

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water is safe at these levels.

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. GWSSA 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/safewater/lead>.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or man-made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 from their health care providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We at GWSSA work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.



## Grand Water & Sewer Service Agency



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# Annual Report 2017

## President's Message

Grand Water & Sewer Service Agency is pleased to present its Annual Report for the year 2017. It is hoped that this synopsis of the Agency's activities in 2017 will give all those interested a better understanding of the functions the Agency performs and the issues it faces.

The Board and Staff of the Agency appreciate the opportunity to serve the citizens of Spanish Valley.

*Dan Pyatt*  
President

## Board Members

### GWSSA

Dan Pyatt, President  
Gary Wilson, V. President  
Brian Backus, Operating Comm.  
Mike Holyoak, Operating Comm.  
Rex Tanner, Operating Comm.  
Rick Thompson, Operating Comm.  
Dale Weiss, Operating Comm.

Kyle Bailey  
Ken Helfenbein  
Lynn Jackson  
Jerry McNeely  
Preston Paxman

### SVWSID

Gary Wilson, Chairman  
Mike Holyoak, Vice Chair  
Dale Weiss, Treasurer  
Rick Thompson, Clerk  
Ken Helfenbein

### GCWCD

Dan Pyatt, Chairman  
Jerry McNeely, Vice Chair  
Brian Backus  
Preston Paxman  
Rex Tanner

### GCSSWD

Gary Wilson, Chairman  
Mike Holyoak, Vice Chair  
Kyle Bailey  
Lynn Jackson  
Rick Thompson

RESULTS			
LG	MCL	Sample Date	Likely Source of Contamination
<b>Contaminants</b>			
1	5	2016	Soil runoff
<b>Contaminants</b>			
0	15	2012	Erosion of natural deposits
0	5	2012	Erosion of natural deposits
<b>Contaminants</b>			
0	10	2016	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
2000	2000	2016	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
100	100	2016	Discharge from steel and pulp mills; erosion of natural deposits
1300	1300	2017	Corrosion of household plumbing systems; erosion of natural deposits
4000	4000	2016	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
0	15	2017	Corrosion of household plumbing systems, erosion of natural deposits
10000	10000	2017	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
50	50	2016	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
None set by EPA	None set by EPA	2016	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills.
1000	1000	2016	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland
2000	2000	2016	Erosion of natural deposits
4000	4000	2017	Water additive used to control microbes

TEST RESULTS				
Contaminant	Violation Y/N	Level Detected ND/Low-High	Unit Measurement	MC
<b>Microbiological</b>				
Turbidity – ground water	N	< 1	NTU	N/A
<b>Radioactive C</b>				
Alpha emitters	N	ND	pCi/1	
Radium 228	N	ND	pCi/1	
<b>Inorganic C</b>				
Arsenic	N	<1	ppb	
Barium	N	29-50	ppb	
Chromium	N	ND-4	ppb	
Copper	N	12-63	ppb	
Fluoride	N	186-200	ppb	
Lead	N	ND-6	ppb	
Nitrate (as Nitrogen)	N	300-500	ppb	
Selenium	N	1-< 2	ppb	
Sodium	N	9-18	ppm	Non
Sulfate	N	46-74	ppm	
TDS (Total Dissolved solids)	N	120-268	ppm	
Chlorine	N	61	ppb	

## Project and Program Report

### Equipment Program

A total of 251 hours of equipment time was used in 2017. Average vehicle mileage was 9,372. In February of 2017 GWSSA purchased a used Hydro-Excavator truck for \$142,500. The truck can clean sewers, excavate around meter pits and exercise valves.

### SEMS Asset Management Program

GWSSA continues to input preventative/unscheduled maintenance work orders. A total of 607 Work Orders were completed in 2017. Water accounted for 59%, Irrigation 10%, and Sewer 31% of the total. Customer generated Service Orders are detailed below.

### Water Project

The Water Project was approved by the USRDA for funding in October of 2017. The \$5,280,000 project will be funded with \$500,000 in self participation, grant of \$2,080,000, and loan of \$2,700,000. It includes a 500,000-gallon water tank and upsized water lines to provide fire flows and adequate pressures to the service area. The project should go out to bid in the spring of 2018.

