



EPA
WaterSense
2015 PARTNER
OF THE YEAR



2015 Annual Drinking Water Quality Report



MURRAY
CITY WATER



MURRAY

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2015 Annual Drinking Water Quality Report

Dear Water Customer:

Murray City is pleased to distribute its annual Water Quality Report for calendar year 2015. The report contains information about Murray City's water quality, along with other information to help protect this important resource. We invite you to take a few minutes to read through this report and find something that would be of interest and use to you. Our hope is that every time you hear water running you will be reminded of its value. Our goal is to inspire you to find ways to conserve and protect the City's drinking water. Murray City is fortunate to have an abundant supply of clean, high quality drinking water and many successful endeavors materialized this past year.

Listed below are a few of our accomplishments:

- Recognized by the Environmental Protection Agency (EPA) as '2015 WaterSense Partner of the Year' for our water conservation efforts. I appreciate the extra efforts of our staff to be successful. This is a notable, national honor for our progressive City.
- Popular response to the City's 'Fixture Rebate Program' resulting in the replacement of 49 toilets and 10 showerheads.
- Collaboration with the Utah Rivers Council to sell and distribute rain barrels.
- Partnership with the National Energy Foundation and the Murray School District to teach water conservation principles. This included an art contest featuring talented young artists.
- Relationship with Lowe's Home Improvement to promote 'WaterSense Fix-a-Leak Week'. The Murray City Water Division staffed a booth in the front of the store to answer questions and inform Murray City residents about the "Fixture Rebate Program". Lowe's offered markdowns, as well as help, to those do-it-yourselfers. Furthermore, several Murray plumbing businesses offered discounts for services.
- Provided community outreach and education booths at the annual Earth Day activity and Murray Fun Days celebration.

As you review the report we are confident you will find worthwhile information. Please note the 'Fix-a-leak Week' art contest winners. I hope you will appreciate their talent and great work as much as I did. If you happen to know these young people, please take time to thank and congratulate them.

Sincerely,

Ted Eyre
Murray City Mayor



MURRAY

Murray City Water Department



Frequently Asked Questions

Water Department Employees	15
Murray water service area population	36,000
Total gallons used in 2015	2,942,708,000
Total acre feet used in 2015	9,030
Number of water sources	27 Total
Deep Wells	19
Springs	8
Average hardness of water supply	200 mg/L
	12 grains/gallon
Water service connections	10,295
Total miles of waterlines	198 miles
Total fire hydrants	1,864
City owned	1,313
Private owned	551
Water storage capacity (gallons)	12,000,000



Rahim A.
1st Place Overall

Important Phone Numbers

Emergency / After Hours:
801.264.9669

**Public Services, Water,
Wastewater, Streets,
Engineering
General Office:**
801.270.2440



Water-Saving Technologies

In addition to following simple steps to watering wisely, using water-efficient technologies can make a big difference in keeping your home irrigation system running efficiently without a lot of effort on your part.

WaterSense Labeled Irrigation Controllers

WaterSense labels weather-based irrigation controllers, a type of “smart” irrigation control technology that uses local weather data to determine when and how much to water. WaterSense labeled irrigation controllers can save you water, time, and money when compared to standard models.

Soil Moisture Sensors

Soil moisture–based control technologies water plants based on their needs by measuring the amount of moisture in the soil and tailoring the irrigation schedule accordingly. WaterSense has issued a Notice of Intent to label soil moisture–based control technologies.

Rainfall Shutoff Devices

Rainfall shutoff devices turn off your system in rainy weather and help compensate for natural rainfall. This inexpensive device can be retrofitted to almost any system.

Rain Sensors

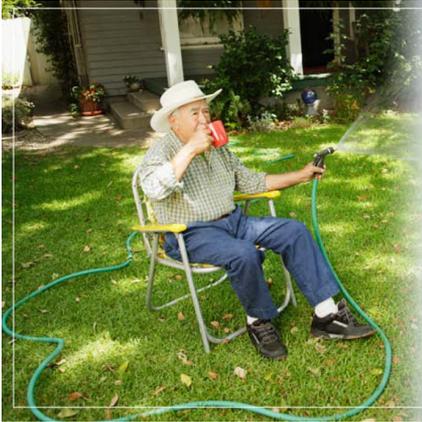
Rain sensors can help decrease water wasted in the landscape by turning off the irrigation system when it is raining.

Sprinkler Heads

Certain types of sprinkler heads apply water more efficiently than others. Rotary spray heads deliver water in a thicker stream than mist spray heads, ensuring more water reaches plants and less is lost to evaporation and wind. WaterSense has issued a Notice of Intent to label landscape irrigation sprinklers.

