



**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。

April 29, 2016



## Dublin San Ramon Services District 2015 Annual Water Quality Report

### **A Message from the General Manager**

Thank you for being so responsive during the drought and reducing your water use by 34 percent in 2015. To minimize water limitations in the future, we are working regionally with our wholesale supplier and the other Tri-Valley water retailers to explore ways to make our water supply more reliable. Community leaders have endorsed doing a feasibility study in 2016 to determine the most cost-effective and efficient alternative water supplies. We'll keep you posted on our progress via our website.

Protecting public health and the environment is an essential part of our mission. Our leadership plans and invests prudently in water infrastructure and an effective and efficient workforce so we can meet the community's needs, now and in the future. Staff at all levels are accountable for knowing and complying with all legal and regulatory requirements. We want to earn your trust through transparent communication, opportunities for meaningful participation in decision making, and outstanding customer service.

*(continued on last page)*

### **YOUR DRINKING WATER MEETS ALL SAFETY STANDARDS**

The tap water Dublin San Ramon Services District (DSRSD) delivered in 2015 met all requirements for drinking water, as it has for many years.

This report describes where our water comes from, what it contains, and how it compares to drinking water standards set by the State Water Resources Control Board Division of Drinking Water and the U.S. Environmental Protection Agency. DSRSD and Zone 7 Water Agency, the District's wholesale water supplier, conduct thousands of tests annually to ensure our drinking water continues to meet these standards, year after year.



## Sources of Our Potable Water

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

Normally, more than three-quarters 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's Del Valle and Patterson Pass treatment plants. When State Water Project allocations are restricted, such as in the current drought, more of our water comes from local sources.



*Lake Oroville, the State Water Project's largest reservoir, stores Sierra rain and snowmelt that normally provides most of the Tri-Valley's water.*

## 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 the presence of animals or from human activity.

### Contaminants that may be 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 occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;



## Safety Standards Regulate Contaminants

(Continued from page 2)

- 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 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 (USEPA) 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. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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.

The tables on page 6-7 show the average level and range of each contaminant detected in the DSRSD water supply in 2015. All water supplied during 2015 met the regulatory standards set by the state and federal governments. No contaminants were detected at levels higher than standards allow. Additional unregulated parameters, such as sodium levels 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, 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: (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 components associated with service lines (pipelines 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.

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. (Please collect the flushed water and reuse it for another non potable 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, (800) 426-4791, or at [www.epa.gov/lead](http://www.epa.gov/lead).



*The water DSRSD supplied during 2015 met all regulatory standards. In every category related to public health, water quality was much better than the safety standards require.*



# HOW WE MONITOR WATER QUALITY

## Monitoring for Contaminants

DSRSD employees collect representative samples from 60 locations throughout the water distribution system. These samples undergo analysis in the District's laboratory, which is certified by the State Board Division of Drinking Water's Environmental Laboratory Accreditation Program. Zone 7 monitors water quality continuously online, as well as with instantaneous, or "grab," sampling. 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.

## Assessing the Quality of Source Water

Although most water requires some treatment before use, protecting water sources is an important part of providing safe drinking water to the public. The State Board requires water agencies to conduct a comprehensive source water assessment, or "sanitary survey," on drinking water sources every five years.

The surface water in our drinking water supply is most vulnerable to contaminants as it travels through the Sacramento and San Joaquin watersheds and Delta. The latest sanitary survey for the Delta and the State Water Project (SWP), completed in June 2012, identified wastewater treatment plant discharges, urban runoff, recreational activities, and conversions of some agricultural Delta islands to wetlands as key vulnerabilities and sources of contaminants. The sanitary survey includes an action plan to address these issues.

After leaving the Delta, water is transported to Zone 7 via the South Bay Aqueduct (SBA). SBA water quality also may be vulnerable to pollution from wildlife 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 reliabilities and water quality of the SBA.

To request copies of source water studies or for more information, contact Zone 7 Water Quality Manager Gurpal Deol at (925) 447-0533.