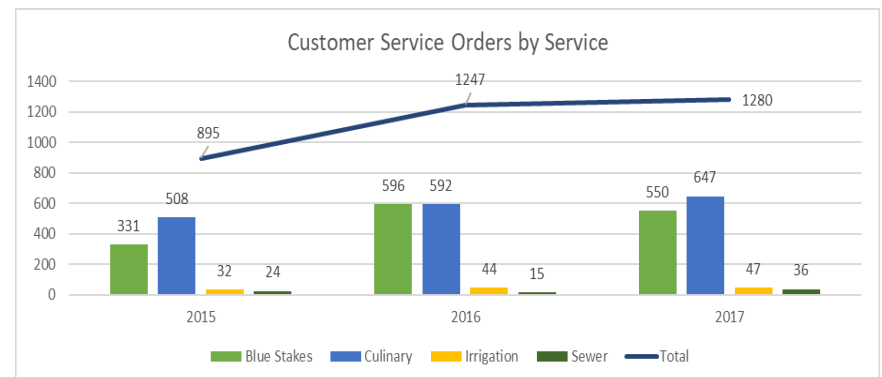
### Construction Standards

The Utah Division of Drinking Water approved GWSSA construction standards for GWSSA as prepared by Sunrise Engineering. The result is that expansions of GWSSA systems may be approved by Sunrise.

### Agency Manager

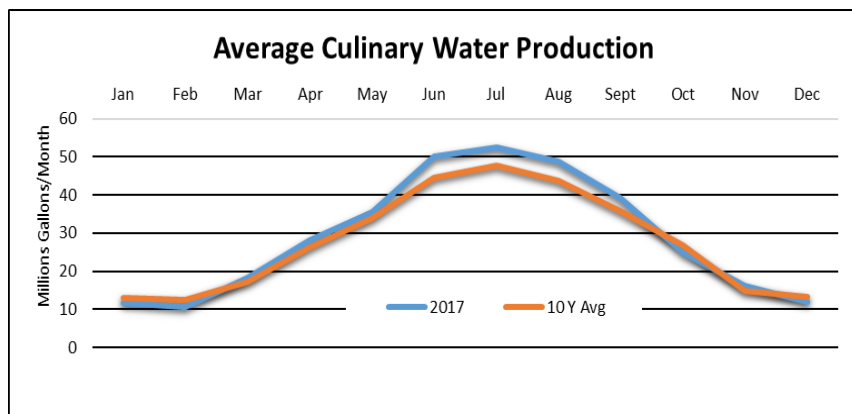
Art Wollenweber resigned in May of 2017 and was replaced by longtime employee Dana Van Horn as Agency Manager.

### Customer Generated Service Orders



## Culinary Water System 2017 Culinary Water Production

	Production 2016	Production 2017
January	9,959,000	11,768,000
February	10,797,000	10,594,000
March	16,989,000	18,295,000
April	24,806,000	28,178,000
May	31,427,000	35,677,000
June	47,966,000	50,079,000
July	48,836,000	52,457,000
August	42,451,000	48,924,000
September	37,083,000	39,287,000
October	32,687,000	24,987,000
November	15,633,000	16,106,000
December	10,338,000	11,996,000
<b>TOTALS</b>	<b>328,972,000</b>	<b>348,348,000</b>
<b>Monthly Average</b>	<b>27,414,333</b>	<b>29,029,000</b>



### Culinary Water Power Cost

Water Produced 328,972,000 gal. or 1009.58 AF  
 Power Costs \$0.18 per 1000 gal. or \$58.37 per AF  
 Historical Power costs per 1,000 gallons:

<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
\$0.23	\$0.24	\$0.20	\$0.18

GWSSA routinely monitors for constituents in our drinking water in accordance with the Federal and Utah State laws. The following table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2017. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

**ND/Low - High** - For water systems that have multiple sources of water, the Utah Division of Drinking Water has given water systems the option of listing the test results of the constituents in one table, instead of multiple tables. To accomplish this, the lowest and highest values detected in the multiple sources are recorded in the same space in the report table.

**Parts per million (ppm) or Milligrams per liter (mg/l)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb) or Micrograms per liter (ug/l)** - 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.

**Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**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.

**Date**- Because of required sampling time frames i.e. yearly, 3 years, 4 years and 6 years, sampling dates may seem outdated.

