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APR 27 2020
DEPARTMENT OF WATER RESOURCES

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

STATEMENT OF COMPLETION

FOR SUBMITTING PROOF OF BENEFICIAL USE

FOR OFFICE USE ONLY	
Amt. of Fee $	150.00
Receipt No.	C108671
Receipted By	KM
Date Receipted	4-27-2020

The Idaho Department of Water Resources considers this form a statement by the permit holder(s) that development of a water right has been **completed** and that water has been applied to beneficial use to the extent described below. **This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner.** Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, contact any Department office or visit the Department's website at idwr.idaho.gov for an *Assignment of Permit* form. If you wish to relinquish your permit because you have not established the authorized use of the water and are not applying for an extension, please notify the Department in writing.

1. Permit No. 22-13265 Telephone No. (208) 787-2940
2. Name of Permit Holder(s) City of Victor
3. Mailing Address P.O. Box 122 City Victor
   State ☑ ID Zip 83455 Email roberth@victorcityidaho.com
4. Source of Water Groundwater If **GROUND WATER** (well), Date Drilled mo. June / yr. 2010
   Well Driller High Plains Drilling Drilling Permit Number 54867
5. Extent of use(s) completed **as authorized by the water right permit**:
   Domestic (No. of households) 1140 Stockwater (No. and type of stock) _____
   Irrigation (No. of acres) _____ Other _____
6. Total rate of diversion or storage volume for which proof is submitted 3 cfs **OR** _____ acre-feet.
7. Compliance with a measuring device requirement, lockable controlling device requirement, and/or other conditions of permit: Refer to the approval conditions on your permit and respond accordingly.
   The Department will not issue a license if permit conditions are not met.

Measuring Device	**Is a measuring device required?**	Yes ☒	No ☐
	If yes, has the measuring device been installed?	Yes ☒	No ☐
Lockable Controlling Device	**Is a lockable device required to control the diversion?**	Yes ☐	No ☒
	If yes, has the lockable device been installed?	Yes ☐	No ☒
Fish Screen	**Is a fish screen required?**	Yes ☐	No ☒
	If yes, has the fish screen been installed?	Yes ☐	No ☒

   Other Conditions of Permit
   Do the approval conditions on your permit require you to submit additional information in connection with your proof of beneficial use? If yes, list the conditions below and attach documents with the required information.
   Report Completed? Yes ☒ No ☐
8. Fee Enclosed $ _____ or not applicable ☐. See fee schedule on page 2 of the instructions.
   Proof statements filed without an appropriate fee, will be considered incomplete.
9. Person to contact to accompany the Department representative during field examination of the water system.
   Name Robert M. Hauxveldt Telephone Number (208) 399-2155
   Mailing Address P.O. Box 122 City Victor
   State ID Zip 83455 Email roberth@victorcityidaho.com

The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted and applied to a beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Signature of Permit Holder Robert M. Hauxveldt City Engineer Date 4-20-2020
(Include your title, if on behalf of company or organization)

Mail to: Idaho Department of Water Resources, PO Box 83720, Boise, ID 83720-0098

Form No. 217 12/15

City of Victor

Water Right Report

April 2020

By: Robert M. Heuseveldt, P.E., CFM
City Engineer

PROFESSIONAL ENGINEER
LICENSED
14027
4-20-2020
STATE OF IDAHO
ROBERT M. HEUSEVELDT

Table of Contents

List of Tables:

1.0 Introduction

In accordance with the conditions of approval listed on the Permit to Appropriate Water Numbers 22-13265 and 22-13717 this report has been prepared to help assess the proof of beneficial use. The water used under this permit is intended to serve the City of Victor that is located in Teton County on the East Side of Idaho. The City of Victor Culinary Water System, hereafter referred to as the system, consists of three water sources, two storage tanks, a main booster stations, two neighborhood booster stations, 925 water meters, and several miles of distribution pipelines of various sizes. In order to assess the system, it is important to understand how the system operates. Section 2 of this report will describe each component of the system. Section 3 will explain the three different modes of operation for the system. After establishing how the system operates Section 4 will assess the volumes and flow rates or diversion rates associated with the system and each source. Section 5 will address the specific conditions of approval under the permits and give recommendations on the rates of diversion for the water right permits.

2.0 Components of the System

The system is broken down into the following categories: sources, storage tanks, and booster stations. Each of these components play a role in how the system operates in the three modes that will be discussed in Section 3 of this report. Exhibit 1 is an aerial map of the City that has each of the system components labeled for convenience and information purposes.

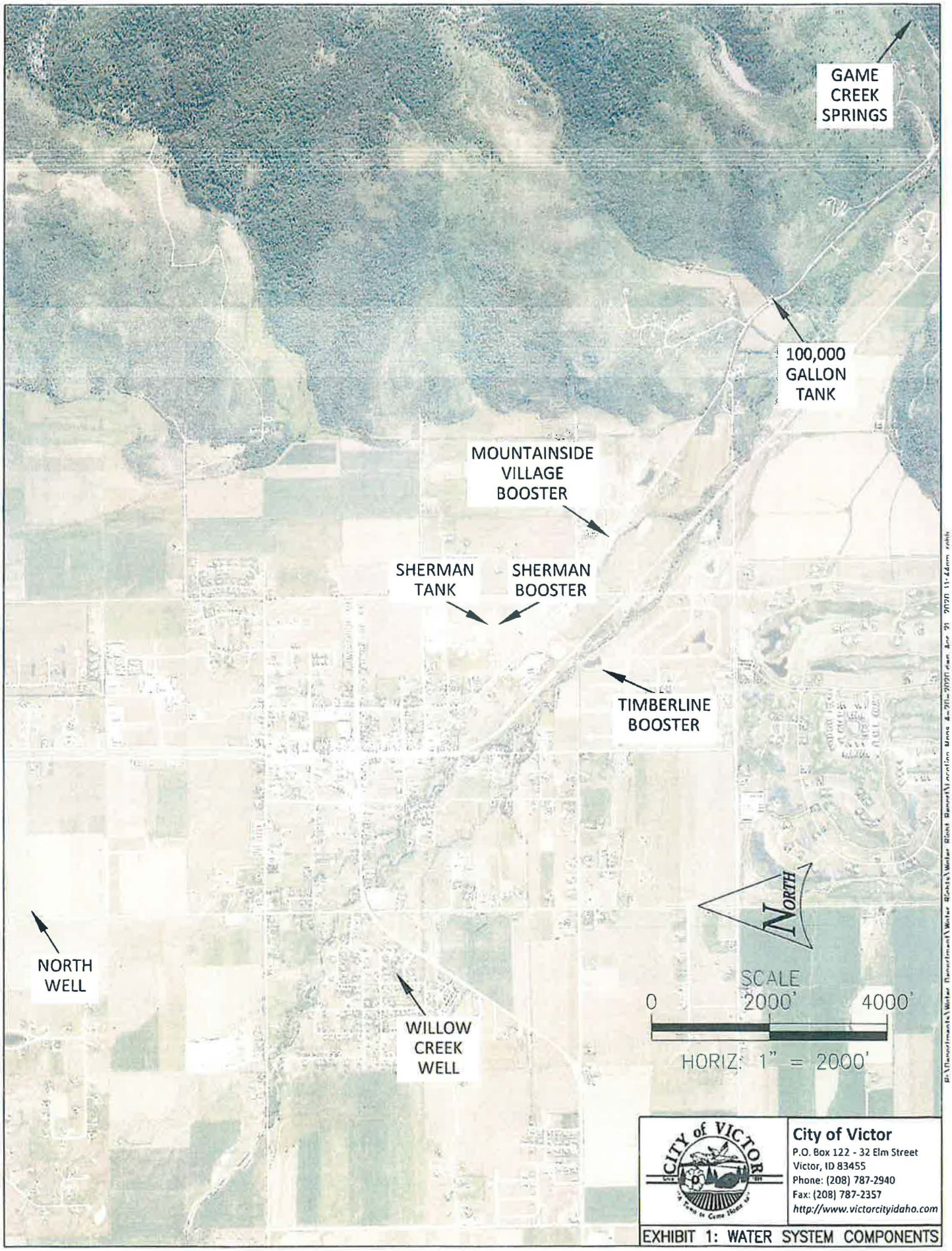
2.1 Sources

There are three sources or points of diversion that provide water to the system. The system operators refer to the sources as the Game Creek Spring, the Willow Creek Well, and the North Well. The corresponding water right and permit information for these sources is listed in Table 1 – Victor Water Right and Permit Summary.

Table 1 – Victor Water Right and Permit Summary

Description	Water Right/Permit Number	Source	Diversion Rate (cfs)	Priority Date
Game Creek Spring	22-566 A	Springs	1.6	6/1/1896
Game Creek Spring (Seasonal)	22-122	Springs	3.2	1/22/1916
Willow Creek Well	22-7762	Ground Water	2.23	8/27/1993
North Well (In Development Permit)	22-13265	Ground Water	3	3/12/2003
North Well (In Development Permit)	22-13717	Ground Water	3	5/11/2007

The first source is the Game Creek Spring. It is located approximately 2.8 miles southeast of the City Center. This source supplies water to the system by gravity through a concrete spring box that feeds a 10 inch watermain that runs along the old Jackson Highway and ties directly into the distribution system.



City of Victor
P.O. Box 122 - 32 Elm Street
Victor, ID 83455
Phone: (208) 787-2940
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http://www.victorcityidaho.com

EXHIBIT 1: WATER SYSTEM COMPONENTS

The second source is the Willow Creek Well. This well is located approximately 0.7 miles west of the City Center. This source is isolated from the distribution system and strictly fills the Sherman Tank that is located in Sherman Park.

The third and last source is the North Well which is located on 1,000 West (Crystal Avenue) and is approximately 1.2 miles north west of the City Center. This source is connected directly to the distribution system. Currently the North well has two Permits to Appropriate Water. The numbers for these permits are listed in Table 1.

2.2 Storage Tanks

There are two storage tanks in the system. The operators refer to the storage tanks as the One Hundred Thousand Gallon Tank, and the Sherman Tank.

The One Hundred Thousand Gallon Tank is located along the 10-inch water main that comes from the Game Creek Spring. This tank is filled by the Sherman Booster or the North Well and acts as a bladder for the system. It is important to know that the spring does not fill this tank. This tank supplements the flow from the springs when the system is being fed strictly by the springs which is Operation Mode 1.

The second storage tank is the Sherman Tank. This tank is in Sherman Park and is filled through an isolated line that comes from the Willow Creek Well. It is designed to have the volume capacity of 1 Million Gallons. This tank feeds the distribution system through the Sherman Booster Station that is connected directly to the tank. It is filled through an isolated line that is connected to the Willow Creek Well.

2.3 Booster Stations

There are three booster stations in the system. The operators of the system refer to them as the Sherman Booster, the Mountainside Village Booster, and the Timberline Booster.