*Most of the Tri-Valley's water is conveyed by the State Water Project through the Sacramento-San Joaquin Delta (Sherman Island, left, and Stockton Ship Channel, right), the largest estuary on the west coast.*

*Photos courtesy of Florence Low, California Department of Water Resources*



# 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 2015 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)  
Glyphosate  
Heptachlor  
Heptachlor Epoxide  
Hexachlorobenzene  
Hexachlorocyclopentadiene  
Lindane  
Methoxychlor  
Molinate  
Oxamyl  
Pentachlorophenol  
Picloram  
Polychlorinated Biphenyls  
Simazine  
Thiobencarb  
Toxaphene  
2,3,7,8-TCDD (Dioxin)  
2,4,5-TP (Silvex)

### INORGANIC CHEMICALS

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

### RADIONUCLIDES\*\*

Radium-226, Radium-228  
Beta/photon emitters  
Gross Alpha particle activity  
Tritium, Strontium-90

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## SECONDARY DRINKING WATER STANDARDS

Aluminum  
Copper  
Foaming Agents (MBAS)  
Iron  
Manganese  
Methyl-tert-butylether (MTBE)  
Odor-Threshold  
Silver  
Thiobencarb  
Zinc

\* Latest monitoring for Asbestos was conducted in 2011.

\*\* Based upon low vulnerability, CDPH (now DDW) granted reduced monitoring for radionuclides for current supply sources on January 25, 2008. Only gross alpha particle activity monitoring is required once every nine years. Latest gross alpha monitoring conducted in 2008. Uranium monitoring is conducted for supplemental information as in-house capabilities are available.



# 2015 WATER QUALITY TEST RESULTS

## Definitions

**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.

**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.

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

**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 Environmental Protection Agency.

**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
- 4 Byproduct 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 Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities
- 22 "Hardness" is the sum of polyvalent cations (subatomic particles with positive charges) present in the water, generally magnesium and calcium. Cations usually occur naturally.

## Regulated Contaminants with PRIMARY and SECONDARY DRINKING WATER STANDARDS

Established by the State Water Resources Control Board, Division of Drinking Water (DDW)

DSRSD DISTRIBUTION SYSTEM						
Sources	Contaminants (Units)	MCL	DLR (MRL)	PHG, MCLG (MRDLG)	Highest percentage of monthly positive samples	
					Highest Locational Running Annual Average	Range of all samples collected in 2015
8	Total coliform bacteria	More than 5% of monthly samples are positive		(0)	4.8%	
4	Total trihalomethanes (TTHMs) (µg/L)	80	0.5	NA	47	22 - 62
4	Haloacetic acids (HAA) (five) (µg/L)*	60	1*	NA	14	5.0 - 23
					Running Annual Average (RAA)	Range of monthly average
5	Chloramines as Chlorine (mg/L)	Maximum Residual Disinfectant Level (MRDL) = 4.0		[4]	1.2	0.86 - 1.4
1, 7, 14	Fluoride (mg/L)	2	0.1	1	0.8	0.6 - 1.1

\*DLR is 1 µg/L for each HAA component, except Monochloroacetic acid, which has DLR of 2 µg/L.

(Chart continued on next page)

Regulated Contaminants with PRIMARY and SECONDARY DRINKING WATER STANDARDS (chart continued from previous page)