## 2017 Annual Drinking Water Quality Report

### Grand Water & Sewer Service Agency

We're pleased to present to you this year's 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. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water sources are from groundwater. Our water sources are George White Well #4, George White Well #5, Chapman Well and the Spanish Valley Well. The wells draw water from the Glen Canyon Aquifer.

The Drinking Water Source Protection Plan for Grand Water & Sewer Service Agency (GWSSA) is available for your review. It contains information about source protection zones, potential contamination sources and management strategies to protect our drinking water. Our sources have been determined to have a low level of susceptibility from potential contamination from sources such as septic tanks, roads, residential or industrial development. We have also developed management strategies to further protect our sources from contamination. Please contact us if you have questions or concerns about our source protection plan.

There are many connections to our water distribution system. When connections are properly installed and maintained, the concerns are very minimal. However, unapproved and improper piping changes or connections can adversely affect not only the availability, but also the quality of the water. A cross connection may let polluted water or even chemicals mingle into the water supply system when not properly protected. This not only compromises the water quality but can also affect your health. So, what can you do? Do not make or allow improper connections at your homes. Even that unprotected garden hose lying in the puddle next to the driveway is a cross connection. The unprotected lawn sprinkler system after you have fertilized or sprayed is also a cross connection. When the cross connection is allowed to exist at your home, it will affect you and your family first. If you'd like to learn more about helping to protect the quality of our water, call us for further information about ways you can help.

This report shows our water quality and what it means to you our customer. If you have any questions about this report or concerning your water utility, please contact Dana Van Horn at 435-259-8121. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first and third Thursday of each month at 7:00 p.m. at the GWSSA office. Copies of this report are available at the GWSSA office or at [www.grandwater.org](http://www.grandwater.org). Copies were mailed to all GWSSA customers.

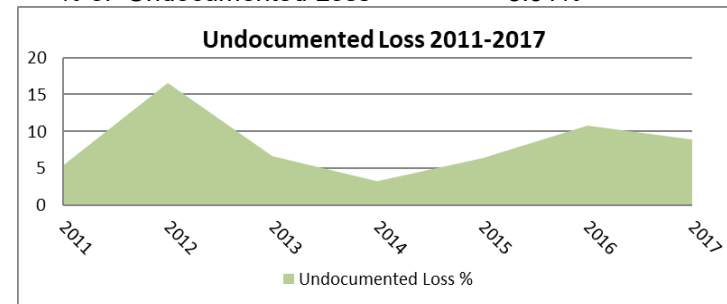
## Culinary Water System (Cont'd)

### 2017 Culinary Water Metered Use

Month	Gallons 2016	Gallons 2017
January	9,081,000	9,403,000
February	8,125,000	9,119,000
March	11,505,000	10,813,000
April	19,346,000	23,665,000
May	24,523,000	32,087,000
June	40,545,000	40,612,000
July	43,360,000	49,800,000
August	41,915,000	44,903,000
September	38,182,000	40,105,000
October	26,427,000	25,398,000
November	17,392,000	16,546,000
December	9,008,000	10,530,000
<b>Total</b>	<b>289,409,000</b>	<b>312,981,000</b>
<b>Monthly Average</b>	<b>24,117,417</b>	<b>26,081,750</b>

*Lost water due to leakage, fire flows, un-metered use and meter malfunction.*

2017 Metered Use	312,981,000 gallons
Water in Storage	4,000,000 gallons
2017 Production	348,348,000 gallons
2017 Lost water	31,367,000 gallons
Documented Loss	343,393 gallons
Undocumented Loss	31,023,607 gallons
% of Undocumented Loss	8.91%



### Compliance with Safe Drinking Water Act

2016 saw no violations of the Safe Drinking Water Act.

