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TO: Town of Sheridan  
FROM: Peter Haun, P.E., WWC Engineering  
DATE: 3/7/2022  
SUBJECT: Town of Sheridan Water System Capacity Assessment - Technical Memorandum

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## Introduction

The Town of Sheridan is located in Madison County in the Ruby Valley, approximately 56 miles southeast of Butte on Highway 287. Figure 1 depicts an area map showing the vicinity of the Town. The Town owns and operates a water supply system that provides domestic water and fire protection for the community. The system consists of three operating groundwater wells (Six groundwater wells in total), an on-grade 300,000-gallon steel storage tank, a transmission main, distribution mains, service lines, and water meters.

The Town of Sheridan revised its Capital Improvements Plan (CIP) in May 2021. One of the top priorities identified for the water system was to evaluate the capacity of the existing system and quantify additional capacity for future growth. The Town of Sheridan's water supply system is functional for the current population, and improvements made to the system in 2020 provided significant improvements to the water supply in terms of resiliency and peak demand. However, some of the wells at the Ballfield Park (Well #2, #3, and #4) currently have limited or no production capacity. These wells have associated water rights assigned to them, which could be utilized in the future. The water supply for fire and residential use, particularly during the irrigation season, is quantified in this Technical Memorandum. Results of this capacity analysis shows the Town of Sheridan currently does not have capacity for future growth according to the Montana Department of Environmental Quality's (MDEQ) design standards. However, improvements are planned for the system to substantially increase capacity and mitigate long-term growth water needs. The Town's water capacity is quantified in tables and the results are supported in this document.

Great West Engineering also conducted a water capacity analysis in a Preliminary Engineering Report for a water system improvements project in 2016, prior to improvements made in 2020. However, water system demands were calculated based on historical data of water sold rather than water pumped, due to a meter failure in the manifold building. WWC prepared this updated capacity analysis using water pumped based on metered water production to assess whether the system has capacity for existing and future demands. This technical memorandum serves to outline the data, methods, and assumptions used to derive existing water demands for the Town of Sheridan and evaluate whether the existing system has capacity to meet demands and quantify the surplus capacity available for future growth. Additionally, this assessment evaluates whether the Town's system meets Montana Department of Environmental Quality (MDEQ) requirements for water storage and supply to properly fight fires and evaluate system improvement alternatives to improve the water supply.

## System Overview

The Town of Sheridan's water supply system consists of six groundwater wells (three are currently in operation), a 300,000-gallon storage tank, a 14-inch PVC transmission main, distribution mains, service lines, water meters, and a manifold building that connects the incoming supply of water from the wells to the rest of the distribution system. The distribution system consists of 4-inch, 6-inch, 8-inch, and 10-inch mains with associated fittings, valves, and fire hydrants. The three operating water supply wells include wells #1, #5, and #6.

Wells #5 and #6 are installed in the deep Tertiary aquifer, are the primary supply wells, and are reliable sources of water throughout the year. Well #1 is located between the manifold building and the tennis/pickleball court, on the west side of the Town. Well #1 is developed in the shallow aquifer. Each well connects to the manifold building in the ballfield area for distribution. The remaining three wells, Well #2, #3, and #4, are located in the ballfield area and currently have limited or no production capacity. These wells may be replaced with redundant wells or refurbished to address future capacity needs.

The transmission lines from each well connect to the manifold building before supplying flow to the rest of the distribution system. The manifold building provides testing, monitoring, and control of the incoming flow from the wells. The manifold building feeds water directly to the distribution system that supplies water to the town which is also connected to the storage tank that is located above and northeast of the Town. As a result of this configuration, the wells provide water to the users connected to the distribution system before reaching the storage tank. Water is used while passing through the Town and excess water is stored and made available to residents during peak use via gravity flow when the pumps are off, and the tank level is at capacity.

The Town's storage consists of a 300,000-gallon steel tank located a mile northeast of Town at the intersection of Kearney Lane and Privratsky Lane. A 70,000-gallon concrete tank located near the current storage tank is no longer in use and was recently demolished. An old surface water supply located on Indian Creek is also no longer in use, but the Town is currently working to retain the rights to Indian Creek water. A telemetry system enables control of the 300,000-gallon reservoir level and well pumping cycles. Water exiting the tank feeds the distribution system via gravity. As the tank supplies water and the water level in the tank drops, the well pumps are turned on to refill the tank.

The oldest portions of the system were constructed in 1915, most of which have been replaced with more modern materials. Figure 2 shows the arrangement of the wells, manifold building transmission and distribution mains, fire hydrants, and the storage tank. The following upgrades, replacements, and additions have been made to the system over the years:

- 1940's: Water main upgrades.
- 1970's: Addition of the water storage tank.
- 1980's: Addition of water supply wells, transmission main, and water mains.
- 2001: Replacement of a water well, currently well #5, and the replacement of a wooden transmission main.

- 2008: Water distribution system improvements, including replacing leaking and undersized water mains.
- 2020: Construction of Well #6, installation of a transmission main between Well #6 and the manifold building, and replacement of distribution mains.

Approximately 300 acres of development can be constructed within Town limits with about 20 acres potentially slated for development within the next few years. Improvements made to the system in 2020 through 2022 greatly increased the capacity and reliability of the water system, but further improvements are needed to support future growth. As outlined in the CIP, additional improvements and analyses, such as this Technical Memorandum, are recommended to quantify capacity, address growth, and ensure a reliable water supply for residents over the next decade.

**Figure 1. Town of Sheridan Vicinity Map**

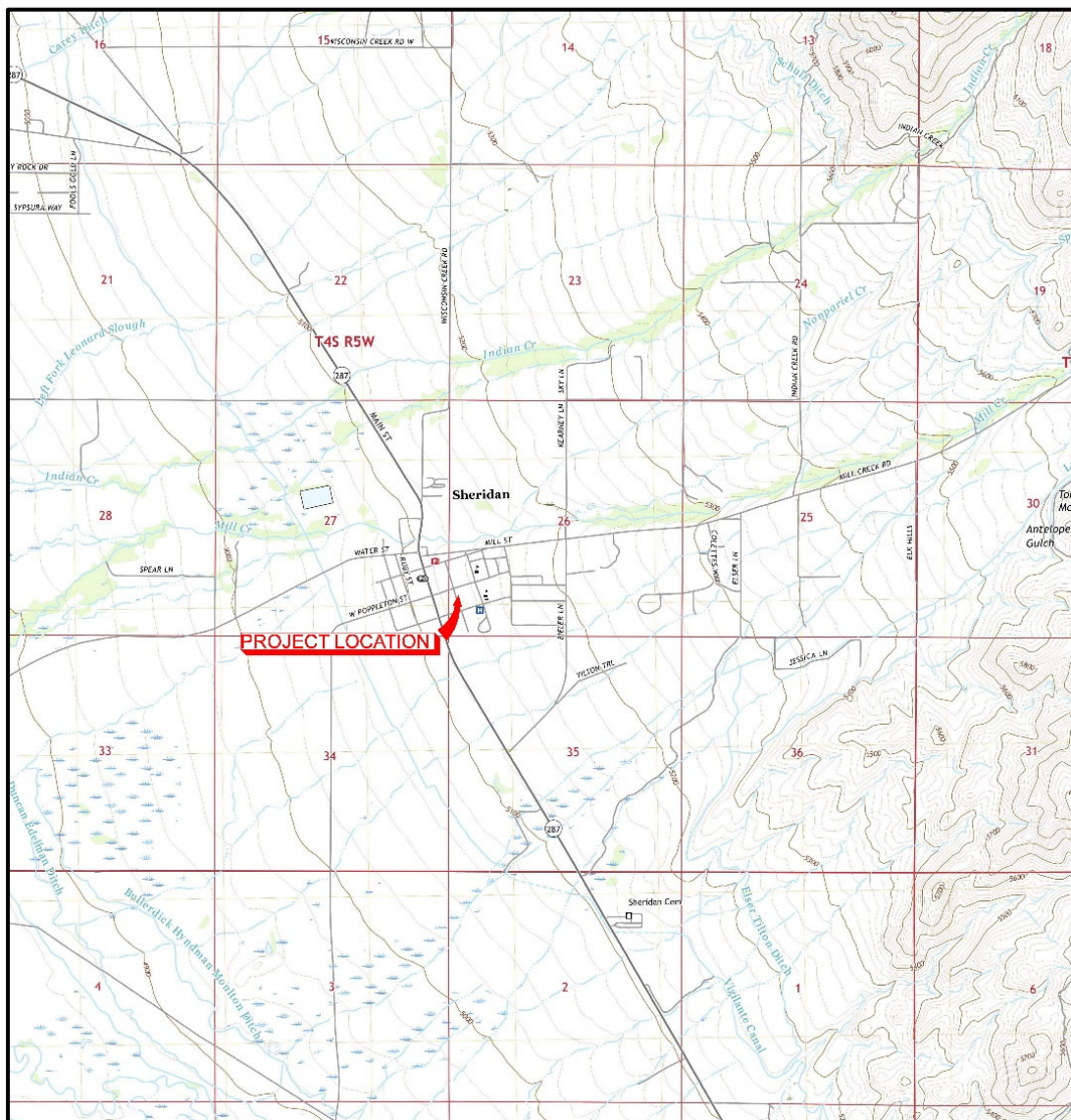
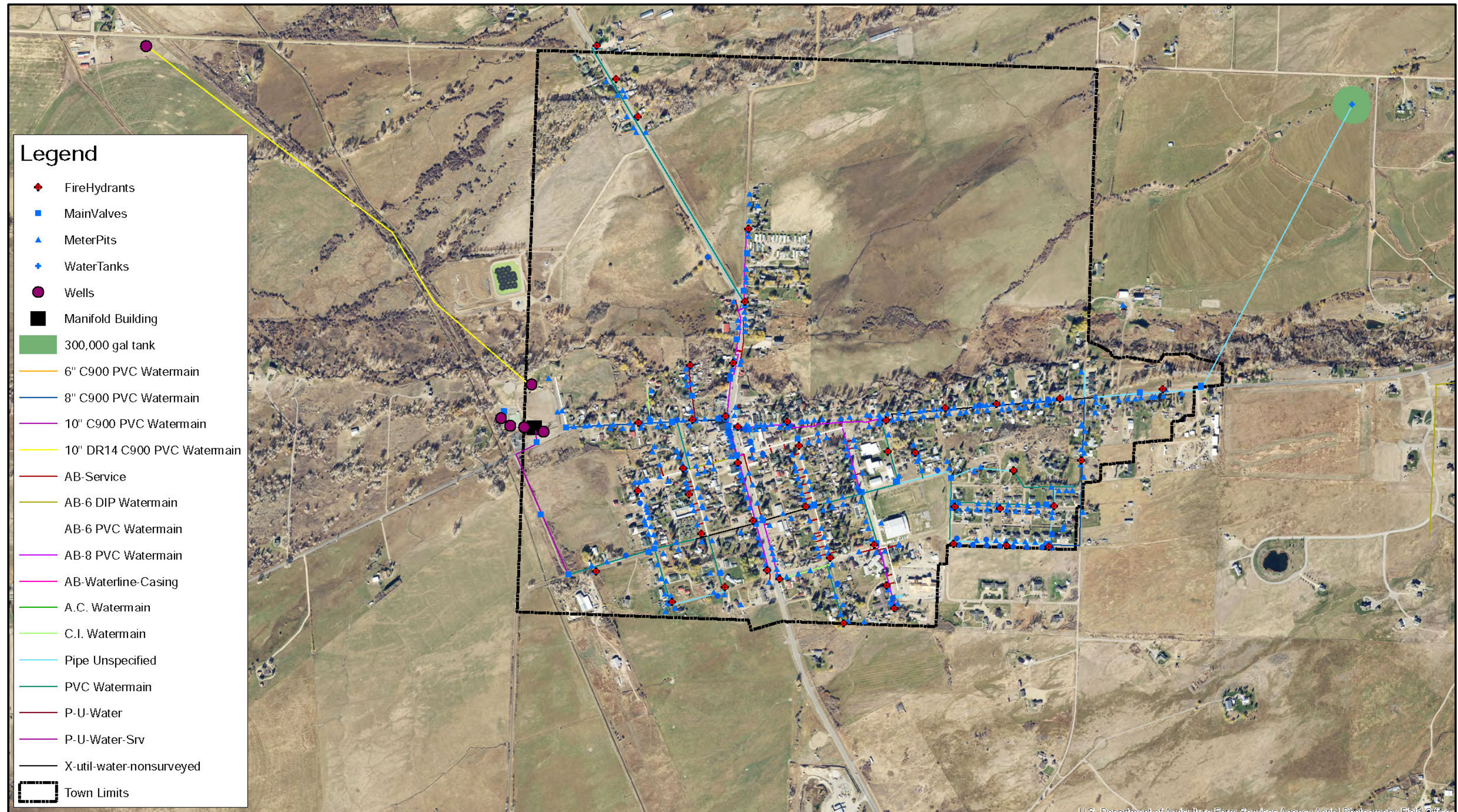


Figure 2. Town of Sheridan Water Supply System Overview Map



## Water Demands

### Introduction

To evaluate the Town of Sheridan water demands, WWC analyzed the Town’s water production data from 2017 - 2021. Assuming the well pumping meters and recordkeeping are accurate, the total volume of water that enters the City’s water system is represented by the well production (pumping) records. Once in the system, water is either sold for domestic and irrigation use (residential and commercial), put to other beneficial use, or physically lost through leaks. The sold water is accounted for by the Town’s usage records for metered water. The beneficial use can include domestic water for Town-owned properties, irrigation for parks, water for fire-fighting efforts, and authorized hydrant flushing. The volume of water that is left after subtracting the water sold can be represented as water put to beneficial use or physically lost through leaks. These two components of water “loss” currently cannot be distinguished based on the data that are available.

