WEBER BASIN WATER CONSERVANCY DISTRICT
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2009 CONSUMER CONFIDENCE *Report*

ELEVENTH EDITION FEBRUARY 2010

This report is intended to be a snapshot of water quality delivered during 2009. Included in this report are details about where your water comes from, what it contains, what we are doing to protect your water sources and how it compares to EPA and State of Utah standards. Weber Basin Water Conservancy District works very hard to provide you with safe, high quality drinking water that meets or exceeds all state and federal regulations. Weber Basin Water Conservancy District is committed to providing you with reliable and accurate information because informed customers are our best allies.

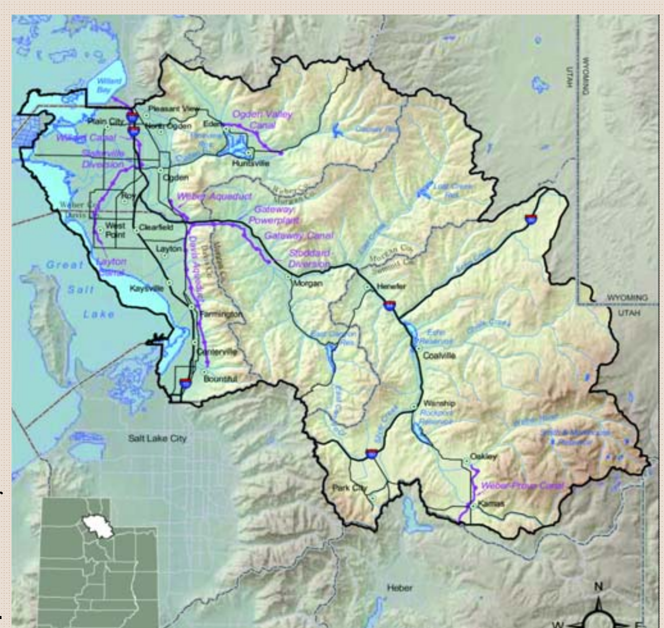
WHERE DOES OUR WATER COME FROM?

Surface water and groundwater

The Weber Basin Water Conservancy District's (District) drinking water supply comes from the Weber River and from several creeks along the Wasatch Front. Groundwater, primarily from the Delta Aquifer, is used to supplement surface water sources.

How drinking water gets to you

Although a portion of drinking water originates as groundwater and is extracted from deep wells, the majority of the drinking water supply begins as surface water from the headwaters of the Weber River. Water is directed into a large canal by a diversion dam. The water then flows through this canal whereupon it enters two large aqueducts. Several creeks along the Wasatch Front can also feed into this aqueduct system. From there, water is transported to each of the District's water treatment plants. After complete treatment, water is delivered to the cities or water improvement districts for final distribution to individual users.



Atención! Muy Importante!
Este reporte de Calidad del Agua potable contiene valiosa información sobre la calidad del agua que usted consume. Por favor, haga que alguien de su confianza le tradusca el contenido del mismo.

LARGE SCALE WATER STORAGE

Why water storage is necessary

Storage reservoirs on the Weber and Ogden river systems play a critical role in ensuring adequate and constant water supply to all water users throughout the year. Dams have been built to store water during the annual spring runoff of winter snow. Without this storage, those of us living down stream along the rivers and streams would experience extreme high flows during the runoff periods and extreme low flows in the late summer months. There would be much more flooding due to unregulated flows in the river during the spring, and there would be insufficient water to provide for drinking and irrigation needs during the late summer and fall.

Reservoirs have allowed growth to continue within the District's service area, which otherwise could not have occurred due to the lack of sufficient and consistent available water.

Reservoirs also play a vital role in reducing the effects of drought. During the past decade the effects of multi-year drought periods have been felt throughout the country. With the available water storage projects these effects have been greatly minimized, whereas without these reservoirs it could have been devastating.

Storage reservoirs also have other useful functions in generating hydro-electric power, economic benefits through tourism, habitat for wildlife, and many forms or recreational activities. They have allowed for many communities to thrive and prosper, while continuing to ensure adequate water for agricultural irrigation, industry, commercial uses and all residential uses.