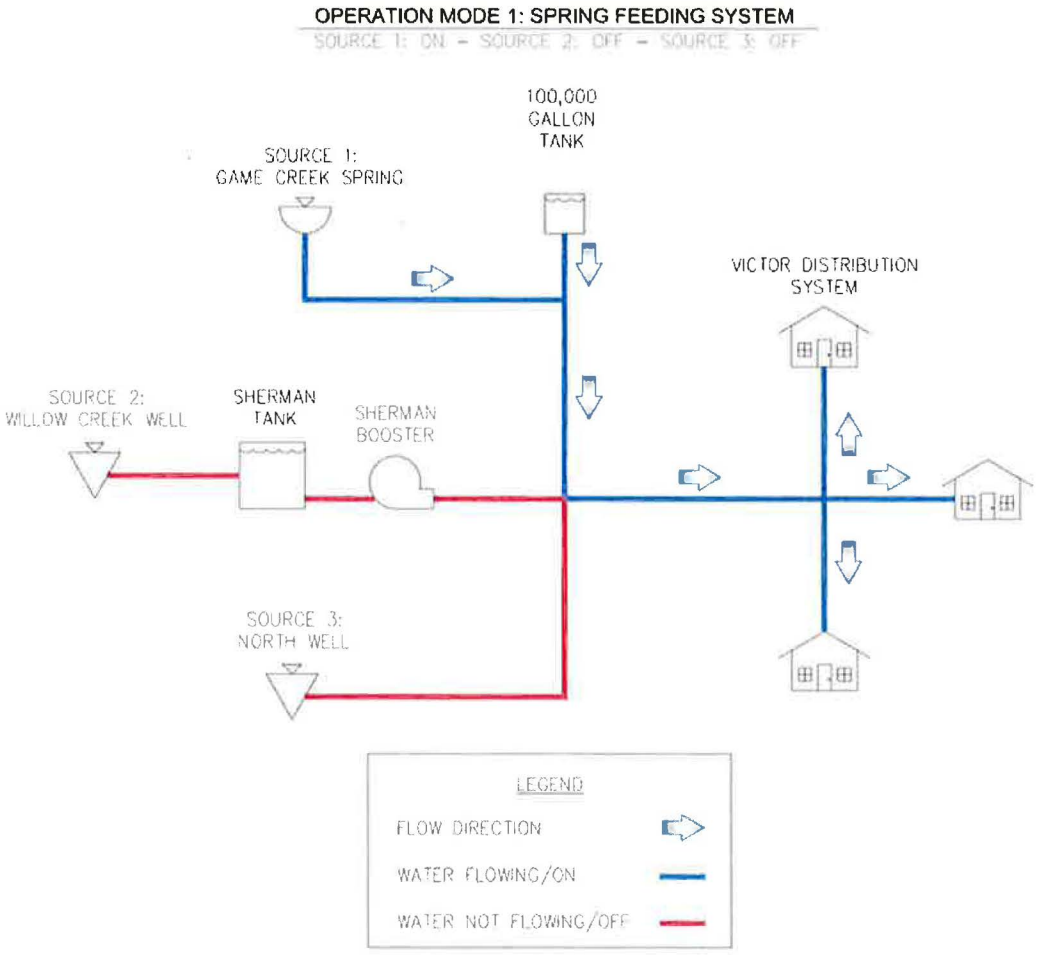
The Sherman Booster is located next to the Sherman Tank in Sherman Park. The operation of this booster station will be discussed in Section 3 of this report under Operation Mode 2.

The Mountainside Village Booster and the Timberline Booster are neighborhood or subdivision specific boosters that are located inside of their respective subdivisions. These boosters draw off the distribution system for water and not off a storage tank. For all intents and purposes these can be considered a collection of users on the system and will not be discussed further in this report.

3.0 Operation of the System

The system has three modes of operation. These shall be referred to as Operation Mode 1: Spring Feeding the System, Operation Mode 2: Sherman Booster On, and Operation Mode 3: North Well On. Each of these modes is based on logic set up in a SCADA (Supervisory Control and Data Acquisition) system. This logic will be explained in each of descriptions for the separate operation modes below. Diagrams 1 through 3 are also included for a visual explanation of the modes of operation. Please refer to the legend for the symbology of the diagrams. Each of the system components described above are labeled in the diagram. For each of the modes of operation it is important to understand what source is supplying the water, what pipelines have water running through them, and the direction of the flow.

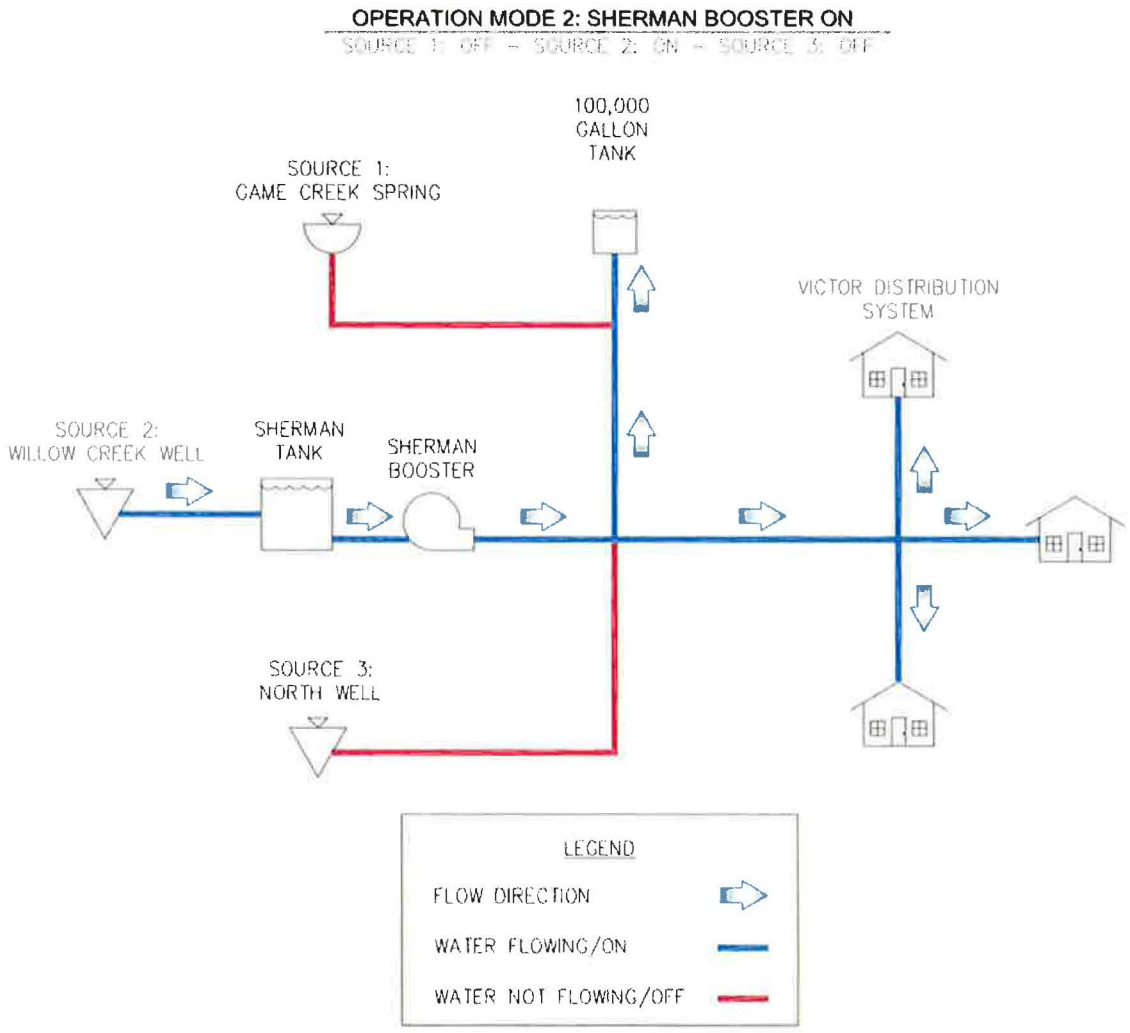
Diagram 1 – Operation Mode 1



3.1 Operation Mode 1: Spring Feeding the System

Operation Mode 1 is utilizing the water from the Game Creek Spring to feed the system; however, the system water demands are higher than what the spring can produce. In order to supplement the flow from the spring the 100,000 Gallon Tank also supplies water to the system in this mode of operation. Please note on the diagram that the flow arrows are indicating flow from both the spring and the 100,000 Storage Tank. When operating in this mode the City is being fed by a gravity system without any electric pumps to maintain pressure. It is the most efficient mode of operation. Eventually the tank level or the depth of the water in the 100,000 Gallon Tank drops as it supplements the spring. The SCADA system monitors the level in the 100,000 Gallon Tank. If the tank empties it cannot supplement the flow from the springs, and the system demands cannot be met. For this reason when it drops to a designated level the SCADA system turns on the Sherman Booster and the system begins operating in Operation Mode 2.

