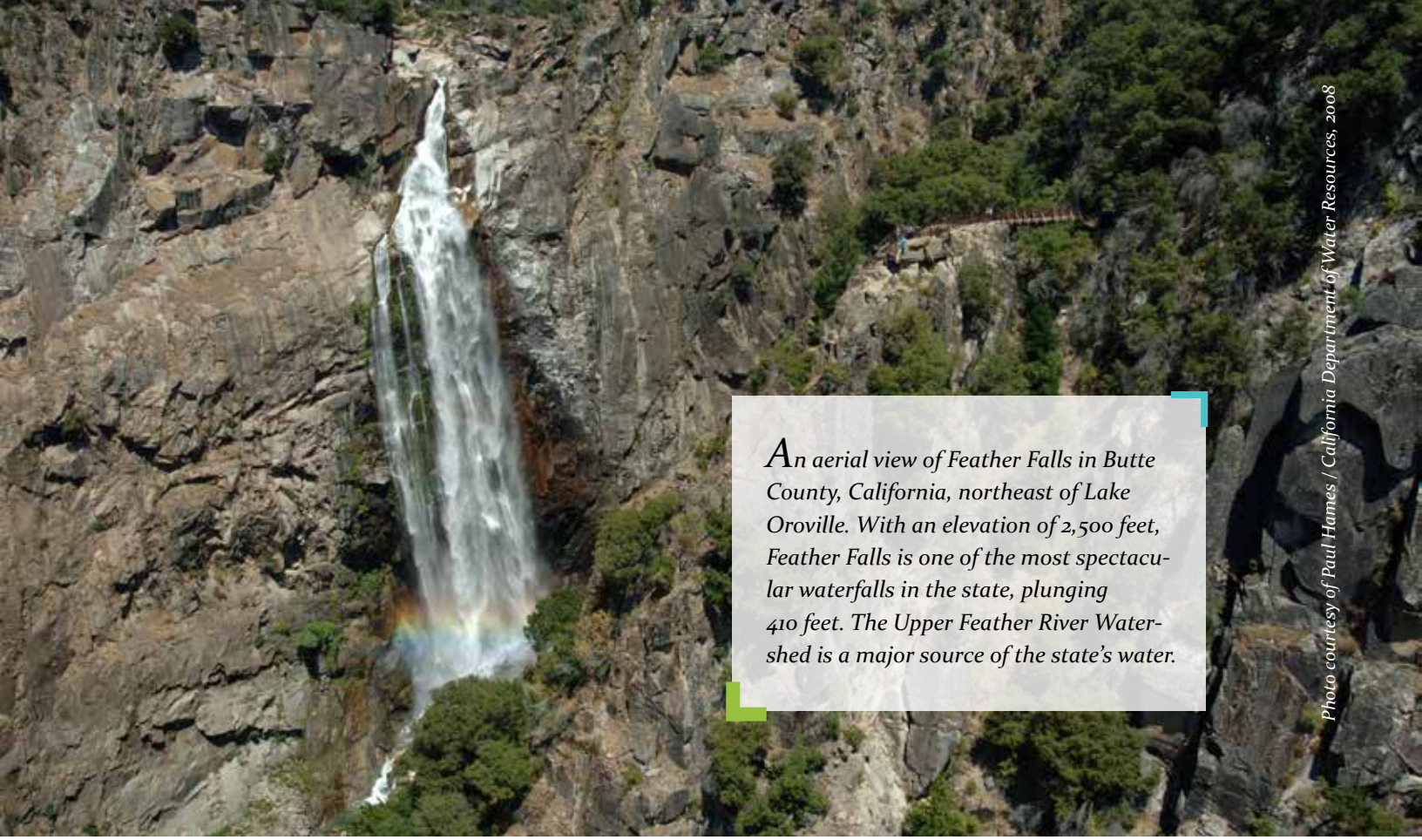
New Process to Elect Your Representative on our Board

In 2019, DSRSD transitioned from an at-large to an area-based election system under the California Voting Rights Act. Previously, all five members of the Board of Directors were chosen by constituents from the District's entire service area.