WATER SUPPLY SOURCES																
Sources	Contaminants (Units)	PRIMARY DRINKING WATER STANDARDS			Del Valle Water Treatment Plant	Patterson Pass Water Treatment Plant	Mocho Wellfield		Stoneridge Well		Hopyard Wellfield		COL Wellfield			
		MCL	DLR (MRL)	PHG, (MCLG), [MRDLG]			Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range		
11	Turbidity (NTU)	TT = 1 NTU Maximum		NA	Highest Level Found = 0.21 NTU	Highest Level Found = 0.28 NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		TT = 95% of samples ≤ 0.3 NTU		NA	% of samples ≤ 0.3 NTU = 100	% of samples ≤ 0.3 NTU = 100	NA	NA	NA	NA	NA	NA	NA	NA	NA	
20	Total Organic Carbon	TT = Quarterly RAA Removal Ratio ≥ 1.0		NA	Lowest Quarterly RAA Ratio = 1.7	Lowest Quarterly RAA Ratio = 1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>Inorganic Chemicals</b>					<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>		
1, 13	Barium (µg/L)	1000	100	2000	ND	ND	ND	ND	140	NA	250	240 - 260	110	NA	246	220 - 260
1, 17	Chromium Total (µg/L)	50	10	(100)	ND	ND	ND	NA	ND	NA	ND	ND - 10	ND	ND	ND	ND - 10
1, 21	Chromium 6 (Cr6) (µg/L)**	10	1	0.02	ND	NA	ND	NA	6	5 - 8	9	9 - 10	6	5 - 7	10	8 - 11
1, 7, 14	Fluoride (mg/L)	2	0.1	1	ND	0.1	ND	ND - 0.1	ND	NA	ND	ND	0.1	NA	ND	ND - 0.1
1, 3	Nitrate (as N) (mg/L)	10	0.4	10	ND	ND - 1.5	ND	ND	3.0	NA	4.3	4.0 - 4.5	3.0	NA	4.2	3.5 - 5.0
<b>Radionuclides</b>					<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>	<b>Avg.</b>	<b>Range</b>
1	Uranium (pCi/L)	20	1	0.43	ND	ND	ND	ND - 1.5	1	NA	ND	ND - 1	3	NA	ND	ND
<b>REGULATED CONTAMINANTS</b>		<b>SECONDARY DRINKING WATER STANDARDS</b>														
15	Color	15	0	—	0	0	0	0 - 2.5	0	NA	0	0	0	NA	0	0
2, 18	Conductivity (µS/cm)	1600	—	—	808	664 - 1003	740	570 - 864	1006	NA	789	773 - 805	1011	NA	746	673 - 821
6, 18	Chloride (mg/L)	500	—	—	172	119 - 226	151	96 - 187	116	NA	69	68 - 69	87	NA	66	52 - 79
6, 19	Sulfate (mg/L)	500	0.5	—	42	25 - 53	41	25 - 55	70	NA	49	47 - 50	82	NA	43	38 - 49
6	Total Dissolved Solids (mg/L)	1000	—	—	446	359 - 600	408	311 - 503	586	NA	459	458 - 460	614	NA	436	392 - 485
11	Turbidity (NTU)	5	(0.05)	—	NA	NA	NA	NA	ND	NA	0.06	0.05 - 0.06	ND	NA	0.1	ND - .03
<b>ADDITIONAL PARAMETERS — Included to assist consumers in making health or economic decisions, i.e. low sodium diet, water softening, etc.</b>																
22	Alkalinity as calcium carbonate (mg/L)	—	—	—	86	72 - 112	85	65 - 97	276	NA	263	255 - 270	329	NA	232	210 - 255
—	Boron (µg/L)	—	100	—	230	180 - 290	230	130 - 300	680	NA	490	460 - 520	530	NA	288	220 - 340
22	Total Hardness as calcium carbonate (mg/L)	—	—	—	134	108 - 158	131	108 - 157	403	NA	308	306 - 310	402	NA	316	290 - 361
8	Potassium (mg/L)	—	—	—	4	2 - 5	4	2 - 5	1	NA	1	1 - 1	1	NA	1	1 - 2
22	Sodium (mg/L)	—	—	—	104	70 - 142	92	63 - 121	50	NA	50	50 - 50	72	NA	38	33 - 41
—	pH (Units)	—	—	—	8.1	7.6 - 8.2	8.1	7.7 - 8.3	7.5	NA	7.7	7.6 - 7.7	7.5	NA	7.4	7.3 - 7.5
8	Silica (mg/L)	—	—	—	9	2 - 17	10	2 - 16	21	NA	26	26 - 26	24	NA	25	24 - 27

**\*\* Chromium 6 (Cr6) MCL Compliance**

- Latest Cr6 data for treatment plants and Mocho and Hopyard Wellfields is from 2011; data for COL Wells 1 and 2 is from 2014.
- For MCL compliance, COL Well 5 water is blended with other COL wells prior to entry into the distribution system, per Division of Drinking Water approved blending plan. Blended sampling location is El Charro Pipeline. Monthly sample is collected whenever COL Well 5 is used for supply. Blending station CR6 data from 2015: Average 9 µg/L; Range 8-10 µg/L.
- Treatment Plants, Mocho and Hopyard wellfield: latest data for Cr6 is from 2011. COL Wells 1 and 2 data is from 2014.

LEAD AND COPPER RULE						
	Contaminant	No. of Samples Collected	90 <sup>th</sup> Percentile Level Detected	Number of Sites Exceeding AL	Action Level (AL)	PHG
1, 9, 16	Lead (mg/L)	66	0.006	1	0.015	0.0002
1, 9, 10	Copper (mg/L)	66	0.690	None	1.3	0.3

The Lead and Copper Rule is applicable to DSRSD's direct customers only. Per the State Water Resources Control Board, Division of Drinking Water's approval, compliance monitoring is conducted once every three years. Data from August 2013 monitoring is summarized on the left.