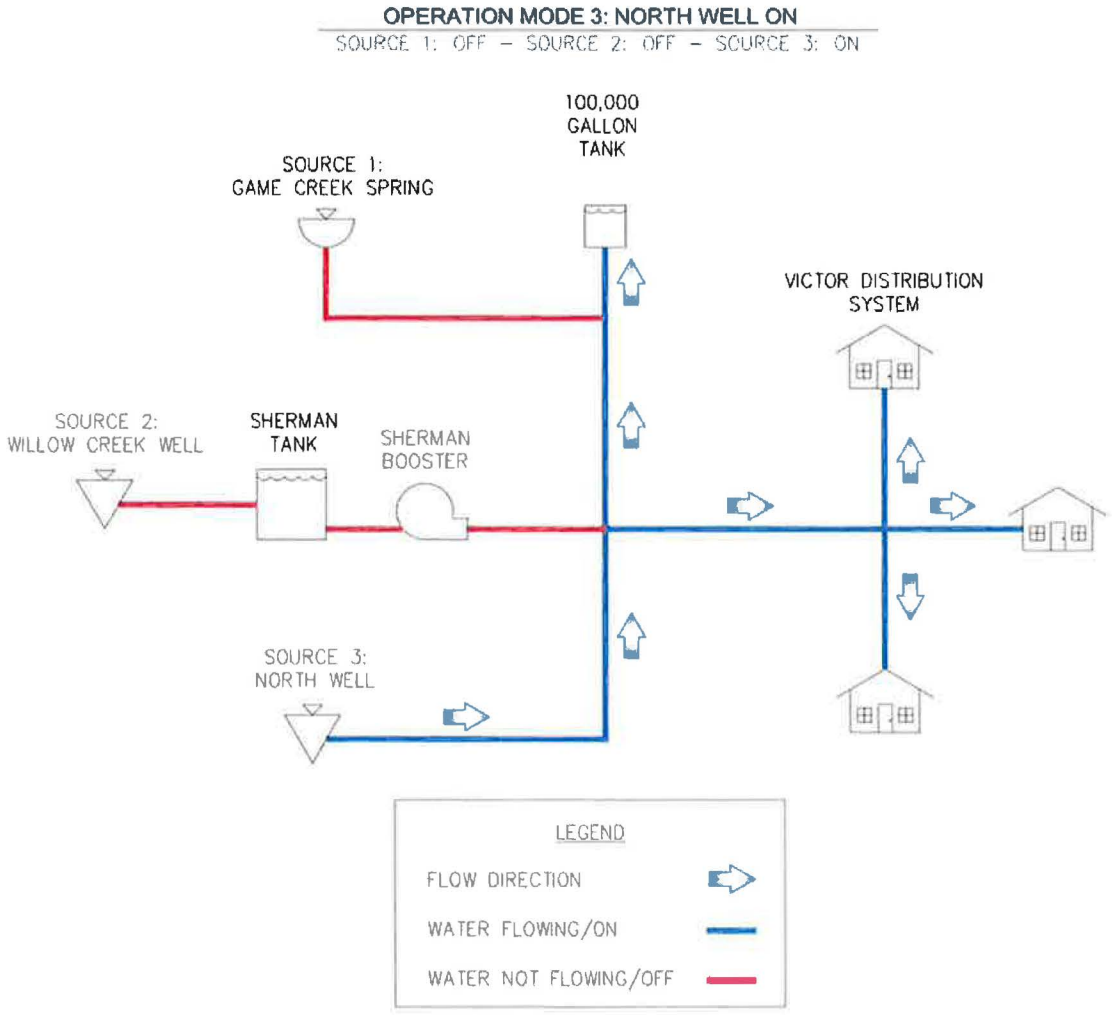
Diagram 2 – Operation Mode 2



3.2 Operation Mode 2: Sherman Booster On

Once the level in the 100,000 Gallon Tank drops to a designated point the SCADA System turns on the Sherman Booster and begins to run the system in Operation Mode 2. In this mode, the Sherman Booster supplies the water to the system. The pumps for this booster ramp up or down to maintain a constant pressure while meeting the system demand. The Sherman Booster also pushes back against the springs and fills the 100,000 Gallon Tank. Please see the flow direction arrows indicating that the flow is coming from the booster and feeding the system while filling the 100,000 Gallon Tank. During this mode of operation, the City does not use any of the water from the springs. The source that fills the Sherman Tank in this mode of operation is Source 2 or the Willow Creek Well. The operation of this well is based on the level in the Sherman Tank. The SCADA system monitors the Sherman Tank level and turns on the Willow Creek Well to fill the tank when it drops to a designated level. The flows from the well are constant and do not vary like the booster flow. Once the tank is filled the SCADA turns the well off and the system returns to Operation Mode 1.

Diagram 3 – Operation Mode 3



3.3 Operation Mode 3: North Well On

Operation Mode 3 is very similar to Operation Mode 2. In the SCADA System the North Well and the Booster operate the same way and off the same logic; however, they take turns. When the water level in the 100,000 Gallon Tank drops to a designated point the SCADA will turn on the North Well. Only the Booster or the North Well Operate at one time. They do not operate at the same time and alternate every other cycle. The North Well has a variable frequency drive or VFD that runs the pump. This allows it to ramp up or down in order to maintain system pressures, keep up with the demand, and fill the 100,000 Gallon Tank. Please note the flow direction arrows indicating that the North Well supplies water to the system and fills the 100,000 Gallon Tank. The City does not receive any of the spring water during this mode of operation. For the purposes of this report it is important to know that the diversion rate or pumping rate for this mode of operation varies based on the demand of the system. Once the 100,000 Gallon Tank is filled the SCADA turns off the well and the system goes back to operating under Operation Mode 1.

4.0 Source Flow Rates and Volumes

The public works staff for the City of Victor collects and records flow data for the system on a regular basis. These records are then placed into spreadsheets for each month that can be used to analyze the system. The monthly flow records for the previous three years are included in Appendix A of this report. This section of the report will summarize the flows and volumes for each of the sources or points of diversion for the system.

4.1 Flow Data Source 1: Game Creek Spring

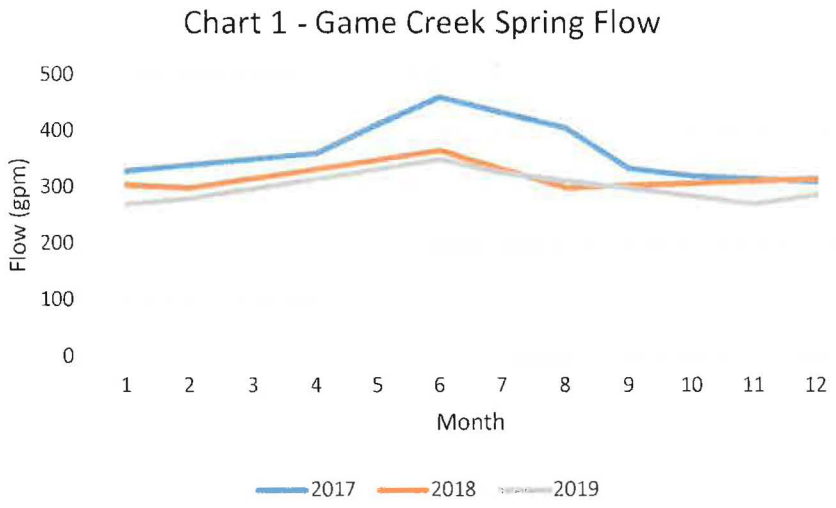
The Game Creek Spring does not have a working meter that monitors the flows. The City has a contract with a supplier to install a meter this summer. In order to monitor the production of the spring the public works department conducts flow tests at various times throughout the year. The test consists of using a container with a known volume and a stopwatch to measure how much time it takes to fill the container. The flow rate is then calculated by dividing the known volume by the amount of time it took to fill the container. This provides the staff with an estimated flow rate that the spring is producing at the time of year that the test is conducted. A summary of the flow tests is contained in Table 2 – Game Creek Spring Flow Measurements. Averages for each year are also contained at the bottom of the table. The average flow rate varies from year to year and from season to season. Chart 1 shows the trend over the past three years with the peak flow for the springs occurring between April and June which coincides with the spring runoff. The average flow rate over the last three years is 328 gpm (0.73 cfs). The peak flow over the past three years was 460 gpm (1.02 cfs).

The two water rights for the Game Creek Spring are 22-122 and 22-566 A. The diversion rates and priority dates are summarized in Table 1 included earlier in this report. Right number 22-122 is different than the other water rights because it is a seasonal water right. This means it can only be used between April 15 and October 31 of each year. During this designated time of the year this source has the water rights with an approved combined rate of diversion for 4.8 cfs. During the winter months outside of the designated season this source only has a diversion rate of 1.6 cfs. As mentioned above the use over the last three years reflects a peak instantaneous rate of diversion of 1.02 cfs. As mentioned under Section 3.1 of this report this source is utilized in Operation Mode 1 which is the most efficient method for supplying water to the system. The City will always utilize as much of this source as possible where it is the least expensive to operate because it is gravity fed and does not require any pumping. The facilities for this source, including the spring box and piping, have the capacity to handle more than the full diversion rate. It is important to note that according to the last three years of records the spring does not produce the full amount approved under the water rights. Consequently, the City must rely on the other sources to meet the demands of the system. It is suggested that the City assess different ways to better utilize this source as part of their facilities planning studies in the future.

Table 2 – Game Creek Spring Flow Measurements

Month	Calendar Year			Monthly Average (gpm)
	2017	2018	2019	
January	329.3	304.5	270	301
February	339.5	299	280	306
March	349.8	315.5	297.3	321
April	360	332	314.5	336
May	412	348.5	331.8	364
June	460	365	349	391
July	432.5	332	325	363
August	405	299	311.3	338
September	333	303	297.5	311
October	320	307	283.8	304
November	315	311	270	299
December	310	315	286	304
Yearly Average (gpm)	**364**	**319**	**301**	**328**

The numbers in blue were interpolated from the measurements from the closest months.

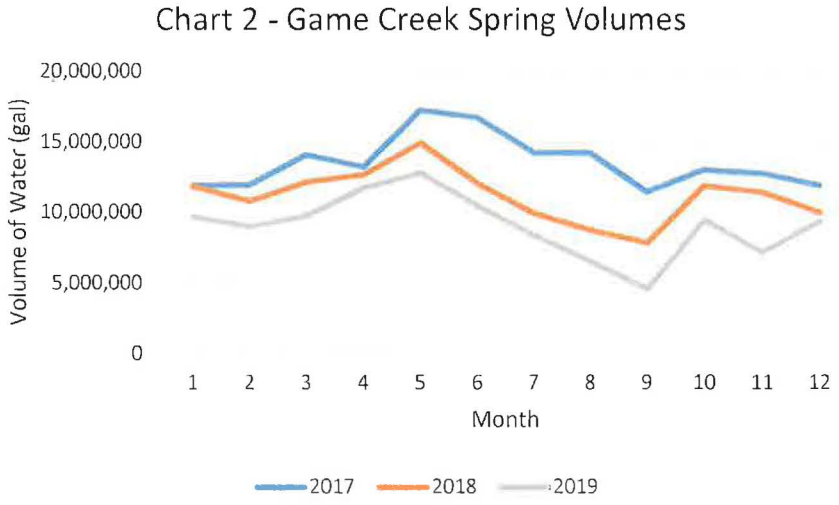


In order to calculate the volume of water that is used from this source it is important to refer to Section 3 of this report to understand the mode of operation. In summary when the system is operating in modes 2 or 3 the water from the spring is not being used. During these modes of operation the receiving box/manifold system for the spring fills up forcing the water from the spring to flow into the creek instead of the receiving pipe. Accordingly, the amount of time that the water from the spring was being utilized by the system was estimated by subtracting out the time that the system was operating in modes 2 and 3. The time that the system was operating in modes 2 and 3 was taken from the pump hours for the North Well and the Sherman Booster. The resulting amount of time that the water was

being used from the spring was multiplied by the average flow rates from above to obtain the estimated volume of water that was used from the Game Creek Spring. Table 3 summarized the results of the volume calculations for the game creek springs over the past 3 years. The volume varied from 109 million gallons to 163 million gallons. Chart 2 reveals the same trend is true for the volume of water used as it is for the flow rate at the springs as shown in Chart 1. The peak months occur between April and June during spring runoff.