SOURCE WATER PROTECTION

Protection Plan

The District has completed a Drinking Water Source Protection Plan for all of its surface public drinking water sources. The Drinking Water Source Protection program includes identification of the area from which the drinking water source receives water, an assessment of the potential contamination threats to the source within this area, and management programs to help control both existing and future potential sources of contamination. Copies of this plan may be obtained from the District office for a nominal fee. The State Division of Drinking Water also has a copy on file.

Each significant potential source of contamination has been analyzed and assigned a qualitative susceptibility rating according to its potential to impact the water supply. This rating includes such factors as the likelihood of a release of potential contaminants, the ability of the potential contaminant to travel to the river or stream, and the ability of the intake to bypass contamination. Significant potential sources of contamination located within the area tributary to the District's surface water sources include from greatest potential risk to surface water to least potential risk to surface water: transportation of hazardous materials along roadways and railroads; industrial manufacturers and related companies and large commercial production and maintenance operations; rural residential areas; agricultural activities; mineral producers; sewage treatment facilities; camping areas and other recreational activities; and underground fuel storage. Based upon this qualitative susceptibility rating, the Weber River Watershed was ranked "high" due to the presence of many potential sources of contamination. The Wasatch Front creeks were ranked "moderate to low" due to the presence of a few to no potential sources of contamination.

Wellhead Protection Plan

A Wellhead Protection Plan has been written and implemented for all of the District's groundwater sources. These plans define the protection zones for each of the wells, list the potential contamination sources within the zones, and identify what safeguards are in place to protect the aquifer (natural underground water storage formations made of silts, sands, gravels, and cobbles) from the contamination sources. The wellhead protection plans also consist of steps to further monitor the contamination sources and educate those businesses or industries that may become sources. Copies of these plans may be obtained from the office for a nominal fee. The State Division of Drinking Water also has a copy of each protection plan on file

You Can Help Prevent Water Pollution

The water you drink comes from reservoirs and pumped from deep wells. Residents can help to prevent water pollution by employing best management practices when storing, using, and discarding fertilizers, pesticides, and other household hazardous wastes. The following best management practices should be employed when utilizing fertilizers and pesticides to reduce the risk of surface and groundwater contamination:

- Only purchase the amount and kind of fertilizer or pesticide needed and store in locked, dry cabinets.

- Keep fertilizers and pesticides on separate shelves.
- Do not allow fertilizer and pesticide spills to be washed off into the storm drain system.
- Pesticides and fertilizers should always be applied in accordance with manufacturer's directions.
- 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 soil, sawdust, and cat litter) and then taken to a household hazardous waste collection site.
- Never apply fertilizers near irrigation wells.
- Do not spray or apply pesticides near walks or driveways to prevent pesticides from washing off into the storm drain system.

Household hazardous wastes (HHWs) are discarded materials that are ignitable, corrosive, reactive, 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 the 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, pour HHWs 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 http://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 presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of our drinking water include rivers, streams, reservoirs, 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.

CONTAMINANT REMOVAL FROM OUR WATER

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Raw water typically contains varying amounts of dissolved constituents and suspended particles. Complete water treatment is simply the process of trying to remove these dissolved constituents and suspended particles.

The District operates three water treatment plants. The basic stages of water treatment employed at each of these plants are coagulation and flocculation, sedimentation, filtration and disinfection.

Coagulation and flocculation is the first stage in water treatment. 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 filtration.

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.

SPECIAL PRECAUTIONS TO CONSIDER

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).

What is "hard water" and what can I do about it?

Water described as "hard" is high in dissolved minerals, specifically calcium and magnesium. Hard water is not a health risk, but a nuisance because of mineral buildup on fixtures and poor soap and/or detergent performance.

As water moves through soil and rock, it dissolves very small amounts of minerals and holds them in solution. Calcium and magnesium dissolved in water are the two most common minerals that make water "hard." The degree of hardness becomes greater as the calcium and magnesium content increases.

