

2015 Consumer Confidence Report

Water System Name: Durham Irrigation District

Report Date: June 15th 2016

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2015 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: Three ground water wells

Name & general location of source(s): Well #3 in alley between Durham Dayton Hwy and Campbell St., Durham, Ca
Well #4 on Durham Dayton Hwy. next to the Butte County Public Library
Well #5 located on Holland Ave. just south of Serviss Street

Drinking Water Source Assessment information: _____

Time and place of regularly scheduled board meetings for public participation: Every 2nd Tuesday of the month
at 9418-C Midway, Durham, Ca

For more information, contact: Kevin O'Shea

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TERMS USED IN THIS REPORT

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

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

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

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

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

Variations and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

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

ppb: parts per billion or micrograms per liter ($\mu\text{g/L}$)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

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

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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the 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.

Tables 1, 2, 3, 4, 5, 7, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a mo.)	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	(In the year)	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	Sample Date	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	08/2015	10	*ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	08/2015	10	*0.233	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)						
Well #3	06/03/08	7.6		none	none	Salt present in the water and is generally naturally occurring
Well #4	06/03/08	9.6				
Well #5	07/15/08	8.2				

Hardness (ppm)						Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring
Well #3	06/03/08	100		none	none	
Well #4	06/03/08	170				
Well #5	07/15/08	150				

*Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Hexavalent Chromium ppb			1.0	10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Well #3	12/23/14	1.91				
Well #4	12/23/14	4.19				
Well #5	12/23/14	3.04				
2,4,5-T in ppb				50	25	Residue of banned herbicide
Well #3	12/15/09	< 1				
Well #4	12/15/09	< 1				
Well #5	03/27/13	ND				
Fluoride in ppm			.10	2	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Well #3	06/03/08	.12				
Well #4	06/03/08	.12				
Well #5	07/15/08	.13				
Uranium in ug/L			1			Erosion of natural deposits
Well #3	11/16/05	< 1				
Well #4	11/16/05	< 1				
Well #5	11/16/05	< 1				
Nitrate as NO3 in ppm			2	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Well #3	07/30/15	11.2				
Well #4	07/30/15	24.7				
Well #5	07/30/15	15.5				
Gross Alpha in pCi/L			3	15	(0)	Erosion of natural deposits
Well #3	12/08/09	< 3				
Well #4	12/08/09	< 3				
Well #5	12/28/15	ND				
Radium 226 in pCi/L			1	3	0.05	Erosion of natural deposits
Well #3	12/08/09	< 1				
Well #4	12/08/09	< 1				
Well #5	11/16/05	< 1				
Radium 228 in pCi/L			1	2	0.019	Erosion of natural deposits
Well #3	12/08/09	< 1				
Well #4	11/15/05	< 1				
Well #5	11/07/06	< 1				
Uranium in pCi/L			2	20	0.43	Erosion of natural deposits
Well #3	12/08/09	0.81				
Well #4	09/09/09	0.106				
Well #5	11/16/05	< 2				

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent	Sample	Level Detected	Range of	MCL	PHG	Typical Source of Contaminant
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(and reporting units)	Date		Detections		(MCLG)	
Chloride in ppm						Runoff/leaching from natural deposits; seawater influence
Well #3	06/03/08	1.8		500		
Well #4	06/03/08	4.2				
Well #5	07/15/08	3.9				
Color in Units						Naturally-occurring organic materials
Well #3	06/03/08	< 1.0		15		
Well #4	06/03/08	< 1.0				
Well #5	07/15/08	< 1.0				
Foaming Agents in ppb						Municipal and industrial waste discharges
Well #3	8/03/11	ND		500		
Well #4	06/03/08	50				
Well #5	07/15/08	50				
Specific Conductance In pS/cm						Substances that form ions when in water; seawater influence
Well #3	06/03/08	240		1600		
Well #4	06/03/08	370				
Well #5	07/15/08	300				
Sulfate in ppm						Runoff/leaching from natural deposits; industrial wastes
Well #3	06/03/08	5.8		500		
Well #4	06/03/08	15				
Well #5	07/15/08	9				
Total dissolved solids In ppm						Runoff/leaching from natural deposits
Well #3	06/03/08	180		1000		
Well #4	06/03/08	250				
Well #5	07/15/08	210				
Turbidity in NTU						Soil runoff
Well #3	06/03/08	< .10		5		
Well #4	06/03/08	.14				
Well #5	07/15/08	.11				

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language

*Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Lead-Specific Language for Community Water Systems: 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. Durham Irrigation District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/lead>.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
<p>Monitoring violation: No water samples taken in 2012 from homes for lead and copper testing.</p>	<p>Did not realize samples were due. Was still learning how to use the state's chemical monitoring schedule.</p> <p>Note: these water samples are taken from homes in the community and are not a test of the lead and copper in source water being pumped from the water system's wells. All wells have been tested for lead & copper in the water and no detections have been found within lab testing limits.</p>	<p>36 months</p> <p>Samples due in 3 year intervals. Samples would have been due again in 2015</p>	<p>Will sample every year for next 3 years beginning with year 2015 as per state mandate. Samples need to be taken in summer months</p>	<p>Lead:</p> <p>Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.</p> <p>Copper:</p> <p>Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.</p>