Table 3 – Game Creek Spring – Volume of Water used by the System (gal)

Month	Year		
	2017	2018	2019
January	11,914,074	11,857,230	9,687,600
February	11,970,504	10,799,880	8,988,000
March	14,082,948	12,153,060	9,757,386
April	13,219,200	12,669,120	11,737,140
May	17,254,560	14,950,650	12,800,844
June	16,753,200	12,088,800	10,490,940
July	14,246,550	9,940,080	8,385,000
August	14,239,800	8,754,720	6,537,300
September	11,468,520	7,871,940	4,605,300
October	13,017,600	11,880,900	9,450,540
November	12,776,400	11,419,920	7,176,600
December	11,922,600	10,017,000	9,352,200
Total	**162,865,956**	**134,403,300**	**108,968,850**



4.2 Flow Data Source 2: Willow Creek Well

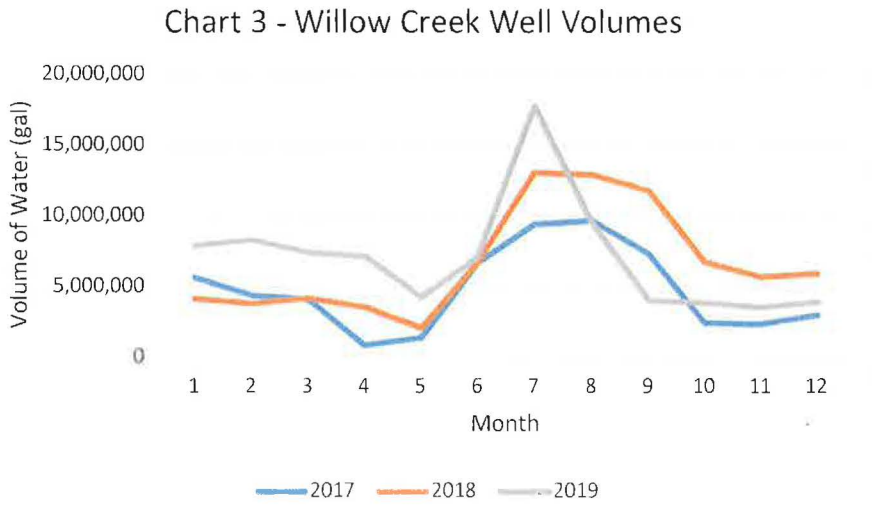
As mentioned previously in Section 3 the Willow Creek Well is the only source that provides water for the Sherman Tank and Booster. There is an isolated water pipeline that runs from this well to the tank. The flow rate is constant for the Willow Creek Well; therefore, the flow rate can be calculated by measuring how long it takes the well to fill a set volume in the Sherman tank. The Sherman Tank is a cylindrical concrete tank. According to the record drawings the inside diameter of the tank is 108 feet. The SCADA System is set to turn the Willow Creek Well on when the Sherman Tank is at 10.5 feet. The well then fills the tank until it reaches a depth of 14.5 feet at which point the SCADA System turns the Willow Creek Well off. The total depth that is filled during each cycle is 4 feet. The resulting volume that was filled by the Willow Creek Well was 274,097 gallons. The time it took to fill the tank was measured while the system was operating in modes 1 or 3 to ensure that the Sherman Booster was not drawing water from the tank. This would allow for an accurate measurement. The time it took the Willow Creek Well to fill the Sherman Tank was 265 minutes on average. Next, the average pump rate was calculated by dividing the total volume filled by the time it took to fill. The resulting pump rate was approximately 1,034 gpm or 2.3 cfs.

The water right associated with the Willow Creek well is Number 22-7762 as summarized in Table 1. The diversion rate on the water right is 2.23 cfs. The Willow Creek Well utilizes the full water right on a consistent basis.

In order to obtain the volume of water that the Willow Creek Well provides to the system the Sherman Booster flow records were used. The booster is the pump station that draws from the tank to feed the system. Table 4 reflects the total volume that was provided by the Willow Creek Well via the Sherman Tank and Booster over the past three years. Chart 3 shows the trend of the monthly volumes. The peak months for the Willow Creek Well Volumes were June through September with July being the highest.

Table 4 – Willow Creek Well – Volume of Water used by the System (gal)

Month	Year		
	2017	2018	2019
January	5,619,000	4,137,000	7,900,000
February	4,375,000	3,795,000	8,269,000
March	4,119,000	4,178,000	7,410,000
April	860,000	3,550,000	7,119,000
May	1,374,000	2,085,000	4,251,000
June	6,665,000	6,691,000	7,090,000
July	9,391,000	13,062,000	17,746,000
August	9,671,000	12,919,000	9,509,000
September	7,318,000	11,779,000	4,030,000
October	2,443,000	6,734,000	3,879,000
November	2,367,000	5,685,000	3,554,000
December	3,011,000	5,955,000	3,909,000
Total	**57,213,000**	**80,570,000**	**84,666,000**



4.3 Flow Data Source 3: North Well

The North Well was incorporated into the system in August of 2019. It operates on a similar level as the Sherman Booster as explained in Section 3 of this report. The challenge with the flow data for the North Well lies in the fact that the City does not have a full year of data. It is important to see how the flows vary through the peak months of June through September. The North well is also different from the Willow Creek Well because it is tied directly into the system and its flows vary based upon the system demand and pressures. According to the Record Drawings for the North Well the 300 Horsepower Pump was designed to pump at the rate of 2,100 gpm or 4.68 cfs to meet fire flow requirements. Municipalities are required to meet the maximum daily demand plus fire flow requirements or 1,500 gallons per minute for a minimum of two hours. During the development period of the well staff ran the pump at 3,000 gallons per minute as a test without any problems. Normal operation levels will not reach that pumping rate, but the system was designed to that capacity.

The average pumping rate for the north well was calculated by dividing the total volume that was pumped by the number of hours that the pump was in operation. Table 5 reflects the pumping rates from August of 2019 through December of 2019. The average pump rate during this time period was found to be 607 gpm.

The permits associated with the North well are numbers 22-13265 and 22-13717. The diversion rate for each of the two permits is 3.0 cfs or a total of 6.0 cfs. The conditions of approval under both permits will be addressed in Section 5 of this report.

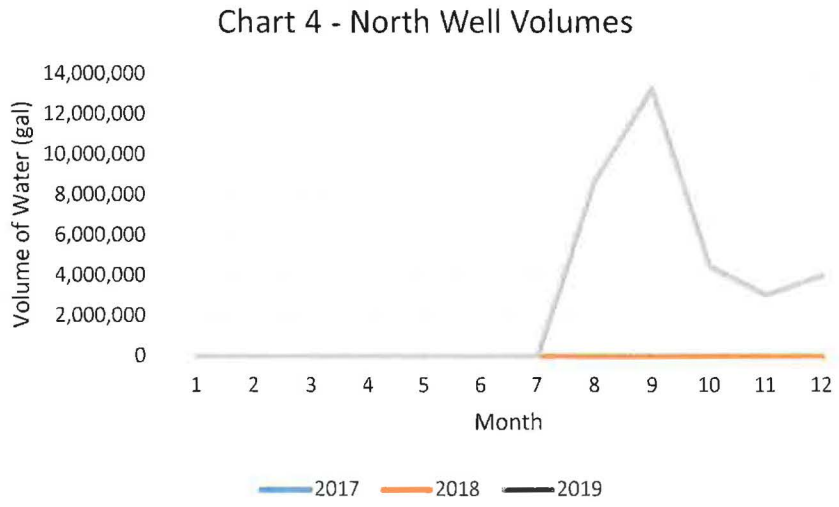
Table 5 – North Well Pump Rate Data

Month	Volume Pumped (gal)	Pump Hours	Average Pumping Rate (gpm)
August	8,702,400	228	636
September	13,260,096	352	628
October	4,464,191	125	595
November	3,044,499	86	590
December	3,982,332	113	587
Average Pump Rate (gpm)			**607**

The volumes for the North Well have been summarized in Table 6. The North Well was placed into operation in August of 2019. The trend has been plotted in Chart 4. There was a bit of a peak during the month of September due to work being done on the Willow Creek Well. During this work the system only operated in modes 1 and 3.

Table 6 – North Well – Volume of Water used by the System (gal)

Month	Year
	2019
August	8,702,400
September	13,260,096
October	4,464,191
November	3,044,499
December	3,982,332
Total	33,453,518



5.0 Conditions of Approval for Permit Numbers 22-13265 and 22-13717

Condition of Approval Number 6 under Permit Number 22-13265 and Condition of Approval 8 under Permit Number 22-13717 states the following:

> *"In connection with the proof of beneficial use submitted for this permit the permit holder shall also submit a report showing the total annual volume, the maximum daily volume, and the maximum instantaneous rate of flow diverted from the point of diversion authorized for this permit during the development period. The report shall also show the maximum instantaneous rate of diversion, either measured or reasonably estimated by a qualified professional engineer, geologist, or certified water rights examiner, for the entire City of Victor municipal water system. The report shall also describe and explain how water diverted under this permit provides an additional increment of beneficial use of water for the City of Victor municipal water system as opposed to an alternative point of diversion for prior water rights already held and used by the City of Victor for its municipal water system."*

Sections 5.1 through 5.3 will address this condition while Section 5.4 will show the number of Equivalent Residential Connections (ERU's) that the City has an the growth that the system has experienced.

5.1 North Well – Total Annual Volume, Maximum Daily Volume and the Maximum Instantaneous Rate of Flow.

The total annual volume for the North well is going to be estimated based off of other system components where the City does not have a full year of records at this time. As explained in Section 3 of this report the North Well and the Sherman Booster operate similar in the system and alternate ever other cycle with each other. As such the volumes for the Sherman Booster and the North Well will be compared and used to make estimates for the required volumes and diversion rates. Table 7 lists the total volumes that were pumped when both the Sherman Booster and the North Well were online and working. The City does have flow records from August, but the North Well was not functioning the entire month; therefore, the totals will not be included in this table. In September there was work being completed on the Willow Creek Well which resulted in the Sherman Booster not running; therefore, the totals for September will not be included either. Table 7 reflects the months from October of 2019 through March of 2020. The resulting percentages are as follows: the Sherman Booster accounted for 49% of the total pumped volume, and the North Well accounted for 51% of the total pumped volume.

Table 7 – Total Volume Pumped Comparison between the Sherman Booster and the North Well

Month	Sherman Booster Gallons Pumped	North Well Gallons Pumped	Total Gallons Pumped into System	Sherman Booster Percentage of Total	North Well Percentage of Total
Oct-19	3,879,000	4,464,191	8,343,191	46%	54%
Nov-19	3,554,000	3,044,499	6,598,499	54%	46%
Dec-19	3,909,000	3,982,332	7,891,332	50%	50%
Jan-20	3,458,000	4,097,325	7,555,325	46%	54%
Feb-20	3,477,000	3,624,530	7,101,530	49%	51%
Mar-20	4,608,000	5,018,496	9,626,496	48%	52%
Totals	**22,885,000**	**24,231,373**	**47,116,373**	**49%**	**51%**

Table 8 reflects a summary of the total volumes that were pumped by the system excluding any volumes provided by the springs or mode 1 of operation. The percentage calculated in Table 7 was then applied to the total volume pumped during 2019. The resulting estimated **Total Annual Volume** for the North Well was **63,918,454 gallons**.