Now, DSRSD has been divided into five separate election areas, referred to as "divisions." In the 2020 election, voters residing in Divisions 1, 3, and 5 will select their representatives for DSRSD's Board. In 2022, voters residing in Divisions 2 and 4 will select their representatives. Check our website, www.dsrsd.com, for more details as the election gets closer.

As our community struggles with the impacts of the COVID-19 public health emergency, please remember that we are working 24/7 to keep you safe.

Dan McIntyre
General Manager



An aerial view of Feather Falls in Butte County, California, northeast of Lake Oroville. With an elevation of 2,500 feet, Feather Falls is one of the most spectacular waterfalls in the state, plunging 410 feet. The Upper Feather River Watershed is a major source of the state's water.

Photo courtesy of Paul Hames / California Department of Water Resources, 2008

SOURCES OF OUR POTABLE WATER

DSRSD purchases all of its potable (drinking) water from Zone 7 Water Agency (Zone 7). This water comes from three sources: 80% is imported surface water from the California State Water Project, 10% is local rain runoff that is stored in Del Valle Reservoir, and 10% is groundwater from local wells.

Most of our water supply starts in the Sierra Nevada as rain and snowmelt. Conveyed by the State Water Project from Lake Oroville on the Feather River in northern California, it travels through the Sacramento River, the Delta, and the South Bay Aqueduct to Zone 7 Water Agency's Del Valle and Patterson Pass treatment plants. When State Water Project allocations are restricted, more of our water comes from local sources.

SAFETY STANDARDS REGULATE 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 the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from human activities or the presence of animals.

Contaminants that may be in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from upstream sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, that can occur naturally 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 storm water runoff, agricultural application, and septic systems;
- Radioactive contaminants that can occur naturally or result from oil and gas production and mining activities.

To ensure tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and the State Water Resources Control Board (State Board) set regulations that limit the amount of certain contaminants in water provided by public water systems. 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. Additional information on water safety is available on the State Water Resources Control Board, Division of Drinking Water: www.waterboards.ca.gov/publications_forms/publications/legislative/docs/2015/sdwp.pdf.

Primary drinking water standards set maximum contaminant levels (MCL) and maximum residual disinfectant levels (MRDL) for substances that affect health, along with monitoring and reporting requirements for these substances and water treatment requirements. Secondary standards protect the odor, taste, and appearance of drinking water. Secondary standards do not have public health goals (PHG) because they are not based on health concerns.

HOW WE MONITOR WATER QUALITY

Monitoring for Contaminants

DSRSD employees collect representative samples from numerous locations throughout the water distribution system. These samples undergo analysis in the District's laboratory, which is certified by the California State Water Resources Control Board Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program. Zone 7 monitors water quality continuously online, as well as with instantaneous or "grab" samples. In all, DSRSD and Zone 7 test for more than 100 water quality parameters.

Treatment and Disinfection

Zone 7 disinfects and removes pollutants from surface water using a multi-barrier approach, and groundwater is chloraminated to maintain a disinfectant residual in the distribution system. After receiving treated water from Zone 7, DSRSD maintains a consistent residual level of disinfectant in its distribution system and flushes pipelines to prevent bacterial growth.

Source Water Assessment

Zone 7 drinking water sources include local and imported surface water as well as groundwater. Protecting our source water is an important part of providing safe drinking water to the public.

A source water assessment is conducted on each groundwater well as required by the California State Water Resources Control Board (State Water Board). Sanitary surveys for surface water supplies are conducted every five years. The latest sanitary survey for the Delta and the State Water Project (SWP) was completed in June 2017.