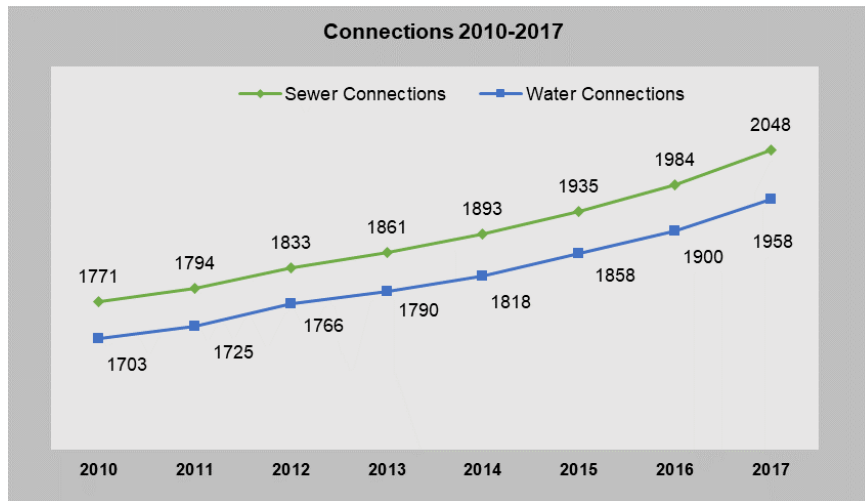
### Consumer Confidence Report

The 2015 Consumer Confidence Report is included in *Appendix A*.



## Culinary Water System (cont'd) System Growth

	Water	Sewer
New Residential Connections	56	62
New Commercial Connections	1	1
New MDU Connections	1	1
Total Residential Connections	1821	1901
Total Commercial Connections	121	130
Total MDU Connections	16	17
<b>Total 2017 Connections</b>	<b>1958</b>	<b>2048</b>
<b>2017 System Percent Growth</b>	<b>3.05%</b>	<b>3.23%</b>



# Appendix A



## Ken's Lake Irrigation System

### Estimate of 2017 Ken's Lake Seepage

Amount in storage at end of 2016	1742 AF
Amount diverted to Ken's Lake	4366 AF
Amount delivered to Irrigation pipeline	2624 AF
Evaporation Estimate	258 AF
Amount in storage at end of 2017	1235 AF
Estimated seepage	1991 AF

\*Note – In April of 2018 GWSSA and the Division of Water Rights installed a new meter at the Sheley Tunnel Diversion.

## Review of Water Management and Conservation Plan (Cont'd)

### Goal #3 – Consumer education

Educational flyers are available at the Agency office. These flyers, suggesting practices for indoor and outdoor water conservation, are offered to all new customers at time of application for water service. More educational materials and message delivery options are in development.

The Agency's website – [www.grandwater.org](http://www.grandwater.org) is an excellent source of conservation information and provides links to water professionals statewide. The conservation education information is updated seasonally. The Agency directs customers to the website via messages on the monthly billings.

### Goal #4 – Reduce system losses

The water audit is found in the *Culinary Water System* portion of this report. The audit indicates undocumented lost water on the system of 8.91%.

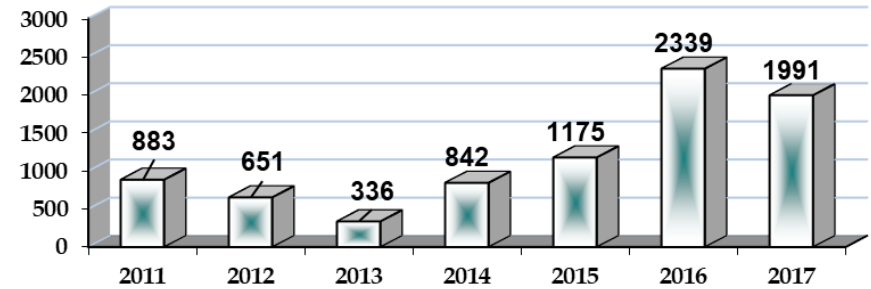
### Goal #5 – Collect data on non-resident population water use

Isolating the amount of water used by our residents (counted in the census) will provide information and insight to aid in targeting educational efforts and future considerations. In 2016 GWSSA separated overnight rental properties from residential users in our billing database. The overnight rental properties will be charged commercial water rates beginning in February 2017. The separation will allow all water use to be better understood by the Agency.

### Outdoor watering restrictions

Watering during the heat of the day between 10:00 a.m. and 6:00 p.m. is recognized as inefficient use of outside water. The Agency policy restricts outside watering during those times. Water users shall be informed periodically by use of mailings, billing messages, brochures, and/or news media.