### Water Produced

The total water volume that enters the Town of Sheridan’s water system is represented by the water produced from the Town’s three groundwater wells that are currently producing water (#1, #5, and #6). Volume is recorded from a meter measuring flow rate in the manifold building representing the combined flow of all wells operating. Daily records were obtained for 2017 through 2021. This data is provided in Appendix A. The monthly production is summarized in Table 1.

**Table 1. Historic Water Production**

Month/Year	2017	2018	2019	2020	2021
Jan	3,596,800	2,114,400	2,680,700	2,280,200	1,673,200
Feb	3,636,000	1,911,800	2,461,600	2,424,800	2,031,300
Mar	3,207,100	2,147,400	2,305,000	2,282,200	1,753,000
Apr	3,373,800	2,088,200	2,595,100	2,318,800	2,077,200
May	4,481,300	3,118,800	2,887,200	3,696,500	3,438,600
Jun	7,685,300	4,246,400	5,165,800	4,733,400	6,918,300
Jul	8,905,900	4,928,700	5,521,200	6,417,500	7,711,300
Aug	6,475,600	3,457,200	5,356,200	6,543,900	5,273,100
Sep	4,788,400	2,748,100	3,911,300	5,008,300	4,953,000
Oct	1,919,400	2,247,000	2,366,500	2,665,300	2,680,500
Nov	1,881,600	2,226,500	2,406,500	1,826,400	1,793,700
Dec	2,217,000	2,412,100	2,468,100	1,907,900	1,814,900
<b>Total (gal/year)</b>	<b>52,168,200</b>	<b>33,646,600</b>	<b>40,125,200</b>	<b>42,105,200</b>	<b>42,118,100</b>

The average annual production has decreased from 2017 to 2021, which could be due to water use restrictions during the summer months, water system improvements such as replacing leaking water mains, and changes in water use habits. Revisiting the analysis in the future with additional annual production data will support the continuation of this trend or show a stabilization of annual production to meet demands from water sales.

## Water Sales

The Town of Sheridan water system provides water to most of the Town’s residents and businesses. As of December 2021, the total number of water/sewer connection per Town records is 360 individual residential connections as well as approximately 10 connections that serve multifamily residential buildings, each ranging in size from 2 - 27 units per connection. These connections consist of trailer parks, duplexes, apartment complexes, etc. Accounting for these units brings the current total number of connections to 416 residential units. This estimate does not include the commercial connections/units. The water sale records currently do not distinguish between commercial and residential use, which may be quantified separately in the future. Town records for water sales were obtained for the years 2017 to 2021. The monthly recorded water sales for each year are provided in Table 2 and detailed records showing daily use is provided in Appendix A.

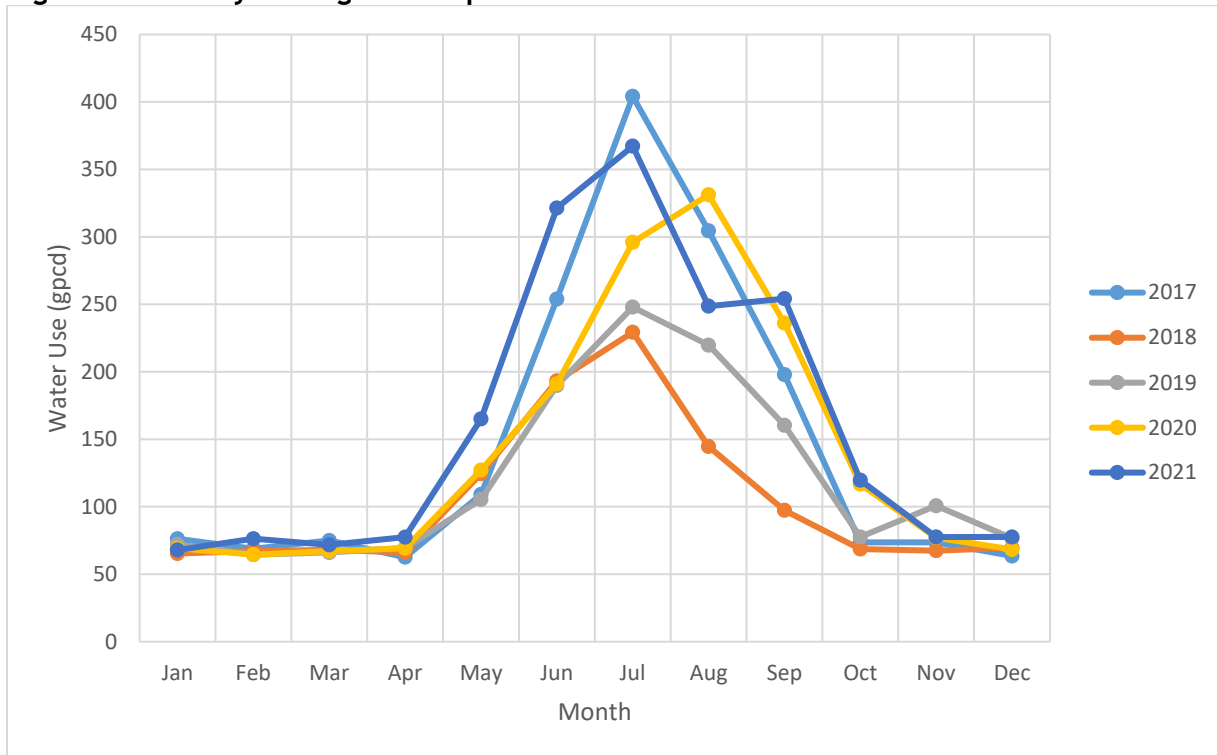
**Table 2. Historic Water Sales**

Month/Year	2017	2018	2019	2020	2021
Jan	1,745,349	1,405,063	1,500,151	1,392,524	1,320,738
Feb	1,385,254	1,305,963	1,389,040	1,432,767	1,640,802
Mar	1,560,529	1,463,576	1,283,678	1,349,904	1,393,932
Apr	1,348,105	1,376,776	1,492,866	1,440,772	1,720,777
May	2,346,771	2,592,233	2,047,521	2,823,792	3,321,871
Jun	5,638,798	4,158,069	4,349,108	3,977,278	6,914,048
Jul	8,132,552	4,775,040	5,163,235	6,572,993	7,901,352
Aug	6,340,707	3,011,379	4,880,435	6,665,022	5,349,752
Sep	4,668,960	2,094,623	3,338,177	5,080,453	5,116,428
Oct	1,429,357	1,476,253	1,614,783	2,512,593	2,574,422
Nov	1,429,357	1,497,375	2,166,402	1,604,536	1,614,037
Dec	1,498,497	1,447,789	1,592,916	1,564,654	1,668,894
<b>Total (gal/year)</b>	<b>37,524,236</b>	<b>26,604,139</b>	<b>30,818,312</b>	<b>36,417,288</b>	<b>40,537,053</b>

Per capita water usage can be estimated from water usage records and population information. According to the 2020 United States Census, the Town of Sheridan’s current population is 694. It should be noted that approximately 42 individuals included in this estimate reside at the assisted living center and/or hospital. The Town’s population has not significantly changed in recent years and this census population is assumed to be reflective of the population from 2017 to 2021. Minor variations in population during this short time period are considered to be negligible for this capacity assessment. The average per capita water used based on water sales

and annual population over the past five years is 135 gpcd. During the summer months (June through August) this average use increases to 263 gpcd. During the winter months (September through May) the average per capita use over the past five years is 93 gpcd. Figure 3 shows the monthly average per capita daily water sales by year. The figure exemplifies the seasonality of water use due to irrigation.

**Figure 3. Monthly Average Per Capita Water Sold**



## Water Loss

Unaccounted for water, often referred to as water lost, is the difference between the quantity of water produced and the quantity of water consumed or billed. This loss includes all water not measured/metered within the system that is used for beneficial uses by the Town such as hydrant testing, firefighting, water main flushing, and domestic or irrigation use for publicly owned spaces. For the purposes of this report, it is assumed that any meter inaccuracies, recording disruptions (construction), or bookkeeping adjustments would have minimal impact on the water loss volume and can be neglected. At this time, it is also assumed that there are no unauthorized or illegal water connections to the Town's system. If unauthorized connections are discovered, the Town should install meters on these lines and assign an account to the user.

The Town installed service meters on all services in 2011 so inaccurate meters and unmetered services do not appear to be a factor. By neglecting any meter and recording inaccuracies and any potential unauthorized use, this plan assumes that the majority of the system's water loss is real loss through system leakage and water use for Town owned properties. Leakage on the

service side of the meter pits is not accounted for in the loss estimate because any post meter losses are already accounted for in the water sales. In order to categorize water loss more appropriately, a more detailed evaluation of the Town's distribution system and water use would be required. Monthly and annual water losses from 2017 to 2021 are provided in Table 3. The 2021 CIP includes scheduled replacement of water lines to address leaking sections and obsolete pipeline materials.

**Table 3. Historic Water Loss**

Month/Year	2017	2018	2019	2020	2021
Jan	1,851,451	709,337	1,180,549	887,676	352,462
Feb	2,250,746	605,837	1,072,560	992,033	390,498
Mar	1,646,571	683,824	1,021,322	932,296	359,068
Apr	2,025,695	711,424	1,102,234	878,028	356,423
May	2,134,529	526,567	839,679	872,708	116,729
Jun	2,046,502	88,331	816,692	756,122	4,252
Jul	773,348	153,660	357,965	-155,493	-190,052
Aug	134,893	445,821	475,765	-121,122	-76,652
Sep	119,440	653,477	573,123	-72,153	-163,428
Oct	490,043	770,747	751,717	152,707	106,078
Nov	452,243	729,125	240,098	221,864	179,663
Dec	718,503	964,311	875,184	343,246	146,006
<b>Total (gal/year)</b>	<b>14,643,964</b>	<b>7,042,461</b>	<b>9,306,888</b>	<b>5,687,912</b>	<b>1,581,047</b>
<b>% Loss</b>	<b>28%</b>	<b>21%</b>	<b>23%</b>	<b>14%</b>	<b>4%</b>
<b>Average Loss Flow Rate (gpm)</b>	<b>28</b>	<b>14</b>	<b>18</b>	<b>11</b>	<b>3</b>

Water loss is exacerbated during the winter months, possibly due to the decreased demand of the system during this period. Water loss has generally decreased between 2017 and 2021. This could be due to improvements made to the distribution system, the addition of metered water user accounts that were previously unaccounted for, and improvements made to the collection and recording of water meter usage data. Revisiting the analysis in the future with additional annual production and sales data will validate the continuation of this trend. Negative loss values in 2020 and 2021 are believed to be the result of meters that were out of service or not read due to technical issues. These negative loss values are also less than the summer daily production volume and storage tank size and therefore could be partially the result of the timing of meter readings and the volume of water stored in the tank at the start/end of each month.

## System Demands

Water systems are sized to meet peak demand periods. The peaking conditions of most concern for facility sizing are typically maximum month demand, maximum day demand, maximum day demand with fire flow, and peak hour demand. Peak water use is typically expressed as a ratio, or peaking factor, dividing the peak water use by the average daily water use. These peaking factors are then used to calculate maximum month, maximum day, and peak hour water use conditions. Using the data discussed in the preceding sections, current water demands for the Town of Sheridan are calculated.



### Maximum Month

The existing average day demand (ADD) was determined by evaluating the average water production for each year between 2017 and 2021. Water production rather than water sales were used to determine demand values to ensure demand estimates are conservative and incorporate water losses. The maximum month production value for each year was determined and used to calculate a maximum month peaking factor for each corresponding year. The results are provided in Table 4. The maximum month peaking factor varied from 1.7 to 2.2 with an average of 1.9.

**Table 4. Summary of Maximum Month Peaking Factors**

Year	Maximum Month	Annual Average Day Demand (gpd)	Maximum Month Average Day Demand (gpd)	Maximum Month Peaking Factor
2017	July	141,377	307,100	2.2
2018	July	92,182	164,290	1.8
2019	July	110,234	184,040	1.7
2020	August	114,416	225,652	2.0
2021	July	116,348	248,752	2.1
<b>Average</b>				<b>1.9</b>

### Maximum Day Demand and Peak Hour Demand

To determine the maximum day demand, the production records were reviewed to find the maximum day of water production for each year from 2017 to 2021. A maximum day peaking factor was calculated for each year by dividing this maximum day production volume by the corresponding average day demand. The peaking factors were averaged to provide the maximum day peaking factor, as shown in Table 5. The maximum day peaking factor varied from 2.1 to 2.9 with an average of 2.5.

**Table 5. Summary of Maximum Day Peaking Factors**

Year	Annual Average Day Demand (gpd)	Maximum Day Date (M/DD/YYYY)	Daily Maximum (gpd)	Maximum Day Peaking Factor
2017	141,377	7/22/2017	376,100	2.7
2018	92,182	7/12/2018	230,100	2.5
2019	110,234	7/18/2019	232,800	2.1
2020	114,416	7/21/2020	281,100	2.5
2021	116,348	7/15/2021	332,000	2.9
<b>Average</b>				<b>2.5</b>

The Town of Sheridan’s water system production rate is assessed by daily volume recorded; hourly production rates are unavailable at this time. Section 11.243 of the 2018 edition of Circular DEQ 2, Design Standards for Public Sewage Systems, contains an equation (10-1) for estimating the peak hourly flow for sewage collection systems based on the existing population of the system. Theoretically this equation can be used to estimate peak hourly demands for a water system as well. The resulting peaking factor is 3.9.

