South Davis Water District
407 West 3100 South • Bountiful, UT. 84010 • (801)295-4468
• sdwoffice@southdaviswater.us

2015 CONSUMER CONFIDENCE REPORT

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We're pleased to present you with a look at the quality of the water delivered in 2015. Also included in this report is a look at where your water comes from, what we are doing to protect your water, how it compares to EPA and State of Utah standards, possible sources of contamination, and some tips on maintaining safe water in your home. The South Davis Water District is committed to providing you with safe, clean, drinking water.

Where Your Water Comes From

SDWD's drinking water comes from 4 springs, 5 wells, and 1 surface water treatment plant that treats water from the Weber River. The treatment plant is operated by the Weber Basin Conservancy District. The SDWD, like other public water suppliers in the area, purchases some of its culinary water from Weber Basin on a contractual basis. Although the SDWD has more than enough water rights and pumping abilities to supply the entire District with water from springs and wells; this treated surface water was contracted for in the 50's during the Weber Basin Project, and is therefore in a "use it or lose it" state and must be used. The District uses all of this contractual water each year while supplementing it with SDWD's own sources.

Our spring water is collected underground and diverted into holding tanks. The Odell, Dago, and Cooper Springs provide millions of gallons to the NSL area. The Enoch Spring provides millions of gallons to the eastern bench area of the District in Bountiful. All of these springs provide very clean, fresh water.

Our North Canyon, Bona Vista, and Val Vista wells provide water to the eastern portion of Bountiful and NSL that reside within the SDWD. Water is boosted from these wells to two large tanks at higher elevations named 1A and 2A, where it is held for consumption. This water is both chlorinated and fluoridated before it enters these tanks.

Our three Val Vista Wells pump water that is boosted to a large tank located in the middle of the District called 3A. This reservoir serves the lower half of the District in Bountiful as well as an easterly portion of Woods Cross. Water from the treatment plant is fed directly into the District's distribution system via a connection located at 3100 S. and Orchard Dr. This water is occasionally boosted from this location up to the 3A tank as the need arises.

The chart below shows the number of gallons consumed from each source and the percentage each source contributed.

SOURCE	GALLONS	%TOTAL
North Canyon Well	64,016,100	24.7%
Bona Vista Well	2,056,801	.9%
Val Vista Well #1	6,578,637	2.5%
Val Vista Well #2	8,680,600	3.4%
Val Vista Well #3	43,025,766	16.6%
Enoch Spring	20,298,000	7.8%
Odell Spring System	42,321,478	16.4%
Surface Water Treatment Plant	71,711,425	27.7%

Source Protection and Susceptibility Analysis

The SDWD has a Drinking Water Source Protection Plan that can be viewed at our office. It provides information such as potential sources of contamination and our designated source protection areas. The source protection zones for each well and spring are estimated based on the time it takes a drop of water to travel to the well or spring collection point. All of the wells in the SDWD have surface grout seals that are in good condition as well as impervious layers over the springs that have been found to be in good condition.

Our aquifers are classified as unconfined. Unconfined refers to the ability of the formation to receive potential contamination from surface activity. Unconfined aquifers are susceptible because they do not have a barrier such as a clay layer that protects the aquifer from exposure to the surface.

Common household chemicals pose a great risk to aquifers and springs. Paint, cleaners, motor oil, gasoline, antifreeze, and lawn and garden chemicals that are disposed of in the gutter or backyard can migrate to rivers and streams or filter down through the ground and pollute aquifers.

Residents can help to prevent water pollution by employing best management practices when storing, using, and discarding fertilizers, pesticides, and other household hazardous wastes properly.

The types of prioritized potential contamination sources, with being highest risk of affecting the wells and springs, are as follows:

1. Residential and commercial pesticide, herbicide, and fertilizer use.
2. Residential sewer system leakages.
3. Streets and roadways - transport spills and road clearing with deicing salts.
4. Existing and abandoned wells that have become contaminated.

Use the following guidelines when using pesticides, herbicides, and fertilizers:

- Only purchase the amount and kind of fertilizer or pesticide needed and store in locked, dry cabinets.
- Do not allow fertilizer and pesticide spills to be washed into the storm drain system.
- Dry pesticide and fertilizer spills should be swept up and later applied at the rate specified on an area where needed.
- Liquid pesticide and fertilizer spills should be soaked up using absorbent material (such as sawdust, cat litter, or soil) and then taken to a household hazardous waste collection site.
- Never apply fertilizers near wells.
- Do not spray or apply pesticides near walks or driveways. This will help prevent pesticides from washing off into the storm drain system.