Estimated Seepage in AF 2011-2017



Note\* -In April of 2018 GWSSA and the Division of Water Rights installed a new meter at Sheley Tunnel.

### Ken's Lake Water Diverted

#### 2017 Water Diverted Through Sheley Tunnel

Month	15 Year Average	Diverted 2017	% of Average
	AF		
January	204	222	109%
February	144	202	140%
March	191	340	178%
April	400	582	146%
May	989	925	94%
June	823	836	102%
July	371	354	95%
August	227	241	106%
September	201	167	83%
October	230	132	57%
November	193	183	95%
December	170	182	107%
<b>Total</b>	<b>4143</b>	<b>4366</b>	<b>105%</b>

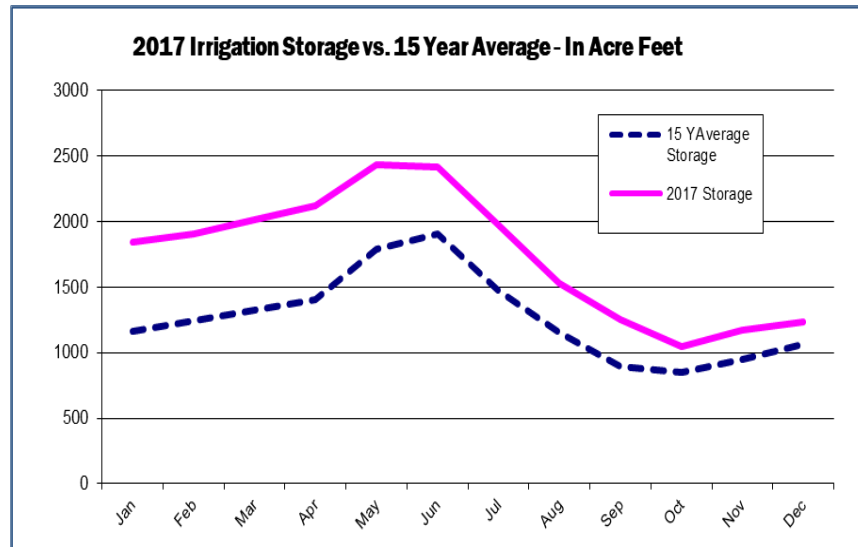
## Ken's Lake Irrigation System (Cont'd)

### Ken's Lake Storage

#### Ken's Lake Storage Vs. 15 year Average

Month	Average	2017 Storage	% of Average	% of Capacity
	AF	AF		
January	1162	1841	158%	71%
February	1241	1908	154%	73%
March	1320	2012	152%	77%
April	1403	2124	151%	81%
May	1787	2435	136%	93%
June	1908	2412	126%	92%
July	1476	1975	134%	76%
August	1151	1525	132%	58%
September	892	1248	140%	48%
October	846	1050	124%	40%
November	946	1172	124%	45%
December	1065	1235	116%	47%

Total Capacity is 2610 AF



## Review of Water Management and Conservation Plan

An updated Conservation Plan was submitted in 2014. The following five-year goals were identified:

Goal #1 – Reduce Spanish Valley's per capita use by ten percent (10%).

Goal #2 – Maintain a financially viable water system.

Goal #3 – Implement and maintain a more aggressive consumer education program.

Goal #4 – Reduce culinary water system losses.

Goal #5 – Collect data on non-resident population water use

### Goal #1 Use per Capita – Population estimate: 3750 2013-2015, 3900 2016-2017

Year	Water Produced	Per Capita Daily Use
State Average		240 gpcd
2013	325,841,000 gal.	238 gpcd
GWSSA GOAL #1		214 gpcd - 10% reduction
2015	296,550,000 gal.	217 gpcd
2016	328,972,000 gal.	231 gpcd
2017	348,348,000 gal.	242 gpcd

Water difference 238 gpcd compared to 242 gpcd  
-5,767,000 gallons or -17.69 AF

### Goal #2 – Maintain a financially viable water system

Water rates are reviewed annually to ensure financial viability. Residential water rates are designed to encourage conservation in an ascending block system and remained unchanged in 2017.

#### Residential Water Rate

\$19.50 base rate – includes no usage

0-8,000 gallons = \$0.60/1 kgal

8,001-15,000 gallons = \$1.40/1 kgal

15,001 and up = \$2.00/1 kgal