## Existing Demand

The existing system demands were determined by applying the peaking factors calculated in the previous sections by the average day demand of the 5-year period from 2017 to 2021. The resulting demand values were also converted to a per connection and per capita flow basis for comparison to the system capacity described in the following sections. Table 6 provides a summary of the existing demand flow rates.

**Table 6. Summary of Existing Demand**

Demand Condition	Peaking Factor	Demand (gpd)	Demand (gpm)	Per Capita Demand (gpcd) <sup>1</sup>	Per Connection Demand (gpd) <sup>2</sup>	Per Connection Demand (gpm)
Average Day Demand	1.0	114,912	80	166	276	0.19
Average Day Maximum Month	1.9	223,714	155	322	538	0.37
Maximum Day	2.5	289,085	201	417	695	0.48
Peak Hour	3.9	447,778	311	-	-	0.75

1. 2020 Population = 694

2. 2021 dwelling units = 416

Based on the current population of 694 and a water service inventory of 416 dwelling units, there are approximately 1.7 people per connection. MDEQ typically recommends a capita per dwelling unit, value of 2.5 when determining connection demand for future developments. The current value of 1.7 may be due to the demographics of the Sheridan community along with the inclusion of commercial connections. It is recommended that the Town reevaluate this estimate during future analyses as the population and demographics change and potentially segregate recorded water sales data between residential and commercial connections.

## Fire Flow Demand

Fire flow demand is the volume of water required to fight structural fires, expressed as flow rate times duration. The proposed fire flows must be as recommended by the fire protection agency in which is the water system is being developed, or in the absence of such a recommendation, the fire code adopted by the State of Montana. Fire flow demand must be added to the maximum day demand during the hours of peak demand when designing a system. The State of Montana has adopted the International Fire Code 2012 Edition as the controlling fire code unless otherwise specified by a community. The Town of Sheridan Volunteer Fire Department provides fire protection and emergency response services to the Sheridan community. According to the fire chief, the required fire-flow is 800 gpm for a duration of 2-hours, which translates to a volume of 96,000 gallons.

## System Capacity

### Water Supply

The Town of Sheridan currently relies on three operating water supply wells, which includes wells #1, #5, and #6. Wells #5 and #6 are installed in the deep Tertiary aquifer and are the primary supply wells and are reliable sources of water throughout the year. Well #5 originally produced 350 gallons per minute (gpm). Since then, the Well #5's productivity has diminished over time, likely from the formation sloughing and clogging the perforations, and now produces approximately 150 gpm. A redundant well is currently proposed to allow Well #5 to be refurbished and add resiliency to the water supply. Well #6 is the newest well, completed in 2020, and is located on Carey Lane near a railroad crossing about one mile north of the Town limits. Well #6 currently produces approximately 225 gpm. Well #6 is also supported by auxiliary power via an on-site generator in the event of a power outage. Wells #5 and #6 produce an approximate combined flow of 325 gpm when operated together. These wells produce 50 gpm less when operated simultaneously and the Town is currently working on evaluating potential methods to increase the combined flow rate with the installation of a Variable Frequency Drive (VFD) on Well #5 to coordinate flows with Well #6.

The third operational well, Well #1, is located between the manifold building and the tennis/pickleball court, on the west side of the Town. Each well connects to the manifold building for distribution to the Town and the storage tank. Well #1 is developed in the shallow aquifer with a production rate of 50 gpm. The remaining three wells, Well #2, #3, and #4, are also located in ball field area and have limited or no production capacity. These wells may be replaced with redundant wells or refurbished to address future capacity needs. The Town is currently pursuing an additional redundant water supply well to supplement capacity and preserve existing water rights. Table 7 shows the existing wells and applicable information regarding their existing operational flow, water rights, and other pertinent information.

**Table 7. Town of Sheridan Water Supply Wells**

Well	GWIC ID	Current Flow Rate (gpm)	Current Flow Rate (gpd)	Water Right Flow Rate (gpm)	Well Depth (ft)	Static Water Level (ft)	Year	Pumping Level (ft)	Notes
1	107984	50	72,000	115	71	22	1990	45	
2	107982	NA	NA	115	100	18	1989		Currently not operable.
3	107951	NA	NA	235	335	50	1989		Currently not operable and will be used for monitoring.
4	107983	NA	NA	260	400	16	1989		Currently not operable.
5	190168	150	216,000	260	490		2001		
6	303499	225	324,000	545	700	41	2019	456	

## Storage and Source Capacity Requirements

Water storage is vital to the Town of Sheridan's water system as it provides water to fulfill demands without the need for continuous pumping. Most importantly, it provides flows required for firefighting in addition to regular demands. The Town's storage consists of a 300,000-gallon steel tank located approximately a mile northeast of Town at the intersection of Kearney Lane and Privratsky Lane. The tank water level is controlled with a pressure transducer and telemetry system that communicates with the well house to enable well activations or shutdowns. Water from the tank gravity feeds the distribution system via a 14-inch diameter PVC transmission main. The storage tank serves to provide operational storage, emergency storage, and fire suppression storage. The storage is intended to equalize pressures in the system along with supply water during peak demand periods when the demand exceeds the pumping capacity of the groundwater source wells. Storage requirements are closely tied to pumping capacity, supply redundancy, and backup power; thus, all of these items will be discussed in this section.

### Storage Requirements

The purpose of the storage tank is to provide operational storage, emergency storage, and fire suppression storage. Montana Department of Environmental Quality (MDEQ) establishes specific sizing requirements for storage facilities, which are as follows in Chapter 7 of the 2018 edition of Circular DEQ 1, Standards for Water Works:

- *Storage facilities must be sufficient, as determined from engineering studies to supplement source capacity to satisfy all system demands occurring on the maximum day, plus fire flow demands where fire protection is provided.*
- *The minimum allowable storage must be equal to the average day demand plus fire flow demand, as defined below, where fire protection is provided.*

### Source Capacity Requirements

Source capacity must be considered along with the storage capacity since the storage must be adequate to supplement the source capacity. Section 3.2 of the 2017 edition of Circular DEQ 1, Standards for Water Works, outlines requirements for the groundwater source capacity of the system:

- *The total developed ground water source capacity for systems utilizing gravity storage or pumped storage, unless otherwise specified by MDEQ, must equal or exceed the design maximum day demand with the largest producing well out of service. Storage must comply with the requirements of Section 7.0.1.*

Section 3.2 also provides requirements for backup power:

- *When power failure would result in cessation of minimum essential service, sufficient power must be provided to meet average day demand through:*
  - *connection to at least two independent public power sources; or*
  - *dedicated portable or in-place auxiliary power of adequate supply and connectivity. Where an auxiliary power supply is powered by liquid petroleum, the storage tank*

*for that fuel must be double-contained and equipped with leak detection or be outside the well isolation zone.*

- *Auxiliary power is not required when:*
  - *documentation is submitted that shows power outages are infrequent and of short duration; and*
  - *fire protection is not diminished by power failure*

## Current Storage and Source Capacity

This capacity analysis serves to assess the current system and determine whether it complies with the MDEQ requirements listed above, quantify excess capacity for future growth, and outline the needs and recommendations for future improvements.

### Storage Capacity

As outlined above, the MDEQ standard for minimum storage requires a minimum of the average day demand plus fire flow demand. The current fire flow demand volume is 800 gpm for a duration of two hours, which translates to a volume of 96,000 gallons. The average day demand, as listed in table 6, is 114,912 gallons. Therefore, the Town of Sheridan's 300,000-gallon storage tank meets the minimum allowable storage requirement of 210,912 gallons. This provides a current surplus storage capacity of 89,088 gallons, which if applied over a 24-hour period would equate to approximately 62 gpm of supplemental flow and even more over a shorter duration during peak demand periods. Storage capacity should be addressed again in future updates as the Town of Sheridan experiences growth and as water demands increase.

By comparing the current groundwater source capacity to the system demands calculated in the previous sections, compliance with MDEQ standards in addition to quantifying surplus capacity was determined. Several alternative scenarios were also selected for comparison to simulate system capacity and compliance following several key improvements such as resolving the production issues associated with Well #5 and #6 operating together and adding a redundant well.

Table 8 provides the results of the capacity analysis to determine compliance and capacity of the system under the conditions required by Section 7.0.1 of the 2017 edition of Circular DEQ 1, which requires storage facilities to supplement source capacity to satisfy system demands occurring on the maximum day, plus fire flow demands where fire protection is provided. It was assumed that the average day demand volume in the storage tank was either expended or held in reserve during the analysis to ensure spare capacity remains for residential use. The results of this specific capacity analysis concludes that the Town of Sheridan's water supply and storage capacity meets MDEQ requires per Section 7.0.1 of Circular DEQ 1. If fire demands change, such as an increase in the fire flow requirement due to updated firefighting equipment, or the maximum day demand increases as the Town of Sheridan experiences growth, this analysis should be updated to reflect those changes to determine future compliance.

## Source Capacity

Table 9 provides the results of the capacity analysis to determine compliance and capacity of the system under the conditions required by Section 3.2 of the 2017 edition of Circular DEQ 1, which requires the total developed ground water source capacity for systems utilizing gravity storage must equal or exceed the maximum day demand with the largest producing well out of service. Well #6, with a producing capacity of 225 gpm, is the largest producing well for the Town of Sheridan. The analysis was performed for the above-described demand conditions.

The results shown in Table 9 indicates the Town currently does not have capacity to meet current demands as determined by MDEQ standards. The existing system, which considers Well #1 and #5 running does not meet maximum day demands by a small margin. Maximum day demand predominantly occurs in the summer months, most frequently in July, and is primarily composed of lawn irrigation demand. Therefore, in the event that Well #6 is out of service, the Town may only need to restrict water usage for irrigation during the summer months to maintain supply. It should be noted that the existing system with Well #6 in operation will be able to provide a theoretical volume of 540,000 gpd (375 gpm), which equates to a flow of 251,000 gpd or 361 connections during maximum day demand conditions without the use of storage. This resulting capacity is shown in Table 10, which provides a capacity analysis for the system with all existing wells in service. Well #6 also has auxiliary power installed in the form of a backup generator to provide the average day demand flow rate of 114,912 gpd as required by Section 3.2 of Circular DEQ 1. Additionally, fire protection is not diminished during the event of a power outage due to the capacity provided by the storage tank, which exceeds the combined average day demand and fire flow demand minimum allowable storage volume.

**Table 8. Town of Sheridan Storage Capacity Calculations**

Scenario	Total Well Production Capacity		Combined Production and Storage Capacity <sup>1</sup>	Fire Flow (2-hr) + Maximum Day Demand	Remaining Capacity	Notes
	gpm	gpd				
Existing Well Operation	375	540,000	725,088	385,085	340,003	Wells 1, 5, and 6 operating with current system. Wells 5 and 6 operating together produces approximately 50 gpm less than operated individually.
Pressure Issues Resolved	425	612,000	797,088		412,003	Scenario represents flow conditions if the issues associated with the reduction of 50 gpm while well #5 and #6 are operating simultaneously are resolved.
Addition of Redundant Well	625	900,000	1,085,088		700,003	Scenario represents flow conditions are resolved along with the addition of a redundant well with an assumed flow of 200 gpm.

1. Assumes annual average day demand volume (114,983 gallons) within the storage tank has either been expended or held in reserve. The remaining storage volume to support fire flow and the maximum day demand is 185,017 gallons.

**Table 9. Town of Sheridan Source Capacity Calculations - Largest Well Out of Service**

Scenario	Well Production Capacity with Largest Well Out of Service		Maximum Day Demand gpd	Remaining Capacity gpd	Remaining EDU Capacity <sup>1,2</sup> EDU	Notes
	gpm	gpd				
Existing Well Operation	200	288,000	289,085	-1,085	-1	Current production if Wells #1 and #5 operating since the largest producing well (#6) is out of service.
Addition of Redundant Well	400	576,000		286,915	276	Scenario represents flow conditions are resolved along with the addition of a redundant well with an assumed flow of 200 gpm.

1. Assumes a maximum day demand per capita of 417 gpd/connection and 2.5 people per dwelling unit based on MDEQ standards.
2. EDU = Equivalent Dwelling Unit

**Table 10. Town of Sheridan Source Capacity Calculations - Full System Capacity**

Scenario	Total Well Production Capacity		Maximum Day Demand gpd	Remaining Capacity gpd	Remaining EDU Capacity <sup>1,2</sup> EDU	Notes
	gpm	gpd				
Existing Well Operation	375	540,000	289,085	250,915	241	Current production if all operating wells are in service (#1, #5, and #6).
Pressure Issues Resolved	425	612,000		322,915	310	Scenario represents flow conditions if the issues associated with the reduction of 50 gpm while well #5 and #6 are operating simultaneously are resolved.
Addition of Redundant Well	625	900,000		610,915	587	Scenario represents flow conditions are resolved along with the addition of a redundant well with an assumed flow of 200 gpm.

1. Assumes a maximum day demand per capita of 417 gpd/connection and 2.5 people per dwelling unit based on MDEQ standards.
2. EDU = Equivalent Dwelling Unit



## Discussion, Actions, and Recommendations

The Town of Sheridan's water system cannot currently meet the maximum day demands per MDEQ standards. However, based on water system improvements planned by the Town, their water capacity will increase in the next 12 to 18 months as progress is made. These improvements are likely to be implemented due to funding and contracting in place. The planned water system improvements are described below.