These elements in hard water form charged ions in solution which tend to bind with soap and detergent molecules to form an insoluble scum and limescale deposits. To soften the water, you must remove those ions. A conventional water softener does this by replacing them with sodium ions. The active part of a conventional water softener is an ion exchange resin that releases sodium ions as it binds up the calcium, magnesium, and iron ions. When the resin becomes saturated with calcium and magnesium, it must be recharged. The recharging is done by passing a salt (brine) solution through the resin. The sodium replaces the calcium and magnesium which are discharged in the waste water.

Because of the sodium content of softened water, some individuals may be advised by their physician, not to install water softeners, to soften only hot water or to bypass the water softener with a cold water line to provide unsoftened water for drinking and cooking; usually to a separate faucet at the kitchen sink.

Mechanically softened water is not recommended for watering plants, lawns, and gardens due to its sodium content.

Most water softeners have a setting for grains per gallon. Weber Basin Water district provides water which has a hardness range of 6-18 with an average of 14 grains per gallon. Set your softener appropriately, but contact your local utility to verify if additional well water is mixed with your water which could alter the hardness. For additional remedies you may consult with local professionals that deal with hard water and install water softeners.

WATER QUALITY INFORMATION

The water treated and provided by Weber Basin Water Conservancy District meets all state and federal regulations for water quality.

The tables on the following pages list all of the regulated and unregulated drinking water contaminants that we detected during this year. Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Some of our 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.**

The detected contaminants tables have been divided into three different groups representing the District's three culinary distribution systems. These systems are Weber Basin NORTH, (covers the area north of Ogden City), Weber Basin CENTRAL (the area from Ogden City south to Farmington), and Weber Basin SOUTH (the area from Centerville to North Salt Lake).

Important Drinking Water Definitions:

Detected Contaminant - Any contaminant detected at or above its minimum detection limit (MDL).

Minimum Detection Limit - The lowest level at which a particular contaminant is detected with a specified degree of certainty.

MCL - Maximum Contaminant Level: 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.

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 allow for a margin of safety.

NA - Not applicable - there is no Federal or State MCL and/or MCLG.

ND - Not detected.

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

ppm - parts per million, or milligrams per liter (mg/l).

ppb - parts per billion, or micrograms per liter (µg/l).

pCi/L - picocuries per liter (a measure of radioactivity).

Results of cryptosporidium monitoring

Cryptosporidium and giardia are microbial pathogens found in surface water throughout the U.S. Although filtration removes cryptosporidium and giardia, the most commonly-used filtration methods cannot guarantee 100 percent removal. Monitoring conducted by the District indicates the presence of cryptosporidium and giardia in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Due to these results, the District does use UV light in water treatment which inhibits these organisms 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. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Results of radon monitoring

Radon is a radioactive gas that you can't see, taste, or smell. If 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 your state radon program or call EPA's Radon Hotline (800-SOS-RADON)

GET INVOLVED

The District has regularly scheduled Board of Trustee meetings. These meetings are typically held at the District headquarters in Layton, Utah. If you would like to attend, please call for information about the meeting schedule and location. The District is open each standard working day and welcomes public input. You may call us at (801)-771-1677, write to us at Weber Basin Water Conservancy District, 2837 East Highway 193, Layton, Utah, 84040, or visit our web site at:
http://www.weberbasin.com.

Contact Person

If you have any questions concerning the content of this report please contact Brad Nelson at 801-771-1677 or speak to one of our receptionists

Water Web Sites:

www.weberbasin.com
www.drinkingwater.utah.gov
www.epa.gov/safewater

The True Value of Tap Water

You can purchase more than 1,500 gallons of tap water for less than $2.00.

Many people are willing to pay $2.00 for a bottle of water, but complain when their culinary water rates rise a few cents per thousand gallons.

Those few cents are used to build new infrastructure, repair and replace old or damaged pipelines, and maintain water systems that were , in many cases installed 30-50 years ago.

Fifteen hundred gallons is enough water to fill the average bathtub approximately 20 times (for two dollars!).

In bottle water prices, it would cost $1,136 to fill your tub just one time.

REGULATED INORGANIC CONTAMINANTS

Weber Basin NORTH - This data is derived from samples collected from 2005 through 2009.