Table 8 – Summary of Total Volumes Pumped

System Totals for Water Pumped (Excluding Spring Totals)	
Total Volume Pumped (gal)	118,119,518
Number of Days Measured	344
Average Annual Daily Volume (gal)	343,371
Total Estimated Annual Volume (gal)	125,330,303
Recorded Max Daily Volume - July (gal)	627,000.0
Calculated Max Daily Volume Peaking Factor	1.8
North Well Estimated Totals	
Percentage of North Well	51%
Total Estimated North Well Annual Volume (gal)	63,918,454
Total Estimated Average Annual Daily Volume (gal)	175,119
Max Daily Volume Peaking Factor from Above	1.8
Estimated Max Daily Volume (gal)	315,214

The recorded numbers for 2019 were then reviewed, and the maximum daily volume pumped occurred on July 24th. This number was then compared to the Annual Average Daily Volume of gallons pumped in the system to establish a peaking factor of 1.8. The peaking factor was then applied to Estimated Annual Average Daily Volume pumped by the North Well. The resulting estimated **Max Daily Volume** that will be pumped by the North Well is **315,214 gallons**.

In order to find the Max Instantaneous rate of flow diverted from the North Well, without having a full year of data, the comparison with the Sherman Booster will be used once again. As discussed in Section 3 of this report the Sherman Booster and the North Well alternate and operate the same way. The assumption made here is that the system demands during the peak instantaneous event will be the same or met by either the North Well or by the Sherman Booster. Hence, the peak instantaneous rate of flow should be the same for the North Well and the Sherman Booster. The records show that the peak day for 2019 was July 24th. During this day both of the pumps at the Sherman Booster ran parallel in order to meet the system demands; therefore, the pump hours overlap, and an average was used. When booster pumps run in parallel you can calculate the flow by combining the flows from each pump. Table 9 summarizes the data from the peak day. The resulting peak day pump rate was 1,397 for the Sherman Booster. The estimated **Max Instantaneous Rate of Flow Diverted from the North Well is 1,400 gpm or 3.1 cfs.** This flow rate does not reflect any fire flow. The fire flow requirement for the City is to meet the Peak Daily Demand of 825 gpm plus supply the fire flow of 1,500 gpm. **The resulting required diversion rate to meet fire flow requirements is 2,325 gpm or 5.18 cfs.**

Table 9 – Peak Day – Sherman Booster Data

Description	Pump 1	Pump 2	Totals/Average
Pump Hours*	8	7	7.5
Pump Volume (gal)	321,000	306,000	627,000
Peak Day Pump Rate (gpm)	669	729	1,397

5.2 Maximum Instantaneous Rate of Diversion for the entire City of Victor Municipal Water System

The demands for the entire water system are summarized in the following Table 10. In order to calculate the Max Instantaneous Rate of Diversion for the entire City it is important to revisit the operation modes of the system to see what sources could be supplying water at the same time. The scenario that diverts the most water at a given time would be when the North Well and the Willow Creek Well are operating at the same time. For example, the system could be running at peak demand times in Operation Mode 3, the North Well meeting the system demands, while at the same time the Willow Creek Well could be filling the Sherman Tank. The Game Creek Springs would be in overflow mode and would not be contributing to the total amount of water diverted. Under this scenario the **Max Instantaneous Rate of Diversion would be the sum of the diversion rate of the Willow Creek Well or 1,034 gpm and Max Instantaneous Rate of Diversion for the North Well or 1,400 gpm. The resulting sum is 2,434 gpm (5.4 cfs).**

Table 10 – System Demands for the City of Victor Municipal Water System.

System Demand	Amount
Annual Average Daily Demand (gpd)	660,141
Average Annual Daily Demand (gpm)	458
Number of ERU's in 2019	1,140
Average Monthly Usage per ERU (gal per month)	17,613
Max Daily Demand Peaking Factor	1.8
Max Daily Demand (gpd)	1,188,253
Max Daily Demand (gpm)	825
Max Instantaneous Hour Flow Peaking Factor	3.1
Max Instantaneous Hour Flow (gpm)	1,421
Fire Flow Demand	**Amount**
Fire Flow Requirment (gpm)	1,500
Peak Daily Demand + Fire Flow (gpm)	2,325
Peak Daily Demand + Fire Flow (cfs)	5.18

This does not take into account the fire flow requirement that the City has to meet. These requirements were mentioned in Section 5.1. Factoring in the fire flow requirements into a different scenario is summarized as follows: The North Well meets the fire flow requirements of 2,325 gpm while the Willow Creek Well Fills the Sherman Tank at 1,034 gpm. **Under this scenario the Max Instantaneous Rate of Diversion for the entire system would be 3,359 gpm (7.5 cfs).**

Another item that is important to address with regards to Table 10 is the Average Usage per ERU. The reason for this number being high is that the City has a large number of users on the original water system that have to run water in the wintertime to prevent freezing. This winter usage runs from October through the end of March. The municipal water system also supplies water to the residents as a backup irrigation source. In accordance with Condition of Approval 12 under Number 22-13717 and 9 under Number 22-13265 the residents utilize the water from Trail Creek Sprinkler company first. Only when these surface waters are not available and are called for by senior water right holder do the residents turn on the municipal water as a backup. The cost for using the City of Victor culinary water is substantially higher than the cost for the Trail Creek Sprinkler irrigation water. This helps the City to strongly encourage the use of the irrigation water first and only using the culinary water as a backup.

5.3 Providing an Additional Increment of Beneficial Use

It is recommended that the rates of diversion be adjusted on the water rights to reflect the actual system demands including fire flow requirements. Currently both water rights 22-13265 and 22-13717 have a rate of diversion of 3.0 cfs respectively. The combined rate of diversion of 6.0 cfs is not necessary at this time. It is recommended that the senior water right or permit number 22-13265 utilize the full diversion rate of 3.0 cfs. It is further recommended that the rate of diversion listed under permit number 22-13717 be adjusted to 2.18 cfs. The combined total diversion rate of 5.18 cfs is the flow rate that meets the peak daily demand plus fire flow requirements. This provides the City with an additional increment of beneficial use by providing a backup source with rights to provide flows during a fire event if the Sherman Tank or Booster is not operating or being repaired.

Having this source and the associated water rights also allows the Willow Creek Well to run at the same time as the other sources. This was the scenario that was discussed in Sections 3 and 5.2 of this report. Staff reviewed the Scada system and found that during the development period the system did often operate in mode 3, with the North Well providing water to the system under 22-13265 and 22-13717, while at the same time the Sherman Tank was being filled by the Willow Creek well under permit number 22-7762. As such the water right for the Willow Creek Well or 22-7762 could not be used at the North Well location or an alternate point of diversion while it is being used at its designated point of diversion already.

5.4 City of Victor ERU Breakdown

Table 11 summarizes by the total number of ERU's by month and year according to the billing software. Over the past three years the City has experienced an average of a 4.3% growth in the number of ERU's. Since 2007 The City has received an additional 464.4 ERU's according to Building Permit Records. The breakdown of these connections is 108.4 ERU's for commercial properties and 356 for residential properties.

Table 11 – City of Victor ERU Breakdown

Month	Year		
	2017	2018	2019
January	1,005	1,035	1,131
February	1,006	1,035	1,131
March	1,006	1,036	1,135
April	1,008	1,036	1,140
May	1,015	1,045	1,140
June	1,017	1,059	1,140
July	1,018	1,098	1,140
August	1,019	1,101	1,140
September	1,020	1,103	1,140
October	1,020	1,107	1,140
November	1,020	1,129	1,140
December	1,020	1,130	1,140

6.0 Conclusion

In conclusion this report was created to provide information requested in the conditions of approval listed on the Permit to Appropriate Water Numbers 22-13265 and 22-13717. It described each component of the system and explained the modes of operation. After establishing how the system functions the flow data from each source was shared. Then in Section 5 the report lists the specific items requested as conditions of approval under the permits along with information requested by IDWR staff. In summary this report recommends that the rates of diversion be approved for permit number 22-13265 and modified to 2.18 cfs for permit number 22-13717.

Appendix A – Monthly Water Records 2017-2019

City of Victor - Water Flow Data

Month: Jan-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2						
3	8:00	16614	16615	718	427	319
4	8:14	16617	16616	334	134	83
5	7:45	16618	16618	331	97	80
6	7:30	16620	16619	0	91	87
7						
8						
9	9:05	16625	16625	681	240	256
10	8:15	16626	16626	0	71	87
11						
12	10:50	16629	16629	329	168	193
13	7:35	16631	16630	336	87	78
14						
15						
16						
17	8:25	16638	16638	682	343	412
18	7:10	16640	16640	343	90	89
19	7:15	16641	16642	147	90	87
20	7:25	16643	16644	245	91	93
21						
22						
23	7:35	16648	16649	672	274	252
24	7:10	16650	16650	0	88	64
25	7:30	16652	16651	339	81	70
26	7:25	16653	16653	0	80	88
27	7:25	16655	16655	324	86	88
28						
29						
30	7:20	16659	16660	339	221	258
31	7:20	16661	16661	338	92	83
			Totals	**6,158**	**2,852**	**2,767**

Days Measured
29

Average Flow from Spring (gpm)
329

Estimated Time of Use of Spring (hrs)
603

Approximate Monthly Spring Flow (gal)
11,914,074

Monthly Pump Hours	
Pump 1	Pump 2
47	46

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
2,852,000	2,767,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,011	1,003

Monthly Average Daily Use (Gal)	
Booster Total (gal)	5,619,000
Spring Total (gal)	11,914,074
Monthly Total	17,533,074
Average Daily Total	604,589

Amount Pumped from Willow Creek Well
6,158,000

City of Victor - Water Flow Data

Month: Feb-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:20	16663	16663	315	90	80
2	7:25	16664	16665	18	89	80
3	10:55	16666	16666	329	86	88
4						
5						
6	7:30	16671	16671	338	248	224
7	10:45	16673	16673	331	82	129
8	7:05	10714	16674	0	0	84
9	7:20	16675	16676	333	53	85
10	7:15	16677	16678	0	80	80
11						
12						
13	7:25	16681	16682	661	217	212
14	7:25	16683	16683	0	91	79
15	7:30	16685	16685	330	87	82
16	7:25	16686	16686	0	80	52
17	7:20	16688	16687	335	81	88
18						
19						
20						
21	7:15	16694	16694	660	310	342
22	7:14	16695	16695	334	82	43
23	7:15	16697	16697	0	84	88
24	7:25	16698	16699	334	44	82
25						
26						
27	7:15	16703	16703	335	268	217
28	7:15	16705	16705	344	82	86
29						
30						
31						
			Totals	4,997	2,154	2,221

Days Measured
28

Average Flow from Spring (gpm)
339

Estimated Time of Use of Spring (hrs)
588

Approximate Monthly Spring Flow (gal)
11,970,504

Monthly Pump Hours	
Pump 1	Pump 2
42	42

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
2,154,000	2,221,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
855	881

Monthly Average Daily Use (Gal)	
Booster Total (gal)	4,375,000
Spring Total (gal)	11,970,504
Monthly Total	16,345,504
Average Daily Total	583,768