DEQ Circular 1 requires that *"The total developed ground water source capacity for systems utilizing gravity storage or pumped storage, unless otherwise specified by MDEQ, must equal or exceed the design maximum day demand with the largest producing well out of service"*. Without considering storage capacity, the current operating groundwater wells do not meet this condition assuming the largest well, Well #6, is out of service albeit by a very small amount. The period is short during the maximum day demand periods while lawn irrigation is occurring and much longer during the non-irrigation season. The system also meets all other requirements regarding storage, fire flow, and auxiliary power. It should be noted that this capacity analysis does not consider localized flow and pressure conditions within the distribution system. WWC is currently developing a hydraulic model to assess the hydraulic response of the Town's water system under varying conditions in order to identify problem areas to recommend improvements and optimize operation of the wells and storage tank.

Great West Engineering conducted a capacity analysis as part of the 2016 Preliminary Engineering Report for Water System Improvements. The analysis concluded that the Town of Sheridan's groundwater supply wells met the requirements of MDEQ while the storage tank was deficient in meeting the capacity requirements for fire flow. Great West assigned more flow capacity to Well #5 and #1 than what is currently available today. They also included Well #2 in the analysis. The result was a total combined capacity of 533 gpm (300 gpm with the largest well out of service). This is greater than the current total combined capacity of 375 gpm (or 200 gpm with the largest well out of service). Accurate water production data was unavailable in 2016 to properly calculate demand. Additionally, water demands were calculated by adding estimated water loss to water sales data and converting these values to daily demand rates. These conservatively inflated demand rates, combined with a fire flow demand derived solely from the International Fire Code instead of the Fire Chief, resulted in the 300,000 gallons of storage being deemed deficient. Since then, more accurate flow data are available, the Fire Chief provided a required flow rate, and the 2020 water systems improvements were made, such as the construction of Well #6.

There are several actions the Town funded to improve their water system and preemptively mitigate impacts from anticipated growth. As outlined in the 2021 CIP, the Town is pursuing rehabilitating Well #5 and drilling a redundant well. The redundant well will augment the water supply and add resiliency to system to eliminate issues from a temporary flow loss from a production well out of service. The Town targeted ARPA funds to pay for the redundant well in 2022. Once the redundant well is in place, Well #5 can be out of service temporarily and rehabilitated. Well #5 may be operating at a reduced capacity as compared to flow rate reported by Great West Engineering in 2016. It is possible that it may yield more water after

rehabilitation, like the increased flow response in Well #1 after it was rehabilitated in 2019. The goal is for the redundant well to supply water during an emergency or planned well out of service situation. The planned redundant well will be designed using better construction techniques including a large diameter borehole and continuous stainless-steel screen, like Well #6, vs. downhole perforations used in the other wells.

Another improvement that will add capacity is increased production from Well #5 and #6 when operating simultaneously. The goal is to eliminate pressure differences and maximize combined flow from the two wells. The two wells running together have a 50 gpm lower flow rate as compared to the summation of flows while running them independently. Presumably high pressure from one of the two pumps overpowers the other, reducing the combined flow. The Town is working on possibly installing a VFD on Well #5 or use pressure valving to synchronize the two pumps to balance pressure and increase flow so it is closer to the additive flow of the two wells. Lastly, the Town has made significant improvements to the distribution system over the years by replacing aging pipe and considerably reducing water loss via leaks in the system. This is evident by the water loss trends from 2017 to 2021 shown in Table 3. These improvements will continue as scheduled or when leaks are found, as outlined in the 2021 CIP.

**Appendix A**  
**Water Production/Sales Data**  
**(2017-2021)**

**Appendix A**  
**Water Production/Sales Data**  
**(2017-2021)**

**Town of Sheridan Potable Water System**

**Water Pumped, Sold, and Lost - 2017**

	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)					
	12/23	103,800	1/25	105,200	2/23	100,000	3/25	107,500	4/25	107,500	5/26	194,800	6/27	272,300	7/26	274,600	8/25	153,400	9/28	94,300	10/26	91,100	11/23	46,300	
	12/24	117,100	1/26	83,400	2/24	109,600	3/26	114,500	4/26	114,800	5/27	215,600	6/28	269,900	7/27	298,100	8/26	186,300	9/29	78,900	10/27	45,800	11/24	50,900	
	12/25	91,600	1/27	104,300	2/25	114,200	3/27	107,000	4/27	103,100	5/28	217,900	6/29	221,400	7/28	282,400	8/27	177,900	9/30	75,500	10/28	84,700	11/25	87,000	
	12/26	104,900	1/28	117,400	2/26	104,200	3/28	109,600	4/28	116,300	5/29	212,300	6/30	274,500	7/29	297,000	8/28	192,000	10/1	76,300	10/29	47,600	11/26	47,900	
	12/27	92,900	1/29	119,700	2/27	95,900	3/29	103,800	4/29	121,700	5/30	218,600	7/1	317,800	7/30	260,400	8/29	164,700	10/2	87,800	10/30	69,300	11/27	89,200	
	12/28	102,500	1/30	76,500	2/28	112,100	3/30	107,600	4/30	106,400	5/31	281,900	7/2	300,200	7/31	237,500	8/30	191,500	10/3	84,200	10/31	68,800	11/28	45,700	
	12/29	168,800	1/31	118,700	3/1	105,800	3/31	125,200	5/1	97,600	6/1	274,600	7/3	285,800	8/1	277,900	8/31	162,000	10/4	59,500	11/1	45,500	11/29	82,700	
	12/30	25,800	2/1	122,200	3/2	115,600	4/1	81,700	5/2	103,100	6/2	240,200	7/4	346,700	8/2	290,300	9/1	150,400	10/5	57,200	11/2	89,100	11/30	52,300	
	12/31	104,900	2/2	74,400	3/3	105,600	4/2	141,000	5/3	120,700	6/3	318,300	7/5	372,400	8/3	311,300	9/2	127,900	10/6	87,500	11/3	45,200	12/1	57,500	
	1/1	137,000	2/3	118,800	3/4	102,700	4/3	81,900	5/4	130,300	6/4	237,500	7/6	350,600	8/4	286,100	9/3	247,200	10/7	35,900	11/4	88,300	12/2	78,800	
	1/2	131,700	2/4	98,700	3/5	105,700	4/4	107,300	5/5	144,200	6/5	262,600	7/7	324,300	8/5	288,000	9/4	219,700	10/8	89,800	11/5	96,700	12/3	45,500	
	1/3	110,500	2/5	109,500	3/6	114,500	4/5	112,300	5/6	185,200	6/6	236,700	7/8	340,500	8/6	277,300	9/5	147,400	10/9	45,700	11/6	44,400	12/4	82,900	
	1/4	121,800	2/6	141,600	3/7	109,800	4/6	128,100	5/7	141,400	6/7	319,100	7/9	314,800	8/7	235,500	9/6	218,000	10/10	87,200	11/7	46,200	12/5	64,800	
	1/5	123,200	2/7	311,900	3/8	106,500	4/7	99,200	5/8	115,000	6/8	250,600	7/10	245,200	8/8	288,700	9/7	169,800	10/11	51,500	11/8	79,800	12/6	69,200	
	1/6	166,600	2/8	110,000	3/9	110,000	4/8	110,400	5/9	129,800	6/9	306,200	7/11	247,500	8/9	234,600	9/8	179,200	10/12	90,000	11/9	63,000	12/7	79,100	
	1/7	118,400	2/9	86,000	3/10	102,900	4/9	111,600	5/10	160,400	6/10	219,500	7/12	291,500	8/10	219,700	9/9	163,900	10/13	47,100	11/10	95,800	12/8	47,200	
	1/8	110,600	2/10	135,900	3/11	106,900	4/10	108,200	5/11	232,900	6/11	198,100	7/13	258,900	8/11	220,600	9/10	180,600	10/14	90,100	11/11	42,400	12/9	88,900	
	1/9	127,400	2/11	130,400	3/12	110,900	4/11	110,100	5/12	170,900	6/12	179,900	7/14	322,400	8/12	124,400	9/11	160,000	10/15	43,900	11/12	61,800	12/10	44,400	
	1/10	74,800	2/12	120,100	3/13	99,900	4/12	113,600	5/13	175,800	6/13	213,800	7/15	304,800	8/13	110,200	9/12	181,200	10/16	58,200	11/13	77,900	12/11	73,900	
	1/11	102,900	2/13	86,800	3/14	138,900	4/13	107,500	5/14	128,200	6/14	141,500	7/16	308,700	8/14	97,100	9/13	161,600	10/17	79,600	11/14	46,600	12/12	62,600	
	1/12	75,100	2/14	101,700	3/15	71,900	4/14	128,600	5/15	130,900	6/15	164,400	7/17	328,300	8/15	91,800	9/14	117,800	10/18	57,100	11/15	80,200	12/13	47,500	
	1/13	124,300	2/15	115,900	3/16	101,900	4/15	105,500	5/16	142,100	6/16	179,700	7/18	334,600	8/16	137,400	9/15	100,100	10/19	76,900	11/16	61,800	12/14	88,800	
	1/14	134,900	2/16	108,100	3/17	115,700	4/16	121,200	5/17	144,000	6/17	217,400	7/19	343,700	8/17	137,700	9/16	105,300	10/20	45,900	11/17	51,400	12/15	44,700	
	1/15	121,000	2/17	103,300	3/18	103,800	4/17	89,600	5/18	140,700	6/18	245,400	7/20	337,300	8/18	174,300	9/17	94,800	10/21	87,500	11/18	84,800	12/16	82,400	
	1/16	88,800	2/18	116,400	3/19	107,900	4/18	103,700	5/19	134,300	6/19	191,700	7/21	361,600	8/19	189,900	9/18	78,600	10/22	58,000	11/19	63,100	12/17	50,800	
	1/17	97,100	2/19	129,300	3/20	103,700	4/19	110,600	5/20	57,800	6/20	263,600	7/22	376,100	8/20	177,200	9/19	90,800	10/23	63,700	11/20	75,200	12/18	67,500	
	1/18	105,500	2/20	229,200	3/21	107,800	4/20	108,900	5/21	234,800	6/21	294,600	7/23	280,600	8/21	160,000	9/20	93,700	10/24	64,800	11/21	46,800	12/19	70,400	
	1/19	105,800	2/21	226,700	3/22	107,700	4/21	103,000	5/22	180,600	6/22	268,500	7/24	301,000	8/22	177,600	9/21	90,600	10/25	45,300	11/22	88,300	12/20	53,600	
	1/20	37,200	2/22	133,900	3/23	106,200	4/22	109,200	5/23	187,500	6/23	254,300	7/25	272,700	8/23	182,400	9/22	74,300					12/21	80,900	
	1/21	86,400			3/24	108,800	4/23	109,200	5/24	208,200	6/24	288,100			8/24	175,600	9/23	91,300					12/22	51,300	
	1/22	96,900					4/24	96,200	5/25	215,100	6/25	296,100					9/24	66,300					43092	68700	
	1/23	99,900									6/26	271,800					9/25	95,000					43093	79500	
	1/24	186,700															9/26	56,900					43094	79600	
																	9/27	98,200					12/26	54,700	
<b>Totals</b>																									
<b>Pumped</b>		3,596,800		3,636,000		3,207,100		3,373,800		4,481,300		7,685,300		8,905,900		6,475,600		4,788,400		1,919,400		1,881,600		2,217,000	
<b>Sold</b>		1,745,349		1,385,254		1,560,529		1,348,105		2,346,771		5,638,798		8,132,552		6,340,707		4,668,960		1,429,357		1,429,357		1,498,497	
<b>Lost</b>		1,851,451		2,250,746		1,646,571		2,025,695		2,134,529		2,046,502		773,348		134,893		119,440		490,043		452,243		718,503	
<b>% Lost</b>		51%		62%		51%		60%		0		27%		9%		2%		2%		26%		24%		32%	
<b>Max. Daily Pumped</b>		186,700		311,900		138,900		141,000		234,800		319,100		376,100		311,300		247,200		94,300		96,700		89,200	
<b>Avg. Daily Pumped</b>		108,994		125,379		106,903		108,832		144,558		240,166		307,100		215,853		140,835		68,550		67,200		65,206	
<b>Days</b>		33		29		30		31		31		32		29		30		34		28		28		34	
<b>Avg. Sold</b>		52,889		47,767		52,018		43,487		75,702		176,212		280,433		211,357		137,322		51,048		51,048		44,073	
<b>GPM Pumped</b>		76		87		74		76		72		109		128		150		98		48		47		45	
<b>GPD Lost</b>		61,715		72,605		58,806		65,345		76,233		62,015		25,778		4,215		3,981		16,335		15,075		23,950	