Contaminants (units)	Average	Range Low	Range High	MCL	MCLG	Typical Source
Arsenic (ppb)	0.6	0	1.2	10	NA	Erosion of natural deposits; runoff from orchards
Barium (ppm)	0.08	0.07	0.097	2	2	Erosion of natural deposits; discharge of drilling wastes
Fluoride (ppm)[3]	0.1	0.1	0.1	4	4	Erosion of natural deposits
Nitrate (ppm)	0.8	0.2	1.9	10	10	Runoff from fertilizer use; erosion of natural deposits
Selenium (ppb)	0.4	0	0.8	50	50	Erosion of natural deposits; discharge from mines
Sodium (ppm)	13.4	12.5	14.3	NA[1]	NA	Erosion of natural deposits
Sulfate (ppm)	11.5	11	12	1,000[2]	NA	Erosion of natural deposits
Total Dissolved Solids (ppm)	219	188	249	2,000[2]	NA	Erosion of natural deposits

Weber Basin CENTRAL - This data is derived from samples collected from 2005 through 2009.

Contaminants (units)	Average	Range Low	Range High	MCL	MCLG	Typical Source
Antimony (ppb)	0.6	0.6	0.6	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	0.3	ND	0.6	10	NA	Erosion of natural deposits; runoff from orchards
Barium (ppm)	0.08	0.08	0.1	2	2	Erosion of natural deposits; discharge of drilling wastes
Fluoride (ppm)[4]	0.8	0.5	1.2	4	4	Erosion of natural deposits
Nitrate (ppm)	0.5	0.1	1.4	10	10	Runoff from fertilizer use; erosion of natural deposits
Selenium (ppb)	0.6	0.6	0.6	50	50	Erosion of natural deposits; discharge from mines
Sodium (ppm)	38.6	38.6	38.6	NA[1]	NA	Erosion of natural deposits
Sulfate (ppm)	45.5	43	48	1,000[2]	NA	Erosion of natural deposits
Thallium (ppb)	0.9	0.8	1.0	2	0.5	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Total Dissolved Solids (ppm)	400	384	416	2,000[2]	NA	Erosion of natural deposits

Weber Basin SOUTH - This data is derived from samples collected from 2005 through 2009.

Contaminants (units)	Average	Range Low	Range High	MCL	MCLG	Typical Source
Arsenic (ppb)	0.5	0	1.1	10	NA	Erosion of natural deposits; runoff from orchards
Barium (ppm)	0.08	0.06	0.1	2	2	Erosion of natural deposits; discharge of drilling wastes
Fluoride[4] (ppm)	0.7	0.2	1.1	4	4	Erosion of natural deposits
Nitrate (ppm)	1.8	0.1	3.4	10	10	Runoff from fertilizer use; erosion of natural deposits
Selenium (ppb)	1.3	0.001	3.3	50	50	Erosion of natural deposits; discharge from mines
Sodium (ppm)	49.3	33.4	80.2	NA[1]	NA	Erosion of natural deposits
Sulfate (ppm)	34.3	30	39.0	1,000[2]	NA	Erosion of natural deposits
Thallium (ppb)	0.2	ND	0.7	2	0.5	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Total Dissolved Solids (ppm)	499	290	774	2,000[2]	NA	Erosion of natural deposits

1) The State of Utah requires monitoring for sodium even though no MCL has been established.

2) The MCL for sulfate and total dissolved solids is established by the State of Utah.

3) This value represents naturally occurring fluoride concentrations.

4) Fluoride levels in Davis County have been adjusted to an optimal level of 0.7 to 1.0 ppm.

***The District does not add fluoride to water delivered to Weber County.**

REGULATED ORGANIC CONTAMINANTS - Disinfection Byproducts

Weber Basin CENTRAL - This data is derived from samples collected in 2009.

Contaminants (units)	RAA[1]	Range[2] Low	Range[2] High	MCL	MCLG	Typical Source
Total Trihalomethanes (ppb)	13.6	3.6	57.7	80	NA	By-product of drinking water chlorination
Haloacetic Acids (ppb)	11.2	0	68.5	60	NA	By-product of drinking water chlorination

Weber Basin SOUTH - This data is derived from samples collected in 2009.