Groundwater sources in general can be vulnerable to releases from chemical/petroleum pipelines, leaking tanks, groundwater contamination plumes, septic tanks, and wastewater-collection systems. Surface water can be contaminated as it travels through the Sacramento and San Joaquin watersheds and the Delta. After leaving the Delta, water is transported to Zone 7 via the South Bay Aqueduct (SBA). SBA water quality may also be polluted from local cattle grazing, wildlife activities, and recreational activities in the watersheds of the Bethany and Del Valle reservoirs. Zone 7 is proactively participating in a number of activities to improve water supply reliability and the water quality of the SBA.

Copies of any public outreach materials, source water assessment reports or sanitary surveys are available by calling Gurpal Deol at (925) 447-0533.

2019 Water Quality Test Results

The tables on pages 6 and 7 show the average level and range of each contaminant detected in the DSRSD water supply in 2019. All water supplied to customers during 2019 met the regulatory standards set by the state and federal governments. Additional unregulated parameters, such as sodium and water hardness, are included in the tables to assist customers in making health or economic decisions.

IMPORTANT HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Individuals with compromised immune systems (such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, and people with HIV/AIDS or other immune system disorders), some elderly people, and infants can be particularly at risk from infections. These vulnerable individuals should seek advice about drinking water from their health care providers. EPA/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: (800) 426-4791.

Minimizing Exposure to Lead

Lead was not detected above the regulatory action level in the DSRSD water supply. 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 associated with service lines (pipes that deliver water) and home plumbing. DSRSD is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

Every three years, DSRSD is required to test the indoor tap water from a sample of homes built before 1986, when plumbing fixtures were allowed to contain lead. The District's next lead and copper sampling event will be in 2022, the last was conducted in 2019.

The EPA requires that 90 percent of the samples be below the regulatory action level of 15 parts per billion. The District's results were much better than this standard. When the last residential samples were taken, only three homes were at or above the regulatory action level. While the District was not required to take any action, staff advised the homeowners about the advantages of replacing old plumbing and fixtures with new lead-free materials. Minimize the potential for lead exposure when water has been sitting in pipes for several hours by flushing the tap for 30 seconds to two minutes before using the water for drinking or cooking. (Please save flushed water for another purpose, such as watering plants.) Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline, (800) 426-4791, or at www.epa.gov/lead.

Testing for Lead in Schools

In 2017, the California State Water Resources Control Board, Division of Drinking Water required water systems to test for lead in schools if school districts requested to be tested. Then the California legislature passed Assembly Bill 746 requiring water systems to test for lead in drinking water at all public K-12 schools by July 1, 2019. The testing involves sampling water at taps throughout the school—drinking fountains and kitchen facilities.

DSRSD provides water to 20 public and 5 private K-12 schools in its service area. By the end of 2018, the District had tested all public schools and one private school (St. Raymond School was the only private school that requested lead testing). All tests were below the action level.

Lead sampling information and results can be found at https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadsamplinginschools.html.

Nitrates in Water

Nitrate levels in Zone 7's surface water supplies are typically low (<0.4mg/L – 1.3 mg/L) as compared to groundwater (0.8 mg/L – 5.1 mg/L). In 2019, although one sample was detected at 5.1 mg/L (above half the MCL), all samples meet all the standards.

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than 6 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 your health care provider for advice.

ZONE 7 Water Agency Monitors Groundwater for PFAS

Per- and Polyfluoroalkyl substances (PFAS) are a large group of man-made chemical compounds that have been extensively used since the 1940s in common consumer products designed to be waterproof, stain-resistant, or nonstick. In addition, they have been used in fire-fighting foam and various industrial processes. PFAS are unregulated contaminants of emerging concern in drinking water due to a host of health impacts and the tendency of PFAS to accumulate in groundwater.

Perfluorooctanic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) are two of the most widely studied of the more than 6,000 PFAS chemical compounds. California currently has a drinking water notification level of 5.1 parts per trillion (ppt) for PFOA and 6.5 ppt for PFOS (effective August 2019) and a response level of 10 ppt for PFOA and 40 ppt for PFOS, based on a running annual average (RAA) of the last four quarters of results (effective February 2020). For perspective, one part per trillion is the equivalent of four grains of sugar in an Olympic sized swimming pool or the equivalent of one second in 32,000 years.