**Town of Sheridan Potable Water System**

**Water Pumped, Sold, and Lost - 2018**

	Pumped		Pumped		Pumped		Pumped		Pumped		Pumped		Pumped		Pumped		Pumped						
Date	(gals)	Date	(gals)	Date	(gals)	Date	(gals)	Date	(gals)	Date	(gals)	Date	(gals)	Date	(gals)	Date	(gals)	Date	(gals)				
12/27	52,300	1/27	65,000	2/24	45,400	3/27	45,700	4/26	92,700	5/25	136,800	6/25	98,100	7/26	120,500	8/25	115,500	9/25	53,000	10/26	47,600	11/27	71,100
12/28	84,200	1/28	60,800	2/25	62,500	3/28	86,500	4/27	58,500	5/26	151,900	6/26	144,200	7/27	153,500	8/26	110,200	9/26	96,300	10/27	76,600	11/28	73,100
12/29	46,000	1/29	74,000	2/26	83,300	3/29	44,500	4/28	98,100	5/27	175,300	6/27	175,600	7/28	159,000	8/27	64,300	9/27	67,000	10/28	64,500	11/29	92,800
12/30	89,300	1/30	66,200	2/27	52,100	3/30	89,200	4/29	78,800	5/28	122,900	6/28	100,900	7/29	88,700	8/28	102,600	9/28	79,100	10/29	104,200	11/30	56,200
12/31	46,600	1/31	47,100	2/28	102,600	3/31	43,900	4/30	82,000	5/29	180,800	6/29	129,600	7/30	139,600	8/29	78,500	9/29	73,800	10/30	41,300	12/1	49,300
1/1	81,200	2/1	88,400	3/1	54,000	4/1	88,000	5/1	50,500	5/30	112,600	6/30	149,400	7/31	89,700	8/30	81,400	9/30	72,400	10/31	51,800	12/2	94,500
1/2	54,700	2/2	45,000	3/2	101,700	4/2	45,000	5/2	94,000	5/31	131,300	7/1	137,300	8/1	129,000	8/31	105,800	10/1	70,600	11/1	89,100	12/3	59,500
1/3	60,600	2/3	87,500	3/3	57,200	4/3	87,400	5/3	83,500	6/1	119,400	7/2	214,500	8/2	118,200	9/1	115,700	10/2	74,800	11/2	47,400	12/4	87,500
1/4	76,300	2/4	66,600	3/4	103,900	4/4	94,700	5/4	73,500	6/2	105,600	7/3	162,800	8/3	103,400	9/2	48,700	10/3	81,700	11/3	95,600	12/5	62,800
1/5	57,300	2/5	69,100	3/5	66,000	4/5	39,600	5/5	106,200	6/3	172,800	7/4	157,400	8/4	96,000	9/3	91,200	10/4	66,000	11/4	47,300	12/6	85,100
1/6	82,700	2/6	46,200	3/6	66,900	4/6	46,000	5/6	117,300	6/4	210,900	7/5	166,300	8/5	141,700	9/4	73,800	10/5	87,400	11/5	80,800	12/7	169,900
1/7	92,200	2/7	85,700	3/7	88,000	4/7	92,900	5/7	91,400	6/5	173,600	7/6	210,100	8/6	105,100	9/5	107,100	10/6	59,300	11/6	67,400	12/8	65,600
1/8	55,200	2/8	45,500	3/8	97,600	4/8	85,900	5/8	109,200	6/6	170,300	7/7	208,300	8/7	97,700	9/6	109,500	10/7	74,100	11/7	67,300	12/9	87,700
1/9	92,300	2/9	89,800	3/9	46,000	4/9	59,400	5/9	127,800	6/7	145,800	7/8	226,800	8/8	142,900	9/7	63,500	10/8	67,900	11/8	79,900	12/10	82,800
1/10	50,800	2/10	46,500	3/10	86,500	4/10	57,700	5/10	109,800	6/8	123,000	7/9	188,500	8/9	124,800	9/8	95,100	10/9	84,300	11/9	47,700	12/11	79,600
1/11	90,200	2/11	91,100	3/11	54,000	4/11	82,100	5/11	118,200	6/9	131,500	7/10	183,800	8/10	110,000	9/9	112,900	10/10	64,500	11/10	95,400	12/12	79,900
1/12	55,100	2/12	46,800	3/12	59,300	4/12	54,200	5/12	81,800	6/10	133,400	7/11	209,200	8/11	115,000	9/10	63,500	10/11	60,400	11/11	48,000	12/13	84,800
1/13	89,200	2/13	90,200	3/13	59,100	4/13	90,300	5/13	81,100	6/11	104,500	7/12	230,100	8/12	128,000	9/11	108,000	10/12	85,500	11/12	86,300	12/14	58,700
1/14	46,300	2/14	46,000	3/14	62,300	4/14	71,400	5/14	103,000	6/12	169,400	7/13	177,500	8/13	86,500	9/12	94,500	10/13	48,800	11/13	61,600	12/15	75,200
1/15	77,100	2/15	88,300	3/15	90,000	4/15	66,500	5/15	106,100	6/13	183,900	7/14	216,500	8/14	139,400	9/13	63,600	10/14	94,000	11/14	89,600	12/16	84,400
1/16	61,800	2/16	68,600	3/16	63,000	4/16	52,700	5/16	126,800	6/14	176,700	7/15	203,600	8/15	127,900	9/14	100,700	10/15	50,100	11/15	55,800	12/17	80,800
1/17	54,200	2/17	71,800	3/17	59,600	4/17	91,500	5/17	119,800	6/15	147,300	7/16	203,100	8/16	95,700	9/15	99,300	10/16	92,900	11/16	67,000	12/18	79,000
1/18	85,900	2/18	51,400	3/18	73,200	4/18	57,400	5/18	102,900	6/16	112,100	7/17	153,300	8/17	135,500	9/16	60,500	10/17	54,600	11/17	80,900	12/19	84,500
1/19	76,000	2/19	89,600	3/19	46,100	4/19	88,400	5/19	103,400	6/17	115,300	7/18	100,800	8/18	98,900	9/17	71,600	10/18	91,500	11/18	48,400	12/20	89,500
1/20	56,500	2/20	51,000	3/20	88,500	4/20	49,000	5/20	96,900	6/18	80,400	7/19	146,300	8/19	126,900	9/18	98,800	10/19	54,300	11/19	95,900	12/21	91,600
1/21	59,600	2/21	91,700	3/21	44,800	4/21	89,500	5/21	112,500	6/19	108,800	7/20	126,400	8/20	128,400	9/19	89,900	10/20	101,600	11/20	49,600	12/22	85,800
1/22	73,600	2/22	72,300	3/22	91,000	4/22	62,500	5/22	137,200	6/20	103,000	7/21	128,700	8/21	73,900	9/20	100,200	10/21	33,500	11/21	96,800	12/23	73,600
1/23	55,700	2/23	69,600	3/23	44,700	4/23	84,000	5/23	153,800	6/21	110,300	7/22	100,300	8/22	105,700	9/21	54,000	10/22	57,400	11/22	49,800	12/24	55,400
1/24	88,800	2/24	85,700	3/24	85,700	4/24	51,800	5/24	126,100	6/22	103,400	7/23	157,200	8/23	102,200	9/22	102,100	10/23	106,100	11/23	97,600	12/25	87,600
1/25	53,200	2/25	47,200	3/25	47,200	4/25	90,500	5/25	175,900	6/23	101,500	7/24	122,100	8/24	73,400	9/23	59,600	10/24	54,800	11/24	48,000	12/26	83,800
1/26	69,500			3/26	85,200					6/24	131,900	7/25			9/24	106,000	10/25	89,300	11/25	85,200			
																				11/26	62,100		
<b>Totals</b>																							
<b>Pumped</b>	<b>2,114,400</b>		<b>1,911,800</b>		<b>2,147,400</b>		<b>2,088,200</b>		<b>3,118,800</b>		<b>4,246,400</b>		<b>4,928,700</b>		<b>3,457,200</b>		<b>2,748,100</b>		<b>2,247,000</b>		<b>2,226,500</b>		<b>2,412,100</b>
<b>Sold</b>	<b>1,405,063</b>		<b>1,305,963</b>		<b>1,463,576</b>		<b>1,376,776</b>		<b>2,592,233</b>		<b>4,158,069</b>		<b>4,775,040</b>		<b>3,011,379</b>		<b>2,094,623</b>		<b>1,476,253</b>		<b>1,497,375</b>		<b>1,447,789</b>
<b>Lost</b>	<b>709,337</b>		<b>605,837</b>		<b>683,824</b>		<b>711,424</b>		<b>526,567</b>		<b>88,331</b>		<b>153,660</b>		<b>445,821</b>		<b>653,477</b>		<b>770,747</b>		<b>729,125</b>		<b>964,311</b>
<b>% Lost</b>	<b>34%</b>		<b>32%</b>		<b>32%</b>		<b>34%</b>		<b>0</b>		<b>2%</b>		<b>3%</b>		<b>13%</b>		<b>24%</b>		<b>34%</b>		<b>33%</b>		<b>40%</b>
<b>Max. Daily Pumped</b>	<b>92,300</b>		<b>91,700</b>		<b>103,900</b>		<b>94,700</b>		<b>175,900</b>		<b>210,900</b>		<b>230,100</b>		<b>159,000</b>		<b>115,700</b>		<b>106,100</b>		<b>104,200</b>		<b>169,900</b>
<b>Avg. Daily Pumped</b>	<b>68,206</b>		<b>68,279</b>		<b>69,271</b>		<b>69,607</b>		<b>103,960</b>		<b>136,981</b>		<b>164,290</b>		<b>115,240</b>		<b>88,648</b>		<b>72,484</b>		<b>69,578</b>		<b>80,403</b>
<b>Days</b>	<b>31</b>		<b>28</b>		<b>31</b>		<b>30</b>		<b>30</b>		<b>31</b>		<b>30</b>		<b>30</b>		<b>31</b>		<b>31</b>		<b>32</b>		<b>30</b>
<b>Avg. Sold</b>	<b>45,325</b>		<b>46,642</b>		<b>47,212</b>		<b>45,893</b>		<b>86,408</b>		<b>134,131</b>		<b>159,168</b>		<b>100,379</b>		<b>67,568</b>		<b>47,621</b>		<b>46,793</b>		<b>48,260</b>
<b>GPM Pumped</b>	<b>47</b>		<b>47</b>		<b>48</b>		<b>48</b>		<b>72</b>		<b>109</b>		<b>128</b>		<b>80</b>		<b>62</b>		<b>50</b>		<b>48</b>		<b>56</b>
<b>GPD Lost</b>	<b>23,645</b>		<b>19,543</b>		<b>24,422</b>		<b>22,949</b>		<b>18,806</b>		<b>2,677</b>		<b>5,122</b>		<b>13,932</b>		<b>21,783</b>		<b>25,692</b>		<b>24,304</b>		<b>32,144</b>