Contaminants (units)	RAA[1]	Range[2] Low	Range[2] High	MCL	MCLG	Typical Source
Total Trihalomethanes (ppb)	23.1	11.7	44.6	80	NA	By-product of drinking water chlorination
Haloacetic Acids (ppb)	22.0	10.4	42.8	60	NA	By-product of drinking water chlorination

1) This value represents the highest running annual average for 2009.

2) Values in the "Range" columns are actual concentrations measured in ppb and reflect the range of detected levels.

REGULATED RADIOLOGIC CHEMICALS

Weber Basin CENTRAL - This data is derived from samples collected from 2005 through 2009.

Contaminant (units)	Average	Range Low	Range High	MCL	MCLG	Typical Source
Gross Alpha Particles (pCi/L)	2.7	0.8	3.6	15	0	Erosion of natural deposits
Combined Radium (pCi/L)	0.7	0.6	1.0	5	0	Erosion of natural deposits

Weber Basin SOUTH - This data is derived from samples collected from 2005 through 2009.

Contaminant (units)	Average	Range Low	Range High	MCL	MCLG	Typical Source
Gross Alpha Particles (pCi/L)	5.8	3.2	8.3	15	0	Erosion of natural deposits
Combined Radium (pCi/L)	1.0	0.2	2.4	5	0	Erosion of natural deposits

REGULATED MICROBIOLOGICAL CONTAMINANTS

Weber Basin CENTRAL

Contaminant	Percentage	Average	High[3]	MCL	MCLG	Typical Source
Turbidity (Weber South WTP)	99%[2]	0.07 NTU	0.24 NTU	0.3 NTU		
Turbidity (Davis North WTP)	100%[2]	0.04 NTU	0.22 NTU	0.3 NTU		

Weber Basin SOUTH

Contaminant	Percentage	Average	High[3]	MCL
Turbidity (Davis South WTP)	100%[2]	0.07 NTU	0.12 NTU	0.3 NTU

1) This value represents the highest percentage of positive samples collected within the distribution system in any one month during 2008.

2) This value represents the lowest monthly percentage of combined filter readings meeting less than 0.3 NTU in at least 95% of the measurements taken each month during 2009.

3) This value represents the highest single measurement of combined filter readings taken every four hours during 2009.

WATER CONSERVATION

With ever increasing growth and the nature of the regional climate, there is no question that we will encounter future drought years. Future drought cycles will have an even greater effect than pervious drought because of the increased population and higher demands on water systems. Conservation and improved water efficiency needs to become a way of life for all of us by incorporating better water use practices and valuing this precious resource more than ever.

Weber Basin Water Conservancy District has a goal of reducing per capita water use 25% by the year 2050. Our thanks to those who have made and are making new efforts to improve efficiency and conserve our water resources.   It is still necessary to continue in our efforts to conserve water by educating ourselves on proper irrigation practices and changing attitudes and behaviors to reduce water waste.

Conservation alone will not meet future water needs and the District will continue to develop water supplies, build new infrastructure and maintain the current infrastructure. However, future water projects are costly and limited so we all need to be more efficient with our current water supply which will help delay these costly future projects while maintaining your current lifestyle. If we each save a little, we all save a lot!

Conservation Programs and Resources

Weber Basin Water Conservancy District offers services and resources for the general public to help improve water efficiency especially with regards to landscape water use. Programs available include:

- **The Water Conservation Learning Garden**
- **Free Water Checks**
- **Free Landscape Classes**
- **Brochures and Educational Information**
- **Participant in Slow the Flow and Statewide Governor's Conservation Team**
- **Slow the Flow**

Visit our website **www.weberbasin.com** for more information on any of these programs.

Visit the Water Conservation Learning Garden for a great place to see how easy and beautiful a water-wise landscape can be. The garden is open daily from 8:00 am to 8:00 pm from May through October and open 8:00 am to 5:00 pm through the winter months.   The garden is easy to find, located at 2837 E. Highway 193 in Layton. For more information please visit our website or call 801-771-1677.

Conservation Web Sites:

www.weberbasin.com
www.slowtheflow.org
www.conservewater.utah.gov
www.ConservationGardenPark.org