Amount Pumped from Willow Creek Well
4,997,000

City of Victor - Water Flow Data

Month: Mar-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:45	16707	16706	0	82	90
2	7:25	16709	16708	334	86	88
3	7:15	16710	16710	0	59	86
4						
5						
6	7:30	16715	16715	727	260	248
7						
8	7:40	16718	16719	332	179	166
9	7:35	16720	16720	127	92	85
10	7:10	16722	16721	212	88	49
11						
12						
13	7:38	16727	16727	678	250	266
14	7:04	16728	16728	0	83	92
15	9:50	16731	16730	336	214	182
16	7:10	16732	16732	2	67	89
17	7:20	16733	16734	344	70	81
18						
19						
20	7:19	16737	16737	330	217	167
21	7:07	16738	16738	325	43	83
22	7:05	16739	16739	0	41	40
23	7:07	16740	16739	0	40	0
24	7:05	16741	16740	0	81	39
25						
26						
27	7:00	16741	16741	358	41	39
28	7:05	16741	16742	1000	0	38
29	7:25	16742	16742	43	40	38
30	7:10	16743	16742	0	42	39
31	8:00	16743	16743	0	0	39
			Totals	**5,148**	**2,075**	**2,044**

Days Measured
31

Average Flow from Spring (gpm)
350

Estimated Time of Use of Spring (hrs)
671

Approximate Monthly Spring Flow (gal)
14,082,948

Monthly Pump Hours	
Pump 1	Pump 2
36	37

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
2,075,000	2,044,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
961	921

Monthly Average Daily Use (Gal)	
Booster Total (gal)	4,119,000
Spring Total (gal)	14,082,948
Monthly Total	18,201,948
Average Daily Total	587,160

Amount Pumped from Willow Creek Well
5,148,000

City of Victor - Water Flow Data

Month: Apr-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2						
3	7:15	16745	16745	0	79	79
4	7:25	16745	16745	351	0	38
5	7:20	16745	16745	0	39	40
6	7:10	16745	16745	0	40	0
7	9:57	16747	16746	0	37	39
8						
9						
10	7:15	16747	16747	349	40	79
11	7:15	16748	16748	0	41	0
12	7:25	16749	16749	0	39	39
13	7:30	16749	16749	0	0	39
14	7:15	16750	16749	0	39	0
15						
16						
17	7:20	16750	16750	0	39	38
18	7:30	16750	16750	0	0	0
19	7:15	16750	16750	0	0	0
20	7:15	16750	16750	0	0	0
21	7:20	16750	16750	0	0	0
22						
23						
24	7:30	16750	16751	342	0	36
25	7:15	16750	16751	0	0	0
26	7:25	16750	16751	0	0	0
27	7:30	16750	16751	0	0	0
28	7:30	16751	16751	0	40	0
29						
30						
31						
			Totals	1,042	433	427

Days Measured
26

Average Flow from Spring (gpm)
360

Estimated Time of Use of Spring (hrs)
612

Approximate Monthly Spring Flow (gal)
13,219,200

Monthly Pump Hours	
Pump 1	Pump 2
6	6

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
433,000	427,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,203	1,186

Monthly Average Daily Use (Gal)	
Booster Total (gal)	860,000
Spring Total (gal)	13,219,200
Monthly Total	14,079,200
Average Daily Total	541,508

Amount Pumped from Willow Creek Well
1,042,000

City of Victor - Water Flow Data

Month: May-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2	7:25	16752	16752	0	42	62
3	7:20	16752	16753	0	20	15
4	7:40	16754	16753	0	48	17
5	8:05	16754	16754	322	29	41
6						
7						
8	7:40	16754	16755	0	0	37
9	7:15	16754	16755	0	0	0
10	7:25	16754	16755	0	0	0
11	7:30	16754	16755	0	0	0
12	7:25	16754	16755	0	0	0
13						
14						
15	7:35	16754	16755	0	0	0
16	7:25	16754	16755	0	0	0
17	7:23	16754	16755	0	0	0
18	7:18	16754	16755	0	0	0
19	7:30	16754	16755	0	0	0
20						
21						
22	7:30	16754	16755	0	0	0
23	7:15	16755	16755	0	42	0
24	7:25	16755	16755	0	0	40
25	7:25	16756	16756	0	41	45
26	7:15	16757	16757	352	82	50
27						
28						
29						
30	7:30	16761	16761	320	266	241
31	7:20	16763	16763	349	141	115
			Totals	**1,343**	**711**	**663**

Days Measured
30

Average Flow from Spring (gpm)
412

Estimated Time of Use of Spring (hrs)
698

Approximate Monthly Spring Flow (gal)
17,254,560

Monthly Pump Hours	
Pump 1	Pump 2
11	11

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
711,000	663,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,077	1,005

Monthly Average Daily Use (Gal)	
Booster Total (gal)	1,374,000
Spring Total (gal)	17,254,560
Monthly Total	18,628,560
Average Daily Total	620,952

Amount Pumped from Willow Creek Well
1,343,000

City of Victor - Water Flow Data

Month: Jun-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:20	16764	16765	400	45	85
2						
3						
4						
5	7:20	16771	16772	726	433	401
6	7:30	16777	16777	614	313	258
7	7:25	16780	16780	371	177	191
8	7:15	16782	16782	321	112	111
9	7:30	16786	16784	457	249	184
10						
11						
12	7:15	16791	16790	775	279	251
13	7:25	16792	16792	0	55	125
14	7:20	16793	16793	354	62	73
15	7:30	16795	16795	0	104	79
16	7:08	16796	16796	387	101	61
17						
18						
19	7:15	16800	16801	377	236	278
20	7:15	16802	16802	402	148	82
21	7:15	16804	16804	169	62	141
22	7:20	16806	16806	210	149	77
23	7:15	16807	16808	341	63	104
24						
25						
26	7:15	16814	16814	695	386	385
27	7:15	16816	16816	326	163	133
28	7:15	16818	16818	378	122	81
29	7:15	16819	16819	0	50	80
30	6:55	16821	16821	340	95	81
31						
			Totals	**7,643**	**3,404**	**3,261**

Days Measured
30

Average Flow from Spring (gpm)
460

Estimated Time of Use of Spring (hrs)
607

Approximate Monthly Spring Flow (gal)
16,753,200

Monthly Pump Hours	
Pump 1	Pump 2
57	56

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
3,404,000	3,261,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
995	971

Monthly Average Daily Use (Gal)	
Booster Total (gal)	6,665,000
Spring Total (gal)	16,753,200
Monthly Total	23,418,200
Average Daily Total	780,607

Amount Pumped from Willow Creek Well
7,643,000

City of Victor - Water Flow Data

Month: Jul-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2						
3	7:20	16826	16825	510	329	259
4	7:10	16829	16829	651	239	227
5						
6	7:15	16833	16832	386	203	192
7	7:10	16835	16835	377	120	167
8						
9						
10	7:20	16843	16843	855	455	454
11	7:30	16846	16846	386	204	152
12	5:10	16851	16851	754	278	323
13	7:20	16854	16854	402	146	190
14	7:10	16856	16857	462	161	160
15						
16						
17	7:39	16864	16863	735	490	358
18	7:20	16869	16869	867	313	340
19	7:35	16872	16872	193	164	164
20	7:10	16875	16875	455	186	181
21	7:17	16878	16878	376	184	162
22						
23						
24	7:16	16884	16885	1179	412	425
25	7:20	16887	16887	276	170	168
26		16890	16889	103	157	88
27	7:15	16891	16891	317	92	138
28	7:18	16894	16893	406	143	86
29						
30						
31	7:20	16899	16899	796	325	386
			Totals	**10,486**	**4,771**	**4,620**

Days Measured
29

Average Flow from Spring (gpm)
433

Estimated Time of Use of Spring (hrs)
549

Approximate Monthly Spring Flow (gal)
14,246,550

Monthly Pump Hours	
Pump 1	Pump 2
73	74

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
4,771,000	4,620,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,089	1,041

Monthly Average Daily Use (Gal)	
Booster Total (gal)	9,391,000
Spring Total (gal)	14,246,550
Monthly Total	23,637,550
Average Daily Total	815,088

Amount Pumped from Willow Creek Well
10,486,000

City of Victor - Water Flow Data

Month: Aug-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	8:02	16901	16902	325	145	151
2	7:35	16907	16907	632	338	276
3	7:25	16909	16909	404	164	144
4	7:10	16912	16912	323	147	144
5						
6						
7	7:30	16918	16919	744	431	434
8	7:25	16921	16921	418	169	163
9	7:10	16923	16923	424	142	92
10	7:35	16924	16925	0	88	146
11	7:30	16927	16927	362	153	84
12						
13						
14						
15	7:15	16937	16936	1197	558	527
16	7:35	16939	16938	318	149	126
17	7:30	16941	16941	421	150	186
18	7:25	16943	16944	399	134	170
19	7:30	16948	16948	509	257	223
20	8:20	16951	16951	413	180	163
21	7:30	16954	16953	376	169	122
22	7:35	16956	16955	17	128	134
23	7:30	16958	16958	407	120	170
24	7:40	16960	16960	363	124	105
25						
26						
27						
28	7:20	16967	16967	820	448	448
29	7:20	16972	16972	927	300	297
30	7:40	16978	16978	509	280	295
31	7:25	16981	16980	391	179	118
			Totals	**10,699**	**4,953**	**4,718**

Days Measured
31

Average Flow from Spring (gpm)
405

Estimated Time of Use of Spring (hrs)
586

Approximate Monthly Spring Flow (gal)
14,239,800

Monthly Pump Hours	
Pump 1	Pump 2
80	78

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
4,953,000	4,718,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,032	1,008

Monthly Average Daily Use (Gal)	
Booster Total (gal)	9,671,000
Spring Total (gal)	14,239,800
Monthly Total	23,910,800
Average Daily Total	771,316

Amount Pumped from Willow Creek Well
10,699,000

City of Victor - Water Flow Data

Month: Sep-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:17	16983	16983	375	121	148
2						
3						
4						
5	7:20	16993	16993	1168	589	521
6	7:30	16995	16995	380	148	146
7	7:20	16998	16998	377	124	170
8						
9						
10						
11	7:20	17008	17008	1101	621	552
12	7:30	17010	17010	376	163	164
13	7:30	17018	17018	911	403	401
14	7:18	17020	17020	197	160	106
15	7:05	17023	17022	371	152	131
16						
17						
18	7:18	17028	17028	791	339	358
19	9:50	17030	17031	402	144	144
20	7:25	17032	17032	381	150	93
21	7:35	17034	17034	0	83	88
22	7:25	17035	17035	321	42	79
23						
24						
25	7:20	17040	17040	330	262	254
26	7:25	17041	17041	382	86	40
27	7:30	17042	17042	0	43	81
28	7:50	17043	17043	0	86	42
29	7:40	17044	17044	327	44	40
30						
31						
			Totals	**8,190**	**3,760**	**3,558**

Days Measured
29

Average Flow from Spring (gpm)
333

Estimated Time of Use of Spring (hrs)
574

Approximate Monthly Spring Flow (gal)
11,468,520

Monthly Pump Hours	
Pump 1	Pump 2
61	61

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
3,760,000	3,558,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,027	972

Monthly Average Daily Use (Gal)	
Booster Total (gal)	7,318,000
Spring Total (gal)	11,468,520
Monthly Total	18,786,520
Average Daily Total	647,811