These are health-based advisory levels established as precautionary measures for contaminants that may be considered candidates to establish drinking water standards, but they have not yet undergone or completed the regulatory standard-setting process. When a contaminant is found at concentrations greater than its notification level or response level, certain notification requirements and recommendations apply.

Zone 7 Water Agency, the Tri-Valley's water wholesaler, monitors for PFAS in its groundwater and surface water supplies and has already taken actions to ensure PFOA and PFOS are below response levels in the treated water they provide to DSRSD.

In 2019, Zone 7 did not detect any PFOA or PFOS in its treated surface water supplies that made up the majority of total water delivered to customers. Although Zone 7 did detect PFOA and/or PFOS in some of Zone 7's groundwater sources, these were blended and/or treated below the applicable response level. PFOS and PFOA were not detected in Zone 7's Hopyard Wells.

Water Supply Sources	PFOS (parts per trillion)		PFOA (parts per trillion)	
	Highest RAA	Range of All Samples	Highest RAA	Range of All Samples
Chain of Lakes (COL) Wellfield				
COL Well 1	34	28 - 44	4	4 - 6
COL Well 2	14	12 - 16	2	ND - 3
COL Well 5*	37	15 - 52	1	ND - 2
Blended COL Water	25	19 - 31	3	2 - 3
Mocho Wellfield				
Mocho Well 1	94	73 - 110	9	8 - 10
Mocho Well 2	41	26 - 50	6	5 - 6
Mocho Well 3	34	30 - 39	6	5 - 6
Mocho Well 4	11	4 -14	3	3 - 4
Blended/Treated Mocho Water	22	9 - 30	4	3 - 4
Stoneridge Well	8	5 - 12	1	ND - 2
Hopyard Wellfield (Well 6 and 9)	ND	ND	ND	ND
Treated Surface Water	ND	ND	ND	ND

ND indicates no detection at or above the analytical reporting limit of 2 parts per trillion (ppt).

* COL Well 5 was blended with other COL well water whenever it was online.

** Mocho Well 1 (the lowest priority well that was rarely used) and Mocho Well 2 were blended with other Mocho well water whenever either well was online; All Mocho wells can also be treated via reverse osmosis membranes at the Mocho Groundwater Demineralization Plant.

Zone 7 continues to monitor for PFAS in its groundwater supply and is working with the State Water Quality Control Board to investigate the extent and potential sources of PFAS contamination. At time this report was written, there was no indication of a single source for this contamination.

In order to provide a reliable supply of high quality water, Zone 7 is also conducting a study to assess additional treatment options and costs for reducing PFAS to the lowest levels that are technically and economically feasible. The study is anticipated to be completed in summer 2020.

For more details about how Zone 7 protects our water supply, visit www.Zone7Water.com/pfas-information.

CONTAMINANTS NOT DETECTED IN ZONE 7 WATER SUPPLY

None of these contaminants were detected at or above the Detection Limit for Purposes of Reporting (DLR) in the Zone 7 water supply during 2019 monitoring.

Primary Drinking Water Standards

ORGANIC CHEMICALS

Volatile Organic Chemicals (VOCs)

Benzene
Carbon Tetrachloride
1,2-Dichlorobenzene
1,4-Dichlorobenzene
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
Dichloromethane
1,2-Dichloropropane
1,3-Dichloropropene
Ethylbenzene
Methyl-tert-butyl ether (MTBE)
Monochlorobenzene
Styrene
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
Toluene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Trichlorofluoromethane
1,1,2-Trichloro-1,2,2-Trifluoroethane
Vinyl Chloride
Xylenes