**Town of Sheridan Potable Water System**

**Water Pumped, Sold, and Lost - 2019**

	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)					
	12/27	71,200	1/26	76,300	2/26	94,400	3/26	76,200	4/26	70,800	5/24	110,400	6/26	151,000	7/26	231,100	8/27	129,100	9/26	81,200	10/26	70,100	11/26	53,500	
	12/28	62,500	1/27	71,200	2/27	70,900	3/27	75,500	4/27	97,000	5/25	124,200	6/27	163,500	7/27	208,500	8/28	152,500	9/27	115,900	10/27	83,700	11/27	96,900	
	12/29	84,800	1/28	73,400	2/28	71,000	3/28	79,100	4/28	56,200	5/26	120,000	6/28	207,000	7/28	206,900	8/29	172,000	9/28	116,300	10/28	51,400	11/28	82,800	
	12/30	76,800	1/29	77,900	3/1	90,600	3/29	80,400	4/29	102,600	5/27	117,600	6/29	159,800	7/29	184,900	8/30	137,300	9/29	60,800	10/29	98,100	11/29	72,400	
	12/31	84,500	1/30	89,300	3/2	96,100	3/30	81,900	4/30	74,900	5/28	115,400	6/30	205,700	7/30	196,900	8/31	142,900	9/30	101,200	10/30	64,600	11/30	84,600	
	1/1	190,700	1/31	79,100	3/3	68,900	3/31	81,100	5/1	91,300	5/29	152,000	7/1	164,300	7/31	177,800	9/1	122,300	10/1	68,600	10/31	87,900	12/1	68,500	
	1/2	177,700	2/1	81,600	3/4	88,300	4/1	83,600	5/2	107,400	5/30	178,000	7/2	212,200	8/1	177,400	9/2	159,700	10/2	79,800	11/1	51,900	12/2	104,600	
	1/3	115,300	2/2	72,500	3/5	86,800	4/2	78,200	5/3	53,100	5/31	127,300	7/3	202,700	8/2	186,000	9/3	163,100	10/3	91,300	11/2	103,000	12/3	49,700	
	1/4	75,400	2/3	74,000	3/6	86,700	4/3	92,000	5/4	106,100	6/1	135,700	7/4	154,900	8/3	189,400	9/4	168,500	10/4	53,800	11/3	103,800	12/4	173,600	
	1/5	79,000	2/4	79,500	3/7	86,500	4/4	116,400	5/5	102,000	6/2	150,500	7/5	162,100	8/4	174,100	9/5	157,500	10/5	95,200	11/4	49,400	12/5	80,200	
	1/6	77,600	2/5	81,800	3/8	89,800	4/5	95,500	5/6	87,800	6/3	141,900	7/6	203,300	8/5	171,500	9/6	165,500	10/6	74,700	11/5	94,200	12/6	87,300	
	1/7	81,000	2/6	83,300	3/9	74,100	4/6	64,400	5/7	105,400	6/4	164,700	7/7	171,300	8/6	181,100	9/7	170,100	10/7	74,800	11/6	51,900	12/7	62,000	
	1/8	81,900	2/7	82,700	3/10	92,500	4/7	104,600	5/8	105,500	6/5	157,200	7/8	185,100	8/7	144,200	9/8	96,300	10/8	71,100	11/7	104,100	12/8	99,800	
	1/9	84,200	2/8	82,900	3/11	54,400	4/8	65,000	5/9	88,300	6/6	211,800	7/9	192,200	8/8	184,900	9/9	120,300	10/9	81,100	11/8	59,500	12/9	55,400	
	1/10	82,000	2/9	81,800	3/12	95,000	4/9	95,800	5/10	100,800	6/7	140,300	7/10	177,600	8/9	162,400	9/10	111,600	10/10	83,600	11/9	90,100	12/10	96,600	
	1/11	83,200	2/10	83,500	3/13	98,000	4/10	87,300	5/11	126,100	6/8	118,800	7/11	174,500	8/10	184,900	9/11	120,900	10/11	68,700	11/10	62,600	12/11	58,000	
	1/12	95,000	2/11	80,600	3/14	63,900	4/11	69,700	5/12	128,600	6/9	122,100	7/12	194,000	8/11	131,000	9/12	98,300	10/12	97,300	11/11	87,200	12/12	88,900	
	1/13	72,100	2/12	76,000	3/15	81,600	4/12	100,100	5/13	144,300	6/10	121,000	7/13	219,000	8/12	147,000	9/13	113,400	10/13	51,300	11/12	84,800	12/13	87,100	
	1/14	85,100	2/13	79,200	3/16	91,300	4/13	64,800	5/14	127,800	6/11	141,000	7/14	162,900	8/13	117,700	9/14	109,600	10/14	85,900	11/13	64,600	12/14	64,200	
	1/15	85,900	2/14	82,000	3/17	98,800	4/14	88,200	5/15	131,100	6/12	195,900	7/15	143,900	8/14	152,500	9/15	133,200	10/15	66,800	11/14	94,800	12/15	78,100	
	1/16	81,200	2/15	76,000	3/18	44,800	4/15	89,700	5/16	133,900	6/13	166,200	7/16	203,400	8/15	139,300	9/16	125,100	10/16	85,200	11/15	49,100	12/16	97,600	
	1/17	88,600	2/16	81,500	3/19	90,700	4/16	69,300	5/17	101,900	6/14	172,600	7/17	129,500	8/16	153,700	9/17	133,900	10/17	64,200	11/16	101,600	12/17	93,800	
	1/18	86,400	2/17	86,700	3/20	74,000	4/17	97,300	5/18	92,300	6/15	188,600	7/18	232,800	8/17	142,600	9/18	110,100	10/18	74,200	11/17	51,100	12/18	58,700	
	1/19	73,300	2/18	83,400	3/21	89,900	4/18	65,700	5/19	118,800	6/16	214,600	7/19	156,300	8/18	158,500	9/19	144,900	10/19	75,200	11/18	96,100	12/19	85,100	
	1/20	77,300	2/19	90,800	3/22	78,600	4/19	92,500	5/20	115,100	6/17	194,700	7/20	203,700	8/19	168,000	9/20	85,300	10/20	99,700	11/19	56,000	12/20	97,400	
	1/21	86,300	2/20	73,000	3/23	72,200	4/20	89,000	5/21	81,500	6/18	209,200	7/21	185,600	8/20	168,100	9/21	123,200	10/21	48,800	11/20	90,200	12/21	47,000	
	1/22	73,900	2/21	73,100	3/24	80,000	4/21	65,000	5/22	128,800	6/19	203,500	7/22	199,100	8/21	167,700	9/22	118,000	10/22	94,500	11/21	71,900	12/22	96,200	
	1/23	81,200	2/22	88,800	3/25	95,200	4/22	103,400	5/23	107,800	6/20	180,200	7/23	195,200	8/22	179,300	9/23	95,600	10/23	53,800	11/22	83,700	12/23	68,400	
	1/24	93,000	2/23	93,200			4/23	58,100			6/21	141,500	7/24	221,800	8/23	131,700	9/24	109,300	10/24	94,700	11/23	76,100	12/24	78,100	
	1/25	93,600	2/24	67,400			4/24	100,100			6/22	157,200	7/25	187,000	8/24	145,400	9/25	121,800	10/25	56,800	11/24	72,700	12/25	101,600	
			2/25	59,100			4/25	85,200			6/23	166,300			8/25	133,000			11/25	100,300			12/26		
											6/24	167,000			8/26	158,700									
											6/25	158,300													
<b>Totals</b>																									
<b>Pumped</b>		2,680,700		2,461,600		2,305,000		2,595,100		2,887,200		5,165,800		5,521,200		5,356,200		3,911,300		2,366,500		2,406,500		2,468,100	
<b>Sold</b>		1,500,151		1,389,040		1,283,678		1,492,866		2,047,521		4,349,108		5,163,235		4,880,435		3,338,177		1,614,783		2,166,402		1,592,916	
<b>Lost</b>		1,180,549		1,072,560		1,021,322		1,102,234		839,679		816,692		357,965		475,765		573,123		751,717		240,098		875,184	
<b>% Lost</b>		44%		44%		44%		42%		0		16%		6%		9%		15%		32%		10%		35%	
<b>Max. Daily Pumped</b>		190,700		93,200		98,800		116,400		144,300		214,600		232,800		231,100		172,000		116,300		104,100		173,600	
<b>Avg. Daily Pumped</b>		89,357		79,406		82,321		83,713		103,114		156,539		184,040		167,381		130,377		78,883		77,629		82,270	
<b>Days</b>		30		31		28		31		28		33		30		32		30		30		31		30	
<b>Avg. Sold</b>		50,005		44,808		45,846		48,157		73,126		131,791		172,108		152,514		111,273		53,826		69,884		53,097	
<b>GPM Pumped</b>		82		55		57		58		72		109		128		116		91		55		54		57	
<b>GPD Lost</b>		39,352		34,599		36,476		35,556		29,989		24,748		11,932		14,868		19,104		25,057		7,745		28,232	

**Town of Sheridan Potable Water System**

**Water Pumped, Sold, and Lost - 2020**

	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)		
	12/27	43,500	1/25	74,300	2/28	86,400	3/26	87,700	4/25	100,000	5/27	157,500	6/26	182,100	7/28	242,800	8/26	194,500	9/26	187,400	10/27	71,000	11/26	70,000
	12/28	73,000	1/26	75,000	2/27	95,200	3/27	77,700	4/26	99,300	5/28	229,700	6/27	168,100	7/29	197,900	8/27	182,200	9/27	100,600	10/28	69,100	11/27	66,600
	12/29	73,900	1/27	76,300	2/28	69,600	3/28	73,700	4/27	95,100	5/29	211,400	6/28	193,000	7/30	223,000	8/28	199,300	9/28	106,000	10/29	61,600	11/28	58,900
	12/30	99,100	1/28	71,700	2/29	70,000	3/29	71,200	4/28	130,000	5/30	197,000	6/29	119,100	7/31	215,200	8/29	164,300	9/29	132,200	10/30	64,300	11/29	59,100
	12/31	52,500	1/29	85,900	3/1	70,800	3/30	77,600	4/29	94,300	5/31	173,500	6/30	122,800	8/1	232,100	8/30	176,000	9/30	118,700	10/31	71,100	11/30	64,400
	1/1	96,400	1/30	72,000	3/2	87,200	3/31	72,400	4/30	134,100	6/1	158,800	7/1	113,100	8/2	207,400	8/31	172,900	10/1	111,500	11/1	87,800	12/1	67,700
	1/2	70,500	1/31	69,700	3/3	68,800	4/1	95,200	5/1	62,000	6/2	189,600	7/2	131,100	8/3	242,500	9/1	115,400	10/2	126,600	11/2	43,700	12/2	47,700
	1/3	82,400	2/1	88,600	3/4	76,200	4/2	49,500	5/2	98,800	6/3	183,800	7/3	133,200	8/4	267,100	9/2	174,500	10/3	116,300	11/3	69,100	12/3	61,700
	1/4	97,000	2/2	66,100	3/5	90,500	4/3	95,000	5/3	79,200	6/4	222,700	7/4	186,900	8/5	235,600	9/3	171,500	10/4	83,800	11/4	62,100	12/4	58,700
	1/5	58,200	2/3	60,700	3/6	86,800	4/4	58,200	5/4	95,400	6/5	202,200	7/5	179,400	8/6	253,100	9/4	198,800	10/5	99,100	11/5	49,400	12/5	50,800
	1/6	84,300	2/4	93,900	3/7	59,700	4/5	89,300	5/5	101,000	6/6	230,300	7/6	165,700	8/7	217,500	9/5	204,400	10/6	120,300	11/6	66,400	12/6	67,400
	1/7	72,200	2/5	63,300	3/8	97,700	4/6	79,700	5/6	114,000	6/7	135,200	7/7	212,200	8/8	249,300	9/6	217,900	10/7	87,700	11/7	53,600	12/7	44,100
	1/8	94,500	2/6	79,900	3/9	54,300	4/7	70,500	5/7	123,800	6/8	161,100	7/8	207,600	8/9	203,400	9/7	161,800	10/8	95,800	11/8	57,900	12/8	64,400
	1/9	81,900	2/7	92,800	3/10	93,600	4/8	95,800	5/8	106,400	6/9	126,300	7/9	180,400	8/10	251,600	9/8	128,000	10/9	91,400	11/9	66,800	12/9	54,000
	1/10	81,900	2/8	69,700	3/11	97,300	4/9	52,800	5/9	104,400	6/10	123,000	7/10	186,300	8/11	230,100	9/9	108,700	10/10	86,400	11/10	46,500	12/10	55,900
	1/11	55,600	2/9	73,200	3/12	52,700	4/10	99,200	5/10	126,200	6/11	122,100	7/11	195,500	8/12	237,600	9/10	152,700	10/11	80,000	11/11	65,100	12/11	58,100
	1/12	99,200	2/10	77,700	3/13	93,400	4/11	92,100	5/11	122,100	6/12	111,000	7/12	217,700	8/13	206,800	9/11	164,400	10/12	75,100	11/12	62,600	12/12	77,000
	1/13	51,500	2/11	80,000	3/14	49,500	4/12	59,800	5/12	91,300	6/13	203,600	7/13	218,300	8/14	235,600	9/12	179,600	10/13	55,800	11/13	47,300	12/13	42,600
	1/14	136,800	2/12	81,200	3/15	98,300	4/13	96,300	5/13	110,700	6/14	184,100	7/14	219,900	8/15	244,400	9/13	228,400	10/14	63,400	11/14	66,400	12/14	68,400
	1/15	56,200	2/13	61,200	3/16	65,700	4/14	53,700	5/14	126,900	6/15	83,600	7/15	239,100	8/16	179,400	9/14	129,000	10/15	72,500	11/15	69,300	12/15	41,900
	1/16	67,200	2/14	77,800	3/17	83,900	4/15	94,000	5/15	197,500	6/16	130,500	7/16	223,100	8/17	237,400	9/15	185,600	10/16	51,800	11/16	43,300	12/16	47,700
	1/17	88,600	2/15	76,400	3/18	86,300	4/16	72,000	5/16	90,600	6/17	113,600	7/17	247,300	8/18	252,900	9/16	185,800	10/17	68,700	11/17	64,900	12/17	59,800
	1/18	153,900	2/16	63,700	3/19	60,100	4/17	72,800	5/17	101,900	6/18	96,100	7/18	259,600	8/19	235,400	9/17	130,800	10/18	69,000	11/18	68,200	12/18	59,200
	1/19	55,500	2/17	85,500	3/20	94,700	4/18	85,800	5/18	113,500	6/19	115,700	7/19	189,500	8/20	241,000	9/18	175,000	10/19	40,900	11/19	42,800	12/19	52,000
	1/20	68,500	2/18	81,400	3/21	48,500	4/19	57,200	5/19	130,600	6/20	119,300	7/20	258,200	8/21	200,100	9/19	170,600	10/20	56,700	11/20	61,800	12/20	68,400
	1/21	63,500	2/19	75,900	3/22	98,600	4/20	103,900	5/20	118,300	6/21	89,200	7/21	281,100	8/22	217,500	9/20	110,400	10/21	52,500	11/21	67,800	12/21	43,600
	1/22	72,800	2/20	74,700	3/23	79,700	4/21	75,900	5/21	123,900	6/22	178,800	7/22	267,900	8/23	176,600	9/21	91,800	10/22	66,700	11/22	69,300	12/22	64,800
	1/23	76,300	2/21	88,700	3/24	70,200	4/22	79,100	5/22	140,000	6/23	134,800	7/23	207,600	8/24	213,400	9/22	132,500	10/23	52,000	11/23	44,100	12/23	58,600
	1/24	73,300	2/22	64,400	3/25	96,500	4/23	100,900	5/23	101,900	6/24	206,400	7/24	207,600	8/25	197,200	9/23	137,400	10/24	59,800	11/24	67,100	12/24	51,200
			2/23	72,100			4/24	49,800	5/24	159,200	6/25	142,500	7/25	183,000			9/24	143,900	10/25	67,900	11/25	46,000	12/25	64,700
			2/24	79,800					5/25	123,200			7/26	277,800			9/25	120,200	10/26	69,700			12/26	53,500
			2/25	71,200					5/26	180,900			7/27	243,300									12/27	57,000
																							12/28	48,000
<b>Totals</b>																								
	<b>Pumped</b>	2,280,200		2,424,800		2,282,200		2,318,800		3,696,500		4,733,400		6,417,500		6,543,900		5,008,300		2,665,300		1,826,400		1,907,900
	<b>Sold</b>	1,392,524		1,432,767		1,349,904		1,440,772		2,823,792		3,977,278		6,572,993		6,665,022		5,080,453		2,512,593		1,604,536		1,564,654
	<b>Lost</b>	887,676		992,033		932,296		878,028		872,708		756,122		-155,493		-121,122		-72,153		152,707		221,864		343,246
	<b>% Lost</b>	39%		41%		41%		38%		24%		16%		-2%		-2%		-1%		6%		12%		18%
	<b>Max. Daily Pumped</b>	153,900		93,900		98,600		103,900		197,500		230,300		281,100		267,100		228,400		187,400		87,800		77,000
	<b>Avg. Daily Pumped</b>	78,628		75,921		78,697		78,241		111,490		158,307		197,014		225,652		163,593		87,162		61,393		58,093
	<b>Days</b>	29		32		29		30		32		30		32		29		31		31		30		33
	<b>Avg. Sold</b>	48,018		44,774		46,548		48,026		88,244		132,576		205,406		229,828		163,886		81,051		53,485		47,414
	<b>GPM Pumped</b>	55		53		55		54		77		110		137		157		114		61		43		40
	<b>GPD Lost</b>	30,610		31,001		32,148		29,268		27,272		25,204		-4,859		-4,177		-2,328		4,926		7,395		10,401
* - Most of Mill and Water Streets didn't read in June, so July is catching up.																								
** - Much of Mill St. could not be accessed due to paving, so many estimated uses																								