Household hazardous wastes (HHWs) are discarded materials that are ignitable, corrosive, reactive, and toxic or otherwise listed as hazardous by the EPA. Paint, used motor

oil, gasoline, antifreeze, or lawn and garden chemicals that you dispose of in the gutter or your backyard can migrate to rivers or filter down through the ground and pollute aquifers. The following best management practices should be employed when handling HHWs:

- Completely use the product before disposing of the container.
- Return unused portions to community household hazardous waste collection programs.
- Do not flush HHWs down the toilet, pour HHWs down the sink, down a storm drain, or pour HHWs on the ground.

Please don't spoil the water supply for yourself and everyone else! Dispose of paint, used motor oil, and other hazardous chemicals in a proper and safe manner. You can call the Division of Environmental Health at 801-944-6697 for the nearest location for hazardous waste disposal.

If you would like additional information on best management practices please visit the Utah Division of Drinking Water website at www.drinkingwater.utah.gov/source_protection_intro.htm for links to Fact Sheets describing ways to minimize the impact of potential contamination sources on our water resources.

Possible Contaminants in the Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

The sources of our drinking water include rivers, 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. Below are some of these contaminants that may be present in source water.

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, 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 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, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants can be naturally-occurring or be the result of oil and gas production and mining activities.

The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. These contaminants are harmful if ingested in certain amounts. The EPA determines these amounts for public water systems, and creates regulations that allow for a large cushion of safety. The FDA regulates limits for bottled water companies. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Surface Water Treatment Process

Cryptosporidium and giardia are microbial pathogens found in surface water throughout the U.S. As stated above, the SDWD received 28% of its drinking water in 2015 from a surface water treatment plant.

The first thing that the treatment plant does is remove all of the larger particulates from the raw water using a process called coagulation and flocculation. The goal of this stage is to bind up the suspended particles included in the raw water by adding a coagulant to the raw water as it first enters the water treatment plant. Floc, which is a tuft-like aggregate, is produced from the mixing of the coagulant in the raw water. This process is called flocculation. Over time, as more suspended matter is bound, the smaller aggregates of floc become larger particles of floc.

Sedimentation is the second stage of water treatment. The objective of this stage is to remove the floc. This is accomplished as the floc settles out of the water in long sedimentation basins. The cleaner water is drained off the surface of the sedimentation basin and sent to the next stage.

Filtration is the third stage of water treatment. The purpose of this stage is to remove the remaining suspended particles and dissolved constituents. This is accomplished by passing the water through a filter composed of different layers of sand and gravel.

Disinfection is the final stage of water treatment. A small amount of chlorine, or other disinfecting chemical, is added. This is used to kill any remaining germs and to keep the water safe as it travels to the public. This treatment process removes cryptosporidium and giardia from the water; however, it cannot guarantee that 100% of the microbes are removed. Monitoring by Weber Basin indicates the presence of cryptosporidium and giardia in their source water. Current testing methods don't allow them to determine if the organisms are dead or if they are capable of causing disease. Therefore, UV light is administered to the water in order to prevent these microbes, if they are present, from reproducing and causing sickness.

Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than water. 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 transplant, 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. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infections by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Water Quality Inside Your Home

Once the water passes from our system and through the meter, you become a partner with us in making sure it stays fresh and clean. Here are some things to consider.

Water Heater
Check the temperature setting for your water heater. Water that is too hot can create a burn hazard, while water that is too cool can create a perfect environment for bacteria to grow. You may also want to consider installing a pressure regulator to prevent any sudden surges to your water heater. These can be found at any general plumbing supply store, or you can have a plumber install one for you.

Filters and Purifiers
All types of filters and purifiers (point of use devices) need to be properly maintained and monitored. Neglected devices may not work as intended; become a haven for microbial growth; or shed filter material into your home's tap water. Even the filter in your refrigerator needs to be properly maintained to protect your family.

Water Softeners
Since the hardness of your water can range anywhere from 14 to 30 grains per gallon, it is important to monitor the settings on your water softener regularly to make sure that you are treating your water properly. Over treating your water is wasted money while under treating is not effective.

Unused Rooms
If you have a kitchen or bathroom that rarely gets used, you should make a point of running water through the faucets on

a frequent basis. Stagnant pipes and fixtures are susceptible to microbial growth. Flushing unused water lines regularly will help prevent this.

Information on Lead
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. The District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components from the meter on. When your water has been sitting for an extended period of time, 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 drinking water, testing methods, and steps you can take to minimize exposure, more information is available from the Safe Drinking Water Hotline at (800 426-4791) or at http://www.epa.gov/safewater/lead.

Information on Radon
Radon is a radioactive gas that you can't see, taste or smell. It is found throughout the U.S. At this time, radon monitoring is not required by the EPA; however, the EPA is considering making radon monitoring a requirement. The proposed MCL for radon is 4,000 pCi/L for systems which have a public education program for radon. For additional information, call EPA's Radon Hotline (800-SOS-RADON).