Synthetic Organic Chemicals (SOCs)*

Alachlor
Atrazine
Bentazon
Benzo(a)pyrene
Carbofuran
Chlordane
2,4-D
Dalapon
Dibromochloropropane (DBCP)
Di(2-ethylhexyl)adipate
Di(2-ethylhexyl)phthalate
Dinoseb
Diquat
Endothall
Endrin
Ethylene Dibromide (EDB)

(SOCs continued)

Glyphosate
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Lindane
Methoxychlor
Molinate
Oxamyl
Pentachlorophenol
Picloram
Polychlorinated Biphenyls
Simazine
Thiobencarb
Toxaphene
2,3,7,8-TCDD (Dioxin)
1,2,3-Trichloropropane (TCP)
2,4,5-TP (Silvex)

INORGANIC CHEMICALS

Aluminum
Antimony
Asbestos**
Beryllium
Cadmium
Cyanide
Mercury
Nickel
Nitrite (as nitrogen)
Perchlorate
Thallium

RADIONUCLIDES

Radium-226, Radium-228
Beta/photon emitters
Tritium, Strontium-90

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* Although SOC monitoring for groundwater sources was waived by DDW for the 2017 to 2019 period, one representative well from each wellfield was monitored for all SOCs except dioxin during 2017.

** Latest monitoring for Asbestos was conducted in 2011.

Secondary Drinking Water Standards

Aluminum
Color
Copper
Foaming Agents (MBAS)
Manganese
Methyl-tert-butyl ether (MTBE)
Odor-Threshold
Silver
Thiobencarb

Environmental Chemist II Troy To uses a gas chromatography/mass spectrometry instrument to analyze organics to below parts per billion.

2019 WATER QUALITY TEST RESULTS

Terms Used

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

COL–Chain of Lakes

DLR–Detection Limit for Purposes of Reporting: Established by the State Water Resources Control Board, Division of Drinking Water.

MCL–Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

MCLG–Maximum Contaminant Level Goal: 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 (EPA).

mg/L–Milligrams per liter, or parts per million (ppm)

µg/L–Micrograms per liter, or parts per billion (ppb)

µS/cm–Microsiemens per centimeter

MRL–Minimum Reporting Level

MRDL–Maximum Residual Disinfectant Level: 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.

MRDLG–Maximum Residual Disinfectant Level Goal: 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.

NA–Not Applicable

ND–Not Detected: Monitored for, but not detected at or above DLR or MRL. ND or value in range column indicates more than one analysis was performed during the year.

NTU–Nephelometric Turbidity Units: Determines size of suspended particles in a medium and visual range through the medium. Turbidity measures cloudiness and is a good indicator of the effectiveness of filtration systems.

PHG–Public Health Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

pCi/L–Picocuries per liter

RAA–Running Annual Average

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

Sources of Contaminants

The major sources of regulated contaminants are listed below and correspond to numbers in the columns labeled "Sources."

1. Erosion of natural deposits
2. Substances that form ions (subatomic particles with positive and negative charges) when in water
3. Runoff or leaching from fertilizers; leaching from septic tanks and sewage
4. By-product of drinking water disinfection
5. Drinking water disinfectant added for treatment
6. Runoff or leaching from natural deposits
7. Added to promote strong teeth
8. Naturally present in the environment
9. Internal corrosion of household water plumbing systems
10. Leaching from wood preservatives
11. Soil runoff
12. Discharge from petroleum, glass, and metal refineries; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
13. Discharges of oil drilling wastes and from metal refineries
14. Discharge from fertilizer and aluminum factories
15. Naturally occurring organic materials
16. Discharges from industrial manufacturers
17. Discharge from steel and pulp mills and chrome plating
18. Seawater influence
19. Industrial wastes
20. Various natural and man-made sources
21. Human and animal fecal waste

LEAD AND COPPER RULE

This rule is applicable to DSRSD's direct customers only. Per DDW approval, compliance monitoring is conducted once every three years.
Data from September 2019 monitoring is summarized below:

Sources	Contaminant	No. of Samples Collected	90th Percentile Level Detected	Number of Sites Exceeding AL	Action Level (AL)	PHG
1, 9, 16	Lead (µg/L)	65	10	3	15	0.2
1, 9, 10	Copper (µg/L)	65	290	None	1,300	300

UNREGULATED CONTAMINANT MONITORING RULE 4 (UCMR4)

EPA's fourth Unregulated Contaminant Monitoring Rule (UCMR4) requires monitoring of 30 chemical contaminants between 2018 and 2020.
This monitoring provides a basis for future regulatory actions to protect public health. These results are from 2019.