Amount Pumped from Willow Creek Well
8,190,000

City of Victor - Water Flow Data

Month: Oct-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2	7:25	17046	17047	319	126	165
3	7:20	17048	17048	0	81	41
4	7:27	17049	17049	321	47	38
5	7:35	17049	17049	0	46	40
6	7:30	17050	17050	0	40	40
7						
8						
9						
10	7:45	17053	17053	319	162	159
11	7:30	17054	17054	314	41	42
12	7:30	17055	17055	0	41	41
13	7:45	17056	17056	0	39	38
14						
15						
16						
17	7:35	17058	17059	357	124	157
18	7:30	17059	17059	0	40	0
19	7:15	17060	17060	0	42	41
20	7:25	17060	17060	355	41	40
21						
22						
23	7:30	17063	17062	0	121	82
24	7:30	17063	17063	0	4	39
25	7:30	17063	17064	358	38	41
26	7:27	17064	17064	0	39	41
27	7:15	17065	17064	0	40	0
28						
29						
30	7:30	17067	17067	358	83	122
31	7:40	17067	17068	0	40	41
			Totals	**2,701**	**1,235**	**1,208**

Days Measured
30

Average Flow from Spring (gpm)
320

Estimated Time of Use of Spring (hrs)
678

Approximate Monthly Spring Flow (gal)
13,017,600

Monthly Pump Hours	
Pump 1	Pump 2
21	21

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
1,235,000	1,208,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
980	959

Monthly Average Daily Use (Gal)	
Booster Total (gal)	2,443,000
Spring Total (gal)	13,017,600
Monthly Total	15,460,600
Average Daily Total	515,353

Amount Pumped from Willow Creek Well
2,701,000

City of Victor - Water Flow Data

Month: Nov-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:30	17068	17068	0	40	33
2	7:35	17069	17068	0	43	8
3						
4						
5						
6	7:15	17071	17071	317	123	118
7	7:30	17072	17072	0	13	83
8	7:35	17073	7073	325	56	42
9	7:25	17073	17074	0	27	41
10						
11						
12						
13	7:34	17072	17077	320	168	158
14	7:25	17077	17078	0	46	37
15	7:25	17078	17078	0	40	37
16	7:10	17079	17079	0	40	41
17	7:20	17079	17080	0	44	42
18						
19						
20	7:40	17082	17082	315	125	122
21	7:25	17082	17083	0	42	41
22	7:15	17083	17084	323	41	42
23						
24						
25						
26	7:30	17087	17088	317	211	201
27						
28	7:35	17088	17088	0	41	41
29	7:10	17089	17089	0	41	41
30	7:30	17090	17090	360	56	42
31						
			Totals	**2,277**	**1,197**	**1,170**

Days Measured
30

Average Flow from Spring (gpm)
315

Estimated Time of Use of Spring (hrs)
676

Approximate Monthly Spring Flow (gal)
12,776,400

Monthly Pump Hours	
Pump 1	Pump 2
22	22

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
1,197,000	1,170,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
907	886

Monthly Average Daily Use (Gal)	
Booster Total (gal)	2,367,000
Spring Total (gal)	12,776,400
Monthly Total	15,143,400
Average Daily Total	504,780

Amount Pumped from Willow Creek Well
2,277,000

City of Victor - Water Flow Data

Month: Dec-17

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:05	17091	17091	0	69	41
2						
3						
4	7:30	17094	17094	317	124	163
5	7:35	17094	17095	0	41	41
6	7:15	17095	17096	317	41	42
7	7:20	17097	17096	0	80	40
8	7:30	17098	17097	0	43	41
9						
10						
11	7:45	17100	17101	316	138	163
12	7:20	17102	17101	325	74	42
13	7:40	17102	17103	0	44	75
14	7:30	17103	17104	325	43	50
15	7:25	17104	17105	0	43	41
16						
17						
18	7:30	17107	17107	319	211	161
19	7:30	17108	17108	9	42	40
20	7:25	17109	17109	0	42	83
21	7:43	17110	17110	355	41	40
22	7:25	17110	17110	0	42	42
23						
24						
25						
26	8:05	17115	17115	638	250	207
27	7:25	17116	17117	0	43	82
28	7:20	17117	17117	0	41	42
29	7:12	17119	17118	324	81	42
30						
31						
			Totals	**3,245**	**1,533**	**1,478**

Days Measured
29

Average Flow from Spring (gpm)
310

Estimated Time of Use of Spring (hrs)
641

Approximate Monthly Spring Flow (gal)
11,922,600

Monthly Pump Hours	
Pump 1	Pump 2
28	27

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
1,533,000	1,478,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
913	912

Monthly Average Daily Use (Gal)	
Booster Total (gal)	3,011,000
Spring Total (gal)	11,922,600
Monthly Total	14,933,600
Average Daily Total	514,952

Amount Pumped from Willow Creek Well
3,245,000

City of Victor - Water Flow Data

Summary Sheet

Metric	Month												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
Booster Flow (gal)	5,619,000	4,375,000	4,119,000	860,000	1,374,000	6,665,000	9,391,000	9,671,000	7,318,000	2,443,000	2,367,000	3,011,000	57,213,000
Spring Flow (gal)	11,914,074	11,970,504	14,082,948	13,219,200	17,254,560	16,753,200	14,246,550	14,239,800	11,468,520	13,017,600	12,776,400	11,922,600	162,865,956
Period Total (gal)	17,533,074	16,345,504	18,201,948	14,079,200	18,628,560	23,418,200	23,637,550	23,910,800	18,786,520	15,460,600	15,143,400	14,933,600	220,078,956
Days Measured	29	28	31	26	30	30	29	31	29	30	30	29	352
Average Daily Flow (gpd)	604,589	583,768	587,160	541,508	620,952	780,607	815,088	771,316	647,811	515,353	504,780	514,952	

Annual Average Daily Demand (gpd) **625,224**

City of Victor - Water Flow Data

Month: Jan-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2	7:25	17123	17123	316	255	245
3	7:25	17124	17125	324	43	82
4	7:30	17126	17126	0	83	42
5	7:30	17127	17127	372	85	86
6						
7						
8	7:25	17131	17130	322	209	171
9	7:25	17132	17132	8	44	78
10	7:50	17133	17133	318	71	43
11	7:15	17134	17134	0	50	40
12	11:50	17135	17135	317	45	80
13						
14						
15						
16	7:35	17140	17139	326	252	205
17	7:35	17141	17141	172	45	79
18	7:25	17143	17143	137	145	88
19	7:30	17144	17144	345	43	82
20						
21						
22	7:20	17147	17147	318	167	164
23	7:35	17149	17148	0	82	43
24	7:35	17150	17150	319	43	77
25	7:35	17151	17151	0	80	43
26	7:40	17152	17152	0	45	77
27						
28						
29	7:18	17156	17156	678	208	166
30	7:25	17157	17157	0	43	82
31	7:30	17159	17158	319	83	43
			Totals	**4,591**	**2,121**	**2,016**

Days Measured
30

Average Flow from Spring (gpm)
305

Estimated Time of Use of Spring (hrs)
649

Approximate Monthly Spring Flow (gal)
11,857,230

Monthly Pump Hours	
Pump 1	Pump 2
36	35

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
2,121,000	2,016,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
982	960

Monthly Average Daily Use (Gal)	
Booster Total (gal)	4,137,000
Spring Total (gal)	11,857,230
Monthly Total	15,994,230
Average Daily Total	533,141

Amount Pumped from Willow Creek Well
4,591,000

City of Victor - Water Flow Data

Month: Feb-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:45	17160	17160	0	84	87
2	7:33	17161	17161	324	44	79
3						
4						
5	7:35	17165	17165	328	215	170
6	7:40	17166	17166	0	42	80
7	7:40	17167	17167	331	86	43
8	7:35	17169	17169	0	79	86
9	7:30	17170	17170	327	54	84
10						
11						
12	7:25	17174	17175	327	216	216
13	7:40	17176	17175	331	83	43
14	7:35	17177	17177	0	43	85
15	7:30	17178	17178	0	88	41
16	7:35	17179	17179	326	43	81
17						
18						
19						
20	7:45	17184	17184	645	264	252
21	7:20	17186	17185	0	78	41
22	7:35	17187	17187	29	89	86
23	7:15	17188	17188	301	45	83
24						
25						
26	7:30	17192	17192	326	213	167
27	8:25	17194	17193	324	90	86
28	7:30	17195	17195	0	45	84
29						
30						
31						
			Totals	3,919	1,901	1,894

Days Measured
28

Average Flow from Spring (gpm)
299

Estimated Time of Use of Spring (hrs)
602

Approximate Monthly Spring Flow (gal)
10,799,880

Monthly Pump Hours	
Pump 1	Pump 2
35	35

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
1,901,000	1,894,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
905	902

Monthly Average Daily Use (Gal)	
Booster Total (gal)	3,795,000
Spring Total (gal)	10,799,880
Monthly Total	14,594,880
Average Daily Total	521,246

Amount Pumped from Willow Creek Well
3,919,000

City of Victor - Water Flow Data

Month: Mar-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:45	17196	17196	336	88	46
2	7:35	17198	17198	0	87	85
3						
4						
5	7:20	17201	17202	656	173	207
6	7:30	17203	17202	0	86	42
7	7:40	17204	17204	12	85	86
8	7:40	17206	17206	398	74	67
9	7:40	17207	17207	0	45	85
10						
11						
12	8:00	17211	17211	602	222	207
13	7:45	17213	17213	67	90	44
14	7:30	17215	17214	336	82	88
15	7:35	17215	17216	0	43	86
16	7:25	17215	17217	0	87	42
17						
18						
19	7:35	17221	17221	665	204	215
20	7:40	17222	17222	0	62	86
21	7:35	17223	17223	344	80	45
22	7:35	17224	17225	0	44	81
23	8:00	17226	17226	318	84	44
24						
25						
26	7:30	17230	17229	376	213	168
27	7:30	17231	17231	0	42	81
28	7:35	17232	17232	320	87	92
29	7:33	17234	17233	0	72	86
30	7:30	17235	17235	0	58	87
31						
			Totals	**4,430**	**2,108**	**2,070**

Days Measured
30

Average Flow from Spring (gpm)
316

Estimated Time of Use of Spring (hrs)
642

Approximate Monthly Spring Flow (gal)
12,153,060

Monthly Pump Hours	
Pump 1	Pump 2
39	39

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
2,108,000	2,070,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
901	885

Monthly Average Daily Use (Gal)	
Booster Total (gal)	4,178,000
Spring Total (gal)	12,153,060
Monthly Total	16,331,060
Average Daily Total	544,369