DEFINITIONS AND TERMS

The following are definitions for some terms and abbreviations that you may be unfamiliar with. It also contains some examples to help comprehend some of the small measurements used in the testing of water.

Parts per million (ppm) - one part per million corresponds to one minute in 2 years or a single penny in $10,000.

Parts per billion (ppb) - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Maximum Contaminant Level (MCL) - the "maximum allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The "goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Nephelometric Turbidity Unit (NTU) - a measure of the cloudiness of the water.

The following page contains all of the regulated and unregulated drinking water contaminants that we detected during this year. We test for over 130 contaminants (i.e., pesticides, herbicides, organic compounds, etc.) with almost all being non-detectable. Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether they need to regulate those contaminants.

Not all contaminants are required to be sampled for every year. The EPA and State of Utah have established that, in some circumstances, if a source of water goes a determined period of time without having detected certain contaminants, or the detected contaminants remain at consistently low levels for a determined period of time, that source may qualify for reduced monitoring.

Some of the surface water data, though representative, are more than one year old. Because the concentrations of certain contaminants do not change frequently, the state allows less frequent monitoring. Note that the presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

Contact Person
Jake Ferguson
801-295-4468
sdwoffice@southdaviswater.us

REGULATED INORGANIC CONTAMINANTS -- Data is derived from samples collected from 2010 through 2015.

Contaminants	Average	Low	High	MCL	MCLG	Typical Sources
Arsenic (ppb)	1.06	ND	2.5	10	NA	Erosion of natural deposits; runoff from orchards.
Barium (ppm)	0.13	0.06	0.41	2	2	Erosion of natural deposits; discharge of drilling wastes.
Fluoride[1] (ppm)	0.66	0.3	0.9	4	4	Erosion of natural deposits; water additive.
Nitrate (ppm)	2.47	0.3	3.5	10	10	Runoff from fertilizer use; erosion of natural deposits.
Selenium (ppb)	2.07	0.001	4.8	50	50	Erosion of natual deposits; discharge from mines.
Sodium (ppm)	55	10.2	188	NA[2]	NA	Erosion of natural deposits.
Sulfate (ppm)	79.43	10.2	65	1,000[3]	NA	Erosion of natural deposits.
Total Dissolved Solids (ppm)	547.58	290	1120	2,000[4]	NA	Erosion of natural deposits.
Turbidity (NTU)	0.21	0.08	1.2 [5]	5	NA	Soil runoff.
Chromium 6[5] (ppb)	ND	ND	ND	100	NA	Erosion of natural deposits; industrial waste disposal.
Lead (ppm) *40 samples total*	0.002	0.0007	0.012	0.015	0	Corrosion of plumbing; erosion of natural deposits.
Copper (ppm) *40 samples total*	0.21	0.001	0.817	1.3	1.3	Corrosion of plumbing; erosion of natural deposits.

[1]Fluoride levels in the District are adjusted to maintain levels between 0.6 and 0.8 ppm.

[2]The State of Utah requires monitoring for sodium even though no MCL has been established.

[3]The MCL for sulfate and total dissolved solids is established by the State of Utah.

[4]This value represents the highest single measurement of combined filter readings taken every four hours during 2015.

[5]The District chose to test for chromium 6 in 2014 even though it was not required.

REGULATED ORGANIC CONTAMINANTS (Disinfection Byproducts) -- These are all 2015 samples.

Contaminants	LLRA[1]	Low	High	MCL	MCLG	Typical Sources
Trihalomethanes (ppb)	26.92	6	34.9	80	NA	By-product of drinking water chlorination.
Haloacetic Acids (ppb)	14.78	1	27.4	60	NA	By-product of drinking water chlorination.

[1]This value represents the running annual average for 2015.

REGULATED MICROBIOLOGICAL CONTAMINANTS -- These are all 2015 samples. Ten samples taken per month.

Contaminants	HMNP[1]	MCL	MCLG	Typical Sources
Total Coliform Bacteria	ND	1 sample	0	Naturally present in the environment.
Fecal Coliform & E. coli	ND	1 sample	0	Human and animal fecal waste.

[1]Highest monthly number of positive samples.

REGULATED RADIOLOGIC CHEMICALS -- Data is derived from samples collected from 2010 through 2015.

Contaminants	Average	Low	High	MCL	MCLG	Typical Sources
Gross Alpha Particles (pCi/L)	6.14	2.7	13.4	15	0	Erosion of natural deposits.
Combined Radium (pCi/L)	0.97	0.5	2.4	5	0	Erosion of natural deposits.