Sources	Unregulated Contaminants (units)	MCL	MRL	Average	Range
4	Haloacetic Acids (five) (HAA_5) µg/L	No Standard	NA	3.2	<0.2 - 13
4	Haloacetic Acids (six) (HAA_6) Brominated µg/L	No Standard	NA	5.6	<0.2 - 25
4	Haloacetic Acids (nine) (HAA_9) µg/L	No Standard	NA	7.6	<0.2 - 31
6	Manganese µg/L (Only one sample was detected above the MRL)	No Standard	0.40	0.45	NA

January - December 2019 Water Quality Data, Contaminants Detected in the Water Supply

Primary and Secondary Drinking Water Standards, Established by the State Water Resources Control Board (State Board), Division of Drinking Water (DDW)

DSRSD DISTRIBUTION SYSTEM						
Sources	Contaminants (units)	MCL	DLR (MRL)	PHG (MCLG) [MRDLG]		
8	Total coliform bacteria	More than 5% of monthly samples are positive		(0)	**Highest percentage of monthly positive samples:** 1.1%	
21	Fecal Coliform and E. coli	*		(0)	**Total number of positive samples in 2019:** 1**	
					Highest Locational Running Annual Average	**Range**
4	Total trihalomethanes (TTHMs), (µg/L)	80	1	NA	35	ND - 53
4	Haloacetic acids (five) (HAA_5), (µg/L)	60	1-2	NA	13	ND - 12
5	Chloramines as Chlorine (mg/L)	MRDL = 4.0		[4]	**Highest Running Annual Average:** 1.8	0.01 - 3.5
1, 7, 14	Fluoride (mg/L)	2.0	0.1	1	**Average:** 0.8	0.5 - 1.1

* Under the California Total Coliform Rule, the MCL is exceeded if a repeat sample is E.coli positive following a Total Coliform positive routine sample or if a repeat sample is Total Coliform positive following an E.coli positive routine sample. Under the Federal Revised Total Coliform Rule, the MCL is exceeded if (a) a repeat sample is E.coli positive following a Total Coliform positive routine sample or if a repeat sample is Total Coliform positive following an E.coli positive routine samples, (b) system fails to take repeat samples following E.coli-positive routine sample, or (c) system fails to analyze total coliform-positive repeat sample for E.coli.

** Out of more than 1,200 samples collected from the distribution system. Although E.coli was detected, it is not in violation of the MCL.