To find out what options are best for updating your irrigation system, consult an irrigation professional certified by a WaterSense labeled program.

Article from WaterSense® An EPA Partnership Program
<http://www3.epa.gov/watersense/outdoor/tech.html>



The most boring way to harm the environment.



2015 Fix A Leak Week Drawing Contest Winners

As part of 2015 Fix a Leak Week we held a drawing contest for 4th grade students. We are pleased to present the three overall winners as well as the seven winners from the individual schools. Thanks to all those who participated.

2015 Fix A Leak Week Drawing Contest Winners



Rahim A.
1st Place Overall



Jakob M.
2nd Place Overall



Dakota L.
3rd Place Overall



Ellie N.
Longview Elementary



Anna M.
Horizon Elementary



Olivia S.
Viewmont Elementary



Matia P.
McMillan Elementary



Jaydin N.
Liberty Elementary



Rhyann H.
Grant Elementary



Mary B.
Viewmont Elementary



Water Testing

Murray Water Department takes more than 100 samples each month to make sure your drinking water is safe. We monitor to make sure levels of chlorine and disinfectant bi-products are at safe levels and to check for other dangerous bacteria and viruses. We also monitor many natural contaminants including lead and copper.

How to Win WaterSense Products

Murray City Water would like to see what you know about the EPA's WaterSense program. By helping us, you could win some great WaterSense labeled products. The survey is only 5 questions and takes a couple of minutes to complete. Upon completion you will automatically be entered into the contest. Go to the following web address to enter.

<https://www.surveymonkey.com/s/R8MPZ3N>

Murray City Landscaping

Murray City has re-landscaped many of our sites to provide an example of a water-wise landscape. The use of more water wise landscaping at these sites and the installation of rain shut off switches has helped Murray City conserve water at our own properties.

Spruce Up Your Sprinkler System

look for WATERSENSE
EPA

Inspect sprinkler heads.
A broken one can waste **25,000** gallons of water in six months!

Connect hoses and pipes well.
A leak as small as the tip of a pen can waste **6,300** gallons of water per month!

Select a WaterSense® labeled irrigation controller and water smarter.

Direct spray on landscapes, not pavement!



Backflow Terms

Cross-Connection

A cross-connection is an unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome and potable. By-pass arrangements, jumper connections, removable sections, swivel or changeover devices or other devices through which backflow could occur, shall be considered to be cross-connections.

Back Siphonage

Back-siphonage is caused by mainline piping failures or drafting due to high demands. For example, it is a condition that can occur when the drinking water system's pressure drops below that of the fire protection system, drawing the fire protection system water back into the drinking water system.

WaterSense® Rebate Program

Murray City Water Department is offering rebates valued at \$75 per toilet/\$25 per shower head to qualified water users for replacing their existing toilet/showerhead with a new EPA WaterSense® labeled version.



Conserve Water, Save Money & Get A Rebate!



Application and details available at: <http://www.murray.utah.gov/index.aspx?NID=234>



We are pleased to present Murray City's 2015 Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. We are committed to continually making improvements to our water system to ensure that the quality of your water is safe, dependable and properly protected.

Murray City obtains its water from springs near Big Cottonwood Canyon along with underground water wells.

Murray City routinely monitors for contaminants in our drinking water in accordance with the Federal and State Drinking Water Rules. The following table shows the results of our monitoring for the calendar year of 2015, beginning January 1, 2015 through December 31, 2015.

Mayor
Ted Eyre
Council Members
Dave Nicponski
D. Blair Camp
Jim Brass
Diane Turner
Brett A. Hales

City council meetings are held the first and third Tuesday of each month





All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk.

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Environmental Protection Agency's Safe Drinking Water Hotline 801.426.4791.

Key to Table

MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MFL	Million fiber per liter (measures asbestos)
NTU	Nephelometric Turbidity Units (cloudiness)
Cfu	Colony forming units (bacterial cell colonies)
pci/L	Picocuries per liter (radioactive units)
ppm	Parts per million (mg/l, 1 penny in \$10,000)
ppb	Parts per billion (ug/l, 1 penny in \$10 million)
ppt	Parts per trillion (1 penny in \$10 billion)
ppq	Parts per quadrillion (1 penny in \$10 trillion)
TT	Treatment technique, method
UR	Unregulated, no EPA standard set
ND	Non-detected (less than the method can see)
SW	State waiver (never used or detected)
NR	Non reportable
NE	Not established



This chart lists the most recent test results for Murray City facilities and indicates the most likely source of contamination. The data is a range for all wells and springs with the lowest and highest levels.