Amount Pumped from Willow Creek Well
4,430,000

City of Victor - Water Flow Data

Month: Apr-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2	7:30	17239	17239	665	218	195
3	7:50	17241	17240	0	89	64
4	7:20	17242	17242	338	49	81
5	7:12	17243	17243	0	87	42
6	7:25	17245	17244	387	87	88
7						
8						
9	7:30	17248	17248	312	167	207
10	7:15	17250	17249	0	82	56
11	7:30	17251	17251	380	43	79
12	7:25	17252	17252	0	83	42
13	7:05	17253	17253	320	43	84
14						
15						
16	7:20	17256	17257	327	174	166
17	7:30	17258	17257	0	84	41
18	7:20	17259	17259	325	44	82
19	7:30	17261	17260	0	83	42
20	7:08	17261	17261	324	42	86
21						
22						
23	7:30	17265	17265	323	171	166
24	7:30	17266	17266	0	79	44
25	7:20	17266	17266	0	0	41
26	7:15	17267	17268	347	44	62
27	7:15	17268	17268	0	62	0
28						
29						
30	7:20	17269	17269	0	65	86
31						
			Totals	4,048	1,796	1,754

Days Measured
29

Average Flow from Spring (gpm)
332

Estimated Time of Use of Spring (hrs)
636

Approximate Monthly Spring Flow (gal)
12,669,120

Monthly Pump Hours	
Pump 1	Pump 2
30	30

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
1,796,000	1,754,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
998	974

Monthly Average Daily Use (Gal)	
Booster Total (gal)	3,550,000
Spring Total (gal)	12,669,120
Monthly Total	16,219,120
Average Daily Total	559,280

Amount Pumped from Willow Creek Well
4,048,000

City of Victor - Water Flow Data

Month: May-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:20	17270	17269	0	39	0
2	7:10	17270	17269	0	0	0
3	7:18	17270	17270	335	0	53
4	7:10	17271	17271	0	32	28
5						
6						
7	7:30	17272	17273	0	98	95
8	7:10	17273	17273	327	44	0
9	7:25	17274	17274	0	42	31
10	7:25	17274	17274	0	0	22
11	7:05	17275	17274	0	40	0
12						
13						
14	7:35	17276	17276	0	46	80
15	7:15	17276	17276	0	15	0
16	7:40	17277	17276	338	29	31
17	7:20	17277	17277	0	0	55
18	7:00	17278	17277	0	563	0
19						
20						
21	7:30	17280	17280	324	118	119
22	7:15	17280	17281	0	0	44
23	7:30	17281	17281	0	44	44
24	7:35	17282	17282	323	79	6
25	7:01	17282	17282	0	0	43
26						
27						
28	7:10	17284	17284	0	89	76
29	7:15	17284	17284	0	41	0
30	7:15	17284	17284	316	0	39
31	7:35	17284	17284	0	0	0
			Totals	**1,963**	**1,319**	**766**

Days Measured
31

Average Flow from Spring (gpm)
349

Estimated Time of Use of Spring (hrs)
715

Approximate Monthly Spring Flow (gal)
14,950,650

Monthly Pump Hours	
Pump 1	Pump 2
14	15

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
1,319,000	766,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,570	851

Monthly Average Daily Use (Gal)	
Booster Total (gal)	2,085,000
Spring Total (gal)	14,950,650
Monthly Total	17,035,650
Average Daily Total	549,537

Amount Pumped from Willow Creek Well
1,963,000

City of Victor - Water Flow Data

Month: Jun-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:35	17284	17284	0	0	0
2						
3						
4	7:25	17288	17288	355	218	187
5	7:15	17289	17289	0	46	78
6	7:15	17291	17290	339	91	53
7	7:15	17292	17292	0	92	86
8	7:30	17294	17294	402	100	134
9						
10						
11	7:35	17303	17303	1211	532	513
12	7:20	17307	17306	399	177	123
13	7:15	17309	17309	379	174	169
14	7:30	17313	17313	369	176	194
15	7:25	17315	17315	137	160	134
16						
17						
18	7:35	17322	17321	773	365	320
19	7:15	17323	17323	347	113	93
20	7:45	17326	17326	380	124	148
21	7:10	17327	17328	317	108	149
22	7:11	17330	17330	0	189	89
23						
24						
25	7:00	17336	17336	1094	359	328
26	7:15	17339	17339	135	159	132
27	7:15	17342	17342	242	147	143
28	3:30	17344	17344	372	127	161
29						
30						
31						
			Totals	**7,251**	**3,457**	**3,234**

Days Measured
28

Average Flow from Spring (gpm)
365

Estimated Time of Use of Spring (hrs)
552

Approximate Monthly Spring Flow (gal)
12,088,800

Monthly Pump Hours	
Pump 1	Pump 2
60	60

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
3,457,000	3,234,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
960	898

Monthly Average Daily Use (Gal)	
Booster Total (gal)	6,691,000
Spring Total (gal)	12,088,800
Monthly Total	18,779,800
Average Daily Total	670,707

Amount Pumped from Willow Creek Well
7,251,000

City of Victor - Water Flow Data

Month: Jul-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2	7:25	17354	17354	1403	594	569
3	7:20	17357	17357	452	175	177
4						
5	7:25	17363	17363	771	314	325
6	7:15	17367	17366	395	199	170
7						
8						
9	7:38	17376	17376	1260	555	613
10	7:30	17380	17379	401	213	145
11	7:18	17383	17382	404	100	181
12	7:20	17386	17387	444	209	240
13	7:27	17390	17390	458	221	194
14						
15						
16	7:35	17405	17405	1750	770	730
17	7:12	17409	17408	463	226	186
18	7:20	17412	17412	399	162	192
19	7:15	17416	17416	461	213	199
20	7:30	17420	17420	472	233	189
21						
22						
23	7:50	17432	17432	1389	630	613
24	7:15	17436	17435	481	259	169
25	7:15	17440	17439	476	221	204
26	7:15	17444	17443	438	195	198
27	7:20	17447	17448	465	171	243
28						
29						
30	7:30	17459	17459	1498	704	687
31		17465	17464	467	273	201
			Totals	**14,747**	**6,637**	**6,425**

Days Measured
30

Average Flow from Spring (gpm)
332

Estimated Time of Use of Spring (hrs)
499

Approximate Monthly Spring Flow (gal)
9,940,080

Monthly Pump Hours	
Pump 1	Pump 2
111	110

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
6,637,000	6,425,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
997	973

Monthly Average Daily Use (Gal)	
Booster Total (gal)	13,062,000
Spring Total (gal)	9,940,080
Monthly Total	23,002,080
Average Daily Total	766,736

Amount Pumped from Willow Creek Well
14,747,000

City of Victor - Water Flow Data

Month: Aug-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:15	17469	17469	577	247	238
2	7:15	17474	17473	607	251	211
3	7:06	17477	17478	453	176	232
4						
5						
6	8:15	17489	17490	1368	647	629
7	7:10	17494	17493	452	244	165
8	7:11	17498	17498	476	209	262
9	7:15	17502	17502	419	268	219
10	7:05	17507	17507	817	218	273
11						
12						
13	7:30	17520	17519	1483	739	611
14	7:15	17524	17524	521	200	272
15	7:35	17528	17528	504	245	201
16	7:20	17532	17533	460	180	233
17						
18						
19						
20	7:25	17549	17549	1933	910	830
21	7:10	17553	17553	489	227	207
22	7:35	17557	17557	498	232	214
23	7:10	17561	17561	396	183	171
24						
25						
26						
27	7:30	17575	17575	1826	847	807
28	7:15	17578	17578	428	183	158
29	7:45	17582	17582	376	175	261
30	7:20	17585	17585	439	180	164
31						
			Totals	14,522	6,561	6,358

Days Measured
30

Average Flow from Spring (gpm)
299

Estimated Time of Use of Spring (hrs)
488

Approximate Monthly Spring Flow (gal)
8,754,720

Monthly Pump Hours	
Pump 1	Pump 2
116	116

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
6,561,000	6,358,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
943	914

Monthly Average Daily Use (Gal)	
Booster Total (gal)	12,919,000
Spring Total (gal)	8,754,720
Monthly Total	21,673,720
Average Daily Total	722,457

Amount Pumped from Willow Creek Well
14,522,000

City of Victor - Water Flow Data

Month: Sep-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2						
3						
4	7:13	17603	17603	2218	1075	1051
5	7:18	17606	17606	406	218	185
6	7:15	17610	17610	414	192	209
7	7:10	17613	17613	361	198	173
8						
9						
10	7:19	17626	17626	1804	704	700
11	7:30	17630	17630	537	221	265
12	7:15	17633	17633	494	224	213
13	7:25	17637	17637	470	245	209
14	7:20	17640	17640	461	196	107
15						
16						
17	7:35	17650	17650	1346	652	576
18	7:35	17654	17654	469	254	211
19	7:20	17657	17658	480	169	215
20	7:25	17661	17661	462	247	173
21	7:20	17664	17664	391	136	166
22						
23						
24	7:21	17673	17672	1084	572	486
25	7:30	17675	17675	255	152	144
26	7:19	17678	17678	455	143	141
27	7:14	17681	17681	362	184	199
28	7:15	17687	17686	913	308	266
29						
30						
31						
			Totals	**13,382**	**6,090**	**5,689**

Days Measured
25

Average Flow from Spring (gpm)
303

Estimated Time of Use of Spring (hrs)
433

Approximate Monthly Spring Flow (gal)
7,871,940

Monthly Pump Hours	
Pump 1	Pump 2
84	83

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
6,090,000	5,689,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,208	1,142

Monthly Average Daily Use (Gal)	
Booster Total (gal)	11,779,000
Spring Total (gal)	7,871,940
Monthly Total	19,650,940
Average Daily Total	786,038

Amount Pumped from Willow Creek Well
13,382,000

City of Victor - Water Flow Data

Month: Oct-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:10	17697	17697	1301	650	590
2	7:15	17699	17699	357	128	136
3	7:30	17702	17702	11	116	142
4	7:15	17704	17704	354	139	91
5	7:10	17705	17706	401	84	104
6						
7						
8						
9	7:15	17714	17714	783	508	450
10	7:12	17715	17715	358	69	86
11	7:30	17717	17716	0	84	43
12	7:15	17718	17718	331	46	90
13						
14						
15	7:13	17722	17722	345	224	220
16	7:35	17724	17724	345	95	77
17	7:30	17725	17725	0	89	40
18	7:25	17726	17726	325	133	128
19	7:10	17729	17728	0	136	88
20						
21						
22	7:25	17733	17733	696	229	260
23	7:15	17734	17734	0	88	64
24	7:20	17736	17736	351	91	99
25	7:30	17738	17738	321	103	96
26	7:12	17739	17739	0	42	74
27						
28						
29	7:25	17744	17744	396	256	233
30	7:20	17745	17745	288	87	45
31	7:18	17747	17746	195	88	93
			Totals	**7,158**	**3,485**	**3,249**

Days Measured
31

Average Flow from Spring (gpm)
307

Estimated Time of Use of Spring (hrs)
645

Approximate Monthly Spring Flow (gal)
11,880,900

Monthly Pump Hours	
Pump 1	Pump 2
50	49

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
3,485,000	3,249,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,162	1,105

Monthly Average Daily Use (Gal)	
Booster Total (gal)	6,734,000
Spring Total (gal)	11,880,900
Monthly Total	18,614,900
Average Daily Total	600,