## 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 affects 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.

During warm months when algae blooms are more likely, Zone 7 adds powdered activated carbon to the water to remove some of the taste-and-odor-causing compounds released by algae. In 2009, Zone 7 studied and tested other processes to improve taste. The study concluded that ozone treatment would be most cost-effective. Zone 7 is currently designing improvements at its Del Valle water treatment plant to treat water with ozone. The process is scheduled to be online by 2019, assuming Zone 7 can secure construction financing. In addition to improving the taste and odor of our water, ozonation reduces disinfection byproducts and removes algal toxins more effectively than current treatments. Zone 7's capital improvement plan includes adding ozone treatment at its Patterson Pass water treatment plant in the future.

### 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 a water softening service. The 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.

### 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.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml).

### 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 moderately hard to hard, in the range of 109-336 mg/L (6-20 gpg). Because our water is a variable blend of surface and groundwater, hardness changes throughout the year and by location in the District. During the drought, water hardness is higher than normal because the blend contains a larger proportion of groundwater. In addition, Zone 7 is not operating its demineralization plant during the drought to conserve water.

### 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 Wellfield in western Pleasanton. In 2014 and 2015, Zone 7 minimized operation of the facility due to the drought, since some water is lost during the demineralization process.



## I've heard about algae blooms that make water toxic to people and pets. Is this an issue in local waterways?

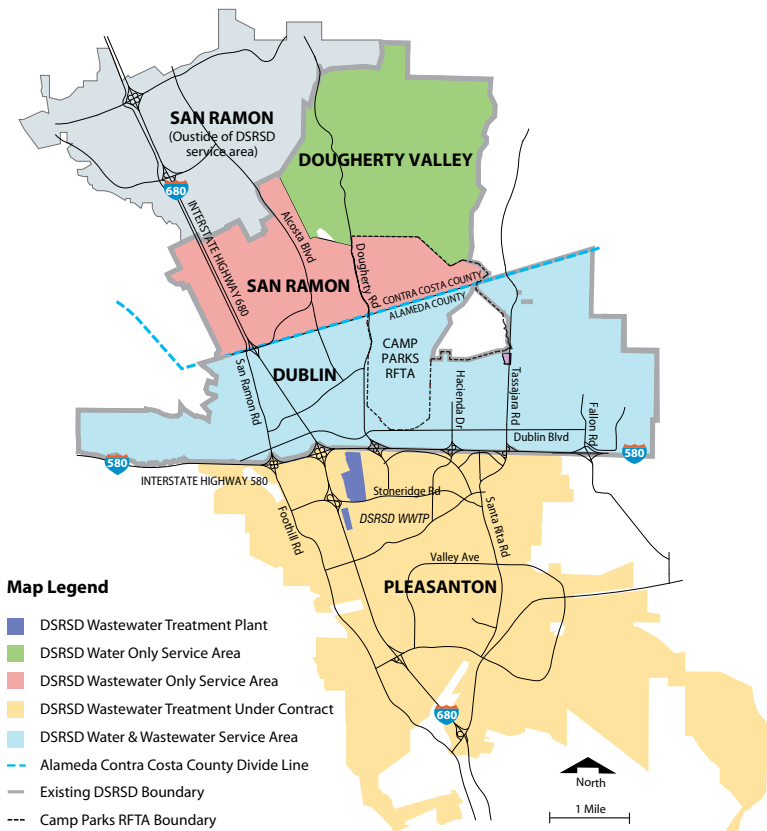
On December 7, 2015, the East Bay Regional Park District (EBRPD) detected a bloom of toxic blue-green algae near the boat ramp in Lake Del Valle. Being cautious, they closed the lake to swimming. EBRPD operates the lake for recreational purposes but Del Valle is primarily a State Water Project facility. At times, lake water is blended with water conveyed through the Delta and delivered to the Zone 7 treatment plants that supply the Tri-Valley's drinking water. The lake water is drawn from the north end of the lake, nearly five miles away from the boat ramp and at a much deeper depth than where blue-green algae were found.