WATER SUPPLY SOURCES								
Sources	Contaminants (units)	PRIMARY DRINKING WATER STANDARDS			Surface Water		Groundwater	
		MCL	DLR (MRL)	PHG, (MCLG), [MRDLG]				
11	Turbidity (NTU)	TT = 1 NTU Maximum		NA	Highest Level Found = 0.21 NTU		NA	
		TT = 95% of samples ≤ 0.3 NTU		NA	% of samples ≤ 0.3 NTU = 100		NA	
20	Total Organic Carbon	TT = Quarterly RAA Removal Ratio ≥ 1.0		NA	Lowest Quarterly RAA Ratio = 1.7		NA	
	Inorganic Chemicals				**Avg.**	**Range**	**Avg.**	**Range**
1,19	Arsenic (µg/L)	10	2	0.004	ND	ND	ND	ND - 2
1, 13	Barium (µg/L)	1000	100	2000	ND	ND	192	ND - 390
1, 17	Chromium Total (µg/L)	50	10	(100)	ND	ND	ND	ND - 16
1, 12	Selenium (µg/L)	50	5	30	ND	ND	ND	ND - 10
1, 7, 14	Fluoride (mg/L)	2	0.1	1	ND	ND - 0.1	ND	ND - 0.1
1, 3	Nitrate (as N) (mg/L)	10	0.4	10	ND	ND - 1.3	3.0	0.8 - 5.1
	Radionuclides							
1	Gross Alpha particle activity (pCi/L)***	15	3	(0)	3	3	3	ND - 6
1	Uranium (pCi/L)	20	1	0.43	ND	ND	1.3	ND - 3.9
	SECONDARY DRINKING WATER STANDARDS, established by DDW							
2, 18	Conductivity (µS/cm)	1600		—	351	212 - 782	945	372 - 1501
6, 18	Chloride (mg/L)	500		—	62	29 - 170	103	40 - 200
6, 19	Iron (µg/L)	300	(100)	—	ND	ND	ND	ND - 250
6, 19	Sulfate (mg/L)	500	0.5	—	19	8 - 47	64	22 - 129
6	Total Dissolved Solids (mg/L)	1000		—	188	103 - 439	567	208 - 940
11	Turbidity (NTU)	5	(0.05)	—	NA	NA	0.11	ND - 1.1
6,19	Zinc (µg/L)	5000	(10)	—	ND	ND	ND	ND - 50
	ADDITIONAL PARAMETERS — Included to assist consumers in making health or economic decisions, i.e. low sodium diet, water softening, etc.							
6	Alkalinity as calcium carbonate (mg/L)	—		—	59	35 - 90	283	101 - 424
6	Boron (µg/L)	—	100	—	63	ND - 130	739	210 - 1560
6	Total Hardness as calcium carbonate (mg/L)	—		—	72	36 - 127	355	87 - 572
6	Potassium (mg/L)	—		—	1.8	1.1 - 4.7	2.0	0.7 - 3.5
6	Sodium (mg/L)	—		—	44	25 - 104	68	27 - 140
	pH (units)	—		—	8.5	7.3 - 8.8	7.5	7.2 - 8.8
6	Silica (mg/L)	—		—	9	5 - 16	23	6 - 29

*** Gross alpha data from 2017

QUESTIONS AND ANSWERS ABOUT OUR WATER

Why does the taste of our tap water sometimes change?

Many factors can affect the taste of water. DSRSD's water is a blend of surface water and groundwater. The blend changes throughout the year and these variations can change taste and odor. Chlorine used to disinfect the water supply occasionally produces a chemical smell. Rapid algae growth in the Delta can cause an earthy or musty taste or smell. (These algae "blooms" can occur at any time but are most common from late spring through early fall.) None of these changes in taste or odor affect the safety of the water.

Rotting food in the garbage disposal or bacteria in the P-trap under the drain can also cause a foul smell. To get rid of the odor, fill the sink with hot water, add an ounce of household bleach, and allow the water to drain slowly. If you have a water filter on your faucet or refrigerator, be sure to change it as often as recommended. Otherwise it becomes a breeding ground for bacteria that not only taste or smell foul but can make you sick.

Why does our water taste different than EBMUD's?

East Bay Municipal Utility District (EBMUD) gets most of its water from the Mokelumne River watershed and channels it into an aqueduct east of the Delta. The water never passes through the Delta and that's why it tastes different than DSRSD's water, which is a blend of surface water that has flowed through the Delta and groundwater extracted from local wells.

What is being done to improve water taste and address algae?

During warm months when algae blooms are more likely in the Delta, the Department of Water Resources (DWR) applies copper sulfate, and Zone 7 adds powdered activated carbon to the water to remove some of the taste-and-odor-causing compounds released by algae.