Maximum Contamination Level (MCL) is the highest level of contaminant that is allowed in drinking water. Using the best available technology, MCL's are set as close to the goal as feasible. Maximum Contaminant Levels Goal (MCLG) is the level of a contaminant in drinking water below which there is no known or expected health risk. MCLG's allow for a margin of safety. In addition to the parameters listed in this report, Murray City monitors for many unregulated contaminants. The results are available at the Public Services office.

Substance	Units	MCL	MCLG	Murray City ND/Low-High	Most Likely Source of Contamination
PRIMARY INORGANICS-Monitoring required at least every 3 years for groundwater sources					
Ammonia	mg/L	NE	NE	ND to .2	Erosions of natural deposits
Arsenic	mg/L	.010	0	ND to .0029	Erosions of natural deposits
Barium	mg/L	2	2	.061 to .241	Erosions of natural deposits
Copper	mg/L	1.3	1.3	ND to .12	Erosions of natural deposits
Cyanide	mg/L	.2	.2	ND to .001	Erosions of natural deposits
Fluoride	mg/L	4	4	.15 to .34	Erosions of natural deposits
Iron	mg/L	.3	.3	ND to .09	Erosions of natural deposits
Lead	mg/L	.015	0	ND to .011	Erosions of natural deposits
Nitrate (as N)	mg/L	10	10	ND to 4.2	Excess Fertilization
Selenium	mg/L	.05	.05	.0006 to .0032	Erosions of natural deposits
Sodium	mg/L	NE	NE	11.7 to 106	Erosions of natural deposits
Sulfate	mg/L	500	500	31 to 96.6	Erosions of natural deposits
TDS	mg/L	2000	NE	180 to 812	Erosions of natural deposits
Turbidity	NTU	5	.03	.02 to 1.6	Suspended material from soil runoff
Zinc	mg/L	5	5	ND to .013	Erosions of natural deposits



Substance	Units	MCL	MCLG	Murray City ND/Low-High	Most Likely Source of Contamination
SECONDARY INORGANICS-aesthetic standards					
Chloride	mg/L	250	NE	10 to 210	Erosions of natural deposits
Color	CU	15	NE	0 to 1	Decaying, naturally-occurring organic material and suspended particles
pH		6.5 to 8.5	NE	7 to 7.98	Naturally occurring
MICROBIOLOGICAL					
Total Coliform	% positive each month	5%	0.00%	0.00%	Human and animal fecal waste, naturally-occurring in the environment. MCL is for monthly compliance. All repeat samples were negative; no violations were issued
RADIOLOGICAL					
Radium 226	pCi/L	NE	NE	0 to .7	Decay of natural and man made deposits
Radium 228	pCi/L	NE	NE	-0.18 to 2.8	Decay of natural and man made deposits
Gross-Alpha	pCi/L	15.0	15.0	0 to 12.2	Decay of natural and man made deposits
UNREGULATED PARAMETERS- monitoring not required					
Calcium	mg/L	UR	NE	19.4 to 113	Erosion of naturally occurring deposits
Hardness, total	mg/L	UR	NE	81 to 463	Erosion of naturally occurring deposits
Hardness, grains	Grains per Gallon	UR	NE	4.73 to 27.05	Naturally occurring
Magnesium	mg/L	UR	NE	7.8 to 43.8	Erosion of naturally occurring deposits
Potassium	mg/L	UR	NE	1.3 to 8.4	Erosion of naturally occurring deposits
Silica	mg/L	UR	NE	5.7 to 17.9	Erosion of naturally occurring deposits
DISTRIBUTION SYSTEM CONTAMINANTS					
Chlorine Residual	mg/L	4	NE	ND to .11	Drinking water disinfectant
TTHM	ppb	80	0	0 to 1.7	By-product of drinking water disinfection
Fluoride	ppm	4	4	.5 to .9	Water additive that promotes strong teeth
LEAD & COPPER (tested at consumer's residence) tested every 3 years					
Copper	mg/L	1.3	1.3	.0081 to .427	Corrosion of household plumbing systems
Lead	mg/L	.015	.015	ND to .0048	Corrosion of household plumbing systems
Calculated Compliance Numbers from 2013			Copper = 0.234 Lead = 0.0019		
VOCs					
Chloroform	ug/L	UR	NE	ND to 3.1	By-product of drinking water disinfection
PESTICIDES					
None Detected					



MURRAY
CITY WATER

Murray City Corporation
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Murray, Utah
84107



EPA
WaterSense

**Tap into
Murray
Quality**
MURRAY CITY WATER



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