**Town of Sheridan Potable Water System**

**Water Pumped, Sold, and Lost - 2021**

Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)		
12/29	60,500	1/26	62,000	2/26	62,200	3/26	48,700	4/27	58,800	5/26	88,600	6/26	304,600	7/27	221,900	8/27	174,100	9/25	163,500	10/26	46,200	11/25	64,200
12/30	62,600	1/27	62,500	2/27	61,500	3/27	63,300	4/28	79,500	5/27	103,300	6/27	263,800	7/28	170,100	8/28	139,500	9/26	147,400	10/27	65,800	11/26	64,600
12/31	54,400	1/28	65,100	2/28	64,100	3/28	69,200	4/29	89,000	5/28	226,500	6/28	220,200	7/29	170,100	8/29	189,600	9/27	159,100	10/28	60,800	11/27	65,700
1/1	60,700	1/29	64,300	3/1	62,300	3/29	58,300	4/30	125,900	5/29	121,000	6/29	307,100	7/30	170,100	8/30	162,600	9/28	137,800	10/29	62,100	11/28	49,800
1/2	65,100	1/30	64,800	3/2	63,700	3/30	58,200	5/1	85,000	5/30	146,100	6/30	256,100	7/31	170,100	8/31	172,100	9/29	128,300	10/30	62,500	11/29	52,300
1/3	56,000	1/31	67,800	3/3	56,500	3/31	70,100	5/2	103,700	5/31	145,800	7/1	290,800	8/1	170,100	9/1	156,300	9/30	112,900	10/31	64,200	11/30	24,400
1/4	61,700	2/1	41,500	3/4	57,500	4/1	71,000	5/3	93,700	6/1	151,100	7/2	286,800	8/2	170,100	9/2	210,500	10/1	139,600	11/1	43,200	12/1	93,900
1/5	58,300	2/2	64,900	3/5	64,100	4/2	48,400	5/4	101,300	6/2	243,100	7/3	297,200	8/3	116,400	9/3	175,300	10/2	87,800	11/2	63,200	12/2	61,100
1/6	55,800	2/3	66,700	3/6	73,700	4/3	69,900	5/5	83,200	6/3	235,300	7/4	277,900	8/4	156,200	9/4	199,100	10/3	133,500	11/3	61,900	12/3	61,500
1/7	75,600	2/4	51,300	3/7	69,400	4/4	72,400	5/6	133,700	6/4	254,800	7/5	251,200	8/5	199,400	9/5	156,600	10/4	96,100	11/4	61,900	12/4	58,900
1/8	40,700	2/5	64,600	3/8	46,100	4/5	61,700	5/7	138,400	6/5	246,400	7/6	171,300	8/6	171,000	9/6	209,600	10/5	111,300	11/5	59,200	12/5	42,500
1/9	65,200	2/6	68,500	3/9	68,800	4/6	66,000	5/8	119,400	6/6	245,500	7/7	280,800	8/7	165,800	9/7	166,500	10/6	96,500	11/6	46,100	12/6	63,400
1/10	55,400	2/7	69,300	3/10	69,100	4/7	53,000	5/9	81,400	6/7	180,900	7/8	239,300	8/8	140,100	9/8	192,200	10/7	72,000	11/7	69,000	12/7	52,800
1/11	51,100	2/8	71,600	3/11	64,600	4/8	65,700	5/10	70,700	6/8	251,800	7/9	284,500	8/9	170,500	9/9	192,200	10/8	86,400	11/8	55,900	12/8	51,900
1/12	65,900	2/9	56,600	3/12	63,100	4/9	67,200	5/11	108,900	6/9	254,900	7/10	287,300	8/10	159,900	9/10	183,900	10/9	48,200	11/9	64,200	12/9	60,900
1/13	66,600	2/10	50,000	3/13	67,500	4/10	79,900	5/12	144,500	6/10	219,100	7/11	279,200	8/11	170,600	9/11	196,200	10/10	70,500	11/10	63,100	12/10	62,200
1/14	54,800	2/11	71,400	3/14	57,600	4/11	60,700	5/13	145,200	6/11	159,000	7/12	210,300	8/12	218,000	9/12	159,900	10/11	59,400	11/11	63,400	12/11	54,700
1/15	48,900	2/12	71,200	3/15	54,100	4/12	53,100	5/14	164,900	6/12	176,100	7/13	329,300	8/13	209,000	9/13	174,600	10/12	64,700	11/12	63,400	12/12	60,800
1/16	63,500	2/13	67,700	3/16	66,400	4/13	65,500	5/15	189,900	6/13	247,800	7/14	254,100	8/14	176,700	9/14	165,900	10/13	63,300	11/13	58,900	12/13	56,000
1/17	60,200	2/14	75,700	3/17	67,200	4/14	70,200	5/16	156,200	6/14	222,400	7/15	332,000	8/15	208,400	9/15	179,700	10/14	62,500	11/14	59,000	12/14	63,600
1/18	62,500	2/15	86,500	3/18	65,000	4/15	70,700	5/17	192,600	6/15	249,200	7/16	276,500	8/16	196,700	9/16	202,700	10/15	59,600	11/15	49,700	12/15	62,200
1/19	67,200	2/16	80,100	3/19	50,700	4/16	52,900	5/18	211,900	6/16	257,600	7/17	180,300	8/17	204,300	9/17	168,800	10/16	59,200	11/16	62,600	12/16	63,500
1/20	70,700	2/17	68,600	3/20	71,500	4/17	64,300	5/19	148,900	6/17	274,900	7/18	225,000	8/18	195,800	9/18	180,800	10/17	50,000	11/17	63,600	12/17	61,800
1/21	41,600	2/18	85,900	3/21	56,000	4/18	74,900	5/20	162,600	6/18	260,000	7/19	253,300	8/19	145,200	9/19	147,800	10/18	61,200	11/18	63,800	12/18	41,900
1/22	66,000	2/19	57,800	3/22	68,800	4/19	73,700	5/21	98,100	6/19	303,600	7/20	279,700	8/20	148,300	9/20	123,900	10/19	49,100	11/19	63,900	12/19	64,800
1/23	69,900	2/20	74,100	3/23	50,800	4/20	73,900	5/22	96,000	6/20	267,500	7/21	206,700	8/21	150,500	9/21	143,800	10/20	65,100	11/20	63,200	12/20	59,700
1/24	44,200	2/21	41,500	3/24	62,500	4/21	53,300	5/23	69,900	6/21	220,700	7/22	203,500	8/22	141,800	9/22	147,300	10/21	62,300	11/21	55,000	12/21	48,800
1/25	68,100	2/22	64,500	3/25	68,200	4/22	68,200	5/24	83,200	6/22	289,200	7/23	299,300	8/23	134,700	9/23	143,500	10/22	64,700	11/22	51,700	12/22	61,700
		2/23	64,500			4/23	72,100	5/25	102,100	6/23	306,900	7/24	121,200	8/24	164,900	9/24	138,000	10/23	47,400	11/23	67,400	12/23	61,300
		2/24	66,200			4/24	69,600			6/24	273,700	7/25	70,800	8/25	150,400			10/24	55,500	11/24	58,800	12/24	61,700
		2/25	64,100			4/25	72,700			6/25	295,500	7/26	171,200	8/26	136,000			10/25	65,600			12/25	62,300
						4/26	58,400																
<b>Totals</b>																							
<b>Pumped</b>	1,673,200		2,031,300		1,753,000		2,077,200		3,438,600		6,918,300		7,711,300		5,273,100		4,953,000		2,680,500		1,793,700		1,814,900
<b>Sold</b>	1,320,738		1,640,802		1,393,932		1,720,777		3,321,871		6,914,048		7,901,352		5,349,752		5,116,428		2,574,422		1,614,037		1,668,894
<b>Lost</b>	352,462		390,498		359,068		356,423		116,729		4,252		-190,052		-76,652		-163,428		106,078		179,663		146,006
<b>% Lost</b>	21%		19%		20%		17%		3%		0%		-2%		-1%		-3%		4%		10%		8%
<b>Max. Daily Pumped</b>	75,600		86,500		73,700		79,900		211,900		306,900		332,000		221,900		210,500		163,500		69,000		93,900
<b>Avg. Daily Pumped</b>	59,757		65,526		62,607		64,913		118,572		223,171		248,752		170,100		170,793		86,468		59,790		58,545
<b>Days</b>	28		31		28		32		29		31		31		31		29		31		30		31
<b>Avg. Sold</b>	47,169		52,929		49,783		53,774		114,547		223,034		254,882		172,573		176,429		83,046		53,801		53,835
<b>GPM Pumped</b>	41		46		43		45		82		155		173		118		119		60		42		41
<b>GPD Lost</b>	12,588		12,597		12,824		11,138		3,648		137		-6,131		-2,473		-5,635		3,658		6,195		5,035

Meter was out of service. Average for the remaining days was substituted.