Even though tests confirmed drinking water hasn't been affected by the toxic algae, Zone 7 has taken extra steps to ensure the safety of the Tri-Valley's water supplies. Zone 7's traditional water treatment processes use disinfectants that remove most algal toxins and they have added other techniques normally used in the summer to remove algal byproducts. It is unusual for algae to bloom in cold weather; normally they like sun and higher temperatures.

The Department of Water Resources monitors for algal toxins throughout the State Water Project, and Zone 7 implemented additional local monitoring in 2016. Recently, Zone 7 collaborated with other South Bay Aqueduct contractors to evaluate the effectiveness of various technologies in removing these toxins during water treatment. Although chlorine is effective when combined with other conventional methods used by Zone 7, ozonation was the most effective treatment studied. Zone 7 is currently designing improvements at its Del Valle water treatment plant to treat water with ozone. The process is scheduled to be online by 2019, assuming Zone 7 can secure construction financing. The project is designed to improve taste and odor of our water, reduce disinfection byproducts, and remove algal toxins more effectively.

## Service Area

A public agency founded in 1953, DSRSD distributes water, recycles water, and collects, treats, and disposes of wastewater for 171,000 people in Dublin, southern San Ramon, Dougherty Valley, and Pleasanton.



## 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 the District Office, 7051 Dublin Blvd., Dublin, at 6 p.m. The public is welcome. For agendas, minutes, and video recordings of past meetings, visit the District website.

### District website:

[www.dsrdsd.com](http://www.dsrdsd.com)

### Technical information regarding water quality:

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[gumber@dsrdsd.com](mailto:gumber@dsrdsd.com)

### General information:

Sue Stephenson, Community Affairs Supervisor (925) 875-2295  
[stephenson@dsrdsd.com](mailto:stephenson@dsrdsd.com)

### Service or bill inquiries:

Customer Service (925) 828-8524  
[customerservice@dsrdsd.com](mailto:customerservice@dsrdsd.com)

### Water conservation:

(925) 875-2245

### Board of Directors:

D.L. (Pat) Howard, President  
Richard Halket, Vice President  
Ed Duarte, Director  
Madelyne (Maddi) Misheloff, Director

Georgean Vonheeder-Leopold, Director

[board@dsrdsd.com](mailto:board@dsrdsd.com)

## Lead in Drinking Water

Events in Flint, Michigan, have people across the country asking questions about lead in drinking water. Could lead contamination happen here? It is very unlikely, for several reasons:

- DSRSD has never used lead pipes in its distribution system.
- DSRSD's wholesale supplier, Zone 7 Water Agency, adjusts and monitors the pH of the water supply to ensure it stays non-corrosive to plumbing.
- DSRSD and Zone 7 regularly test the water, in accordance with all state and federal requirements, to ensure it is safe to drink.

Lead dissolves into drinking water from the corrosion of plumbing or fixtures that contain lead. Even though California now requires new household plumbing, fixtures, and solder to be lead-free, lead is still present in some older pipes and faucets, and in the older solder that was used with copper pipes. These problems are most likely to occur in houses built before 1986.

Every three years, DSRSD is required to test the indoor tap water from a sample of homes built before 1986. Of the 66

homes tested in 2013, only one home's water tested with more lead than the regulatory standard of 15 parts per billion. While we were not required to take any action, our staff advised the homeowner about the advantages of replacing old plumbing and fixtures with new lead-free materials as a way of reducing lead levels in tap water.

We will test for lead in sample homes again this year and publish a summary of test results in next year's *Annual Water Quality Report*.

If you live in a home built before 1986, or if members of your family have special health concerns, please carefully read the information about lead on page 3 of this report. Additional resources are available on our website, [www.dsrdsd.com](http://www.dsrdsd.com).

We know you depend on us to provide a safe and reliable water supply, and we work hard every day to fulfill this responsibility to the community. I welcome your input and can be reached at [mcintyre@dsrdsd.com](mailto:mcintyre@dsrdsd.com) or (925) 875-2200.



Daniel McIntyre  
General Manager



Senior Environmental Chemist Connie Sanchez tests water samples on an instrument that detects contaminants down to the level of a few parts per trillion.



A water main valve is opened by Water Systems Operator Jim Killips to flush out natural sediments that build up over time.



Water Systems Operator Ray Robles tests a water sample for residual chlorine, a disinfectant that discourages bacterial growth in the water distribution system.