DWR monitors for toxic compounds released by algae, including cyanotoxins produced by some blue-green algae, throughout the State Water Project. In addition, Zone 7 implemented its own algal toxins monitoring in 2016. Blue-green algae is appearing more frequently in water bodies such as the Delta and Lake Del Valle, which supply water to Zone 7.

A construction worker makes progress on the ozone contactor structure for the Patterson Pass Water Treatment Plant Upgrades and Ozonation Project. This structure is where ozone will be applied to incoming water for primary disinfection and destruction of organics, cyanotoxins, and taste- and odor-causing compounds.

Does our tap water contain fluoride?

Yes. Fluoride occurs naturally and is added to promote strong teeth. Voters in the District's service area approved fluoridation in 1974, and treatment began in 1977. The District complies with the optimal level of 0.7 milligrams of fluoride per liter of water (mg/L) and control range of 0.6 to 1.2 mg/L, as required by federal and state regulations. Information about fluoridation, oral health, and current issues is available from www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html.

A study of Zone 7's source water identified ozone as the only effective treatment of such cyanotoxins. Zone 7 is currently making improvements that will add ozone treatment to surface water provided to DSRSD and other Tri-Valley water retailers. In addition to removing algal toxins, ozonation will reduce disinfection by-products and improve the taste and odor of our water more effectively than current treatments.

Construction is underway for an ozonation project at Zone 7's Patterson Pass Water Treatment Plant, slated for completion in spring 2022. In addition to adding ozonation to improve treated water quality, the Patterson Pass project includes replacing aging treatment facilities and increasing plant production capacity from 12 million gallons of water a day (mgd) to 24 mgd. Zone 7's Del Valle Water Treatment Plant Ozonation Project was slated for completion in early 2020, but a final date is subject to change due to the COVID-19 crisis.

What do you advise about water softeners?

The District discourages customers from installing salt-regenerated water softeners because they add excess amounts of salt to our wastewater, which in turn increases the salinity of recycled water used for irrigation. The salt in recycled water seeps back into our groundwater basin where it degrades the quality of our drinking water supply. Zone 7 operates a demineralization plant to remove salt from groundwater, but this is an expensive process. The more softened water that is used in the District, the higher the costs for all customers.

If having soft water is important to you, please consider using an exchange tank service. An exchange tank service company will install portable water softening tanks at your home and replace them on a regular schedule. The company disposes of the brine in the tanks under controlled conditions so it never enters the District's wastewater, recycled water, or groundwater basin.

How hard is our water?

Naturally occurring calcium and magnesium cause water to be "hard." We measure hardness by the amount of calcium carbonate in the water, expressed either as milligrams per liter (mg/L) or grains per gallon (gpg). Our water is generally moderately hard to very hard, in the range of 140 - 380 (8-22 gpg). Because our water is a variable blend of surface and groundwater, hardness changes throughout the year and by location in the District.

What is being done to improve water hardness?

Zone 7 has a demineralization plant to slow down the buildup of salts and minerals in our groundwater basin and reduce the hardness of groundwater pumped from the Mocho Well Field in western Pleasanton.

Help us protect source water quality

Protecting drinking water sources is everyone's responsibility. You can help in several ways:

- Reduce or eliminate fertilizers and pesticides; they are a primary source of pollution in creeks and the San Francisco Bay. Visit www.Baywise.org for environmentally friendly alternatives.
- Dispose of medication, chemicals, and used motor oil properly. Find disposal and recycling options at www.dsrsd.com/WhatNotToFlush.
- Pick up after your pets.

CONTACT US

We encourage public interest and participation in District decisions affecting water service and other District business. Board meetings occur on the first and third Tuesday of every month at 6 p.m. at our district office:

DSRSD Boardroom
7051 Dublin Blvd.
Dublin

The public is welcome. For agendas, minutes, and video recordings of past meetings, visit the District website.

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Service Area

A public agency founded in 1953, DSRSD distributes water, recycles water, and collects, treats, and disposes of wastewater for 188,000 people in Dublin, southern San Ramon, Dougherty Valley, and Pleasanton.