**Town of Sheridan Potable Water System**

**Water Pumped, Sold, and Lost - 2020**

	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)		
	12/27	43,500	1/25	74,300	2/28	86,400	3/26	67,700	4/25	100,000	5/27	157,500	6/26	182,100	7/28	242,800	8/26	194,500	9/28	187,400	10/27	71,000	11/28	70,000
	12/28	73,000	1/26	75,000	2/27	95,200	3/27	77,700	4/26	99,300	5/28	229,700	6/27	168,100	7/29	197,900	8/27	182,200	9/27	100,600	10/28	69,100	11/27	66,600
	12/29	73,900	1/27	76,300	2/28	69,600	3/28	73,700	4/27	95,100	5/29	211,400	6/28	193,000	7/30	223,000	8/28	199,300	9/28	106,000	10/29	61,600	11/28	58,900
	12/30	99,100	1/28	71,700	2/29	70,000	3/29	71,200	4/28	130,000	5/30	197,000	6/29	119,100	7/31	215,200	8/29	164,300	9/29	132,200	10/30	64,300	11/29	59,100
	12/31	52,500	1/29	85,900	3/1	70,800	3/30	77,600	4/29	94,300	5/31	173,500	6/30	122,800	8/1	232,100	8/30	176,000	9/30	118,700	10/31	71,100	11/30	64,400
	1/1	96,400	1/30	72,000	3/2	87,200	3/31	72,400	4/30	134,100	6/1	158,800	7/1	113,100	8/2	207,400	8/31	172,900	10/1	111,500	11/1	87,800	12/1	67,700
	1/2	70,500	1/31	69,700	3/3	68,800	4/1	95,200	5/1	62,000	6/2	189,600	7/2	131,100	8/3	242,500	9/1	115,400	10/2	125,600	11/2	43,700	12/2	47,700
	1/3	82,400	2/1	88,600	3/4	76,200	4/2	49,500	5/2	98,800	6/3	183,800	7/3	133,200	8/4	267,100	9/2	174,500	10/3	116,300	11/3	69,100	12/3	61,700
	1/4	97,000	2/2	66,100	3/5	90,500	4/3	95,000	5/3	79,200	6/4	222,700	7/4	186,900	8/5	235,600	9/3	171,500	10/4	83,800	11/4	62,100	12/4	58,700
	1/5	58,200	2/3	60,700	3/6	86,800	4/4	58,200	5/4	95,400	6/5	202,200	7/5	179,400	8/6	253,100	9/4	198,800	10/5	99,100	11/5	49,400	12/5	50,800
	1/6	84,300	2/4	93,900	3/7	59,700	4/5	89,300	5/5	101,000	6/6	230,300	7/6	165,700	8/7	217,500	9/5	204,400	10/6	120,300	11/6	66,400	12/6	67,400
	1/7	72,200	2/5	63,300	3/8	97,700	4/6	79,700	5/6	114,000	6/7	135,200	7/7	212,200	8/8	249,300	9/6	217,900	10/7	87,700	11/7	53,600	12/7	44,100
	1/8	94,500	2/6	79,900	3/9	54,300	4/7	70,500	5/7	123,800	6/8	161,100	7/8	207,600	8/9	203,400	9/7	161,800	10/8	95,800	11/8	57,900	12/8	64,400
	1/9	81,900	2/7	92,800	3/10	93,600	4/8	95,800	5/8	106,400	6/9	126,300	7/9	180,400	8/10	251,600	9/8	128,000	10/9	91,400	11/9	66,800	12/9	54,000
	1/10	81,900	2/8	69,700	3/11	97,300	4/9	52,800	5/9	104,400	6/10	123,000	7/10	186,300	8/11	230,100	9/9	108,700	10/10	86,400	11/10	46,500	12/10	55,900
	1/11	55,600	2/9	73,200	3/12	52,700	4/10	99,200	5/10	126,200	6/11	122,100	7/11	195,500	8/12	237,600	9/10	152,700	10/11	80,000	11/11	65,100	12/11	58,100
	1/12	99,200	2/10	77,700	3/13	93,400	4/11	92,100	5/11	122,100	6/12	111,000	7/12	217,700	8/13	206,800	9/11	164,400	10/12	75,100	11/12	62,600	12/12	77,000
	1/13	51,500	2/11	80,000	3/14	49,500	4/12	59,800	5/12	91,300	6/13	203,600	7/13	218,300	8/14	235,600	9/12	179,600	10/13	55,800	11/13	47,300	12/13	42,600
	1/14	136,800	2/12	81,200	3/15	98,300	4/13	96,300	5/13	110,700	6/14	184,100	7/14	219,900	8/15	244,400	9/13	228,400	10/14	63,400	11/14	66,400	12/14	68,400
	1/15	56,200	2/13	61,200	3/16	65,700	4/14	53,700	5/14	126,900	6/15	83,600	7/15	239,100	8/16	179,400	9/14	129,000	10/15	72,500	11/15	69,300	12/15	41,900
	1/16	67,200	2/14	77,800	3/17	83,900	4/15	94,000	5/15	197,500	6/16	130,500	7/16	223,100	8/17	237,400	9/15	185,600	10/16	51,800	11/16	43,300	12/16	47,700
	1/17	88,600	2/15	76,400	3/18	86,300	4/16	72,000	5/16	90,600	6/17	113,600	7/17	247,300	8/18	252,900	9/16	185,800	10/17	68,700	11/17	64,900	12/17	59,800
	1/18	153,900	2/16	63,700	3/19	60,100	4/17	72,800	5/17	101,900	6/18	96,100	7/18	259,600	8/19	235,400	9/17	130,800	10/18	69,000	11/18	68,200	12/18	59,200
	1/19	55,500	2/17	85,500	3/20	94,700	4/18	85,800	5/18	113,500	6/19	115,700	7/19	189,500	8/20	241,000	9/18	175,000	10/19	40,900	11/19	42,800	12/19	52,000
	1/20	68,500	2/18	81,400	3/21	48,500	4/19	57,200	5/19	130,600	6/20	119,300	7/20	258,200	8/21	200,100	9/19	170,600	10/20	56,700	11/20	61,800	12/20	68,400
	1/21	63,500	2/19	75,900	3/22	98,600	4/20	103,900	5/20	118,300	6/21	89,200	7/21	281,100	8/22	217,500	9/20	110,400	10/21	52,500	11/21	67,800	12/21	43,600
	1/22	72,800	2/20	74,700	3/23	79,700	4/21	75,900	5/21	123,900	6/22	178,800	7/22	267,900	8/23	176,600	9/21	91,800	10/22	66,700	11/22	69,300	12/22	64,800
	1/23	76,300	2/21	88,700	3/24	70,200	4/22	79,100	5/22	140,000	6/23	134,800	7/23	207,600	8/24	213,400	9/22	132,500	10/23	52,000	11/23	44,100	12/23	58,600
	1/24	73,300	2/22	64,400	3/25	96,500	4/23	100,900	5/23	101,900	6/24	206,400	7/24	207,600	8/25	197,200	9/23	137,400	10/24	59,800	11/24	67,100	12/24	51,200
			2/23	72,100			4/24	49,800	5/24	159,200	6/25	142,500	7/25	183,000			9/24	143,900	10/25	67,900	11/25	46,000	12/25	64,700
			2/24	79,800					5/25	123,200			7/26	277,800			9/25	120,200	10/26	69,700			12/26	53,500
			2/25	71,200					5/26	180,900			7/27	243,300									12/27	57,000
																							12/28	48,000
<b>Totals</b>																								
<b>Pumped</b>		2,280,200		2,424,800		2,282,200		2,318,800		3,696,500		4,733,400		6,417,500		6,543,900		5,008,300		2,665,300		1,826,400		1,907,900
<b>Sold</b>		1,392,524		1,432,767		1,349,904		1,440,772		2,823,792		3,977,278		6,572,993		6,665,022		5,080,453		2,512,593		1,604,536		1,564,654
<b>Lost</b>		887,676		992,033		932,296		878,028		872,708		756,122		-155,493		-121,122		-72,153		152,707		221,864		343,246
<b>% Lost</b>		39%		41%		41%		38%		24%		16%		-2%		-2%		-1%		6%		12%		18%
<b>Max. Daily Pumped</b>		153,900		93,900		98,600		103,900		197,500		230,300		281,100		267,100		228,400		187,400		87,800		77,000
<b>Avg. Daily Pumped</b>		78,628		75,921		78,697		78,241		111,490		158,307		197,014		225,652		163,593		87,162		61,383		58,093
<b>Days</b>		29		32		29		30		32		30		32		29		31		31		30		33
<b>Avg. Sold</b>		48,018		44,774		46,548		48,026		88,244		132,576		205,406		229,828		163,886		81,051		53,485		47,414
<b>GPM Pumped</b>		55		53		55		54		77		110		137		157		114		61		43		40
<b>GPD Lost</b>		30,610		31,001		32,148		29,268		27,272		25,204		-4,859		-4,177		-2,328		4,926		7,395		10,401
	* - Most of Mill and Water Streets didn't read in June, so July is catching up.																							
	** - Much of Mill St. could not be accessed due to paving, so many estimated uses																							

Town of Sheridan Potable Water System

Water Pumped, Sold, and Lost - 2021

Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)	Date	Pumped (gals)
12/29	60,500	1/26	62,000	2/26	62,200	3/26	48,700	4/27	58,800	5/26	88,600	6/26	304,600	7/27	221,900	8/27	174,100	9/26	163,500	10/26	46,200	11/25	64,200
12/30	62,600	1/27	62,500	2/27	61,500	3/27	63,300	4/28	79,500	5/27	103,300	6/27	263,800	7/28	170,100	8/28	139,500	9/26	147,400	10/27	65,800	11/26	64,600
12/31	54,400	1/28	65,100	2/28	64,100	3/28	69,200	4/29	89,000	5/28	226,500	6/28	220,200	7/29	170,100	8/29	189,600	9/27	159,100	10/28	60,800	11/27	65,700
1/1	60,700	1/29	64,300	3/1	62,300	3/29	58,300	4/30	125,900	5/29	121,000	6/29	307,100	7/30	170,100	8/30	162,600	9/28	137,800	10/29	62,100	11/28	49,800
1/2	65,100	1/30	64,800	3/2	63,700	3/30	58,200	5/1	85,000	5/30	146,100	6/30	256,100	7/31	170,100	8/31	172,100	9/29	128,300	10/30	62,500	11/29	52,300
1/3	56,000	1/31	67,800	3/3	56,500	3/31	70,100	5/2	103,700	5/31	145,800	7/1	290,800	8/1	170,100	9/1	156,300	9/30	112,900	10/31	64,200	11/30	24,400
1/4	61,700	2/1	41,500	3/4	57,500	4/1	71,000	5/3	93,700	6/1	151,100	7/2	286,800	8/2	170,100	9/2	210,500	10/1	139,600	11/1	43,200	12/1	93,900
1/5	58,300	2/2	64,900	3/5	64,100	4/2	48,400	5/4	101,300	6/2	243,100	7/3	297,200	8/3	116,400	9/3	175,300	10/2	87,800	11/2	63,200	12/2	61,100
1/6	55,800	2/3	66,700	3/6	73,700	4/3	69,900	5/5	83,200	6/3	235,300	7/4	277,900	8/4	156,200	9/4	199,100	10/3	133,500	11/3	61,900	12/3	61,500
1/7	75,600	2/4	51,300	3/7	69,400	4/4	72,400	5/6	133,700	6/4	254,800	7/5	251,200	8/5	199,400	9/5	156,600	10/4	96,100	11/4	61,900	12/4	58,900
1/8	40,700	2/5	64,600	3/8	46,100	4/5	61,700	5/7	138,400	6/5	246,400	7/6	171,300	8/6	171,000	9/6	209,600	10/5	111,300	11/5	59,200	12/5	42,500
1/9	65,200	2/6	68,500	3/9	68,800	4/6	66,000	5/8	119,400	6/6	245,500	7/7	280,800	8/7	165,800	9/7	166,500	10/6	96,500	11/6	46,100	12/6	63,400
1/10	55,400	2/7	69,300	3/10	69,100	4/7	53,000	5/9	81,400	6/7	180,900	7/8	239,300	8/8	140,100	9/8	192,200	10/7	72,000	11/7	69,000	12/7	52,800
1/11	51,100	2/8	71,600	3/11	64,600	4/8	65,700	5/10	70,700	6/8	251,800	7/9	284,500	8/9	170,500	9/9	192,200	10/8	86,400	11/8	55,900	12/8	51,900
1/12	65,900	2/9	56,600	3/12	63,100	4/9	67,200	5/11	108,900	6/9	254,900	7/10	287,300	8/10	159,900	9/10	183,900	10/9	48,200	11/9	64,200	12/9	60,900
1/13	66,600	2/10	50,000	3/13	67,500	4/10	79,900	5/12	144,500	6/10	219,100	7/11	279,200	8/11	170,600	9/11	196,200	10/10	70,500	11/10	63,100	12/10	62,200
1/14	54,800	2/11	71,400	3/14	57,600	4/11	60,700	5/13	145,200	6/11	159,000	7/12	210,300	8/12	218,000	9/12	159,900	10/11	59,400	11/11	63,400	12/11	54,700
1/15	48,900	2/12	71,200	3/15	54,100	4/12	53,100	5/14	164,900	6/12	176,100	7/13	329,300	8/13	209,000	9/13	174,600	10/12	64,700	11/12	63,400	12/12	60,800
1/16	63,500	2/13	67,700	3/16	66,400	4/13	65,500	5/15	189,900	6/13	247,800	7/14	254,100	8/14	176,700	9/14	165,900	10/13	63,300	11/13	58,900	12/13	56,000
1/17	60,200	2/14	75,700	3/17	67,200	4/14	70,200	5/16	156,200	6/14	222,400	7/15	332,000	8/15	208,400	9/15	179,700	10/14	62,500	11/14	59,000	12/14	63,600
1/18	62,500	2/15	86,500	3/18	65,000	4/15	70,700	5/17	192,600	6/15	249,200	7/16	276,500	8/16	196,700	9/16	202,700	10/15	59,600	11/15	49,700	12/15	62,200
1/19	67,200	2/16	80,100	3/19	50,700	4/16	52,900	5/18	211,900	6/16	257,600	7/17	180,300	8/17	204,300	9/17	168,800	10/16	59,200	11/16	62,600	12/16	63,500
1/20	70,700	2/17	68,600	3/20	71,500	4/17	64,300	5/19	148,900	6/17	274,900	7/18	225,000	8/18	195,800	9/18	180,800	10/17	50,000	11/17	63,600	12/17	61,800
1/21	41,600	2/18	85,900	3/21	56,000	4/18	74,900	5/20	162,600	6/18	260,000	7/19	253,300	8/19	145,200	9/19	147,800	10/18	61,200	11/18	63,800	12/18	41,900
1/22	66,000	2/19	57,800	3/22	68,800	4/19	73,700	5/21	98,100	6/19	303,600	7/20	279,700	8/20	148,300	9/20	123,900	10/19	49,100	11/19	63,900	12/19	64,800
1/23	69,900	2/20	74,100	3/23	50,800	4/20	73,900	5/22	96,000	6/20	267,500	7/21	206,700	8/21	150,500	9/21	143,800	10/20	65,100	11/20	63,200	12/20	59,700
1/24	44,200	2/21	41,500	3/24	62,500	4/21	53,300	5/23	69,900	6/21	220,700	7/22	203,500	8/22	141,800	9/22	147,300	10/21	62,300	11/21	55,000	12/21	48,800
1/25	68,100	2/22	64,500	3/25	68,200	4/22	68,200	5/24	83,200	6/22	289,200	7/23	299,300	8/23	134,700	9/23	143,500	10/22	64,700	11/22	51,700	12/22	61,700
		2/23	64,500			4/23	72,100	5/25	102,100	6/23	306,900	7/24	121,200	8/24	164,900	9/24	138,000	10/23	47,400	11/23	67,400	12/23	61,300
		2/24	66,200			4/24	69,600			6/24	273,700	7/25	70,800	8/25	150,400			10/24	55,500	11/24	58,800	12/24	61,700
		2/25	64,100			4/25	72,700			6/25	295,500	7/26	171,200	8/26	136,000			10/25	65,600			12/25	62,300
						4/26	58,400																
<b>Totals</b>																							
	<b>Pumped</b>	1,673,200	2,031,300		1,753,000	2,077,200		3,438,600		6,918,300		7,711,300		5,273,100		4,953,000		2,680,500		1,793,700			1,814,900
	<b>Sold</b>	1,320,738	1,640,802		1,393,932	1,720,777		3,321,871		6,914,048		7,901,352		5,349,752		5,116,428		2,574,422		1,614,037			1,668,894
	<b>Lost</b>	352,462	390,498		359,068	356,423		116,729		4,252		-190,052		-76,652		-163,428		106,078		179,663			146,006
	<b>% Lost</b>	21%	19%		20%	17%		3%		0%		-2%		-1%		-3%		4%		10%			8%
	<b>Max. Daily Pumped</b>	75,600	86,500		73,700	79,900		211,900		306,900		332,000		221,900		210,500		163,500		69,000			93,900
	<b>Avg. Daily Pumped</b>	59,757	65,526		62,607	64,913		118,572		223,171		248,752		170,100		170,793		86,468		59,790			58,545
	<b>Days</b>	28	31		28	32		29		31		31		31		29		31		30			31
	<b>Avg. Sold</b>	47,169	52,929		49,783	53,774		114,547		223,034		254,882		172,573		176,429		83,046		53,801			53,835
	<b>GPM Pumped</b>	41	46		43	45		82		155		173		118		119		60		42			41
	<b>GPD Lost</b>	12,588	12,597		12,824	11,138		3,648		137		-6,131		-2,473		-5,635		3,658		6,195			5,035
	Meter was out of service. Average for the remaining days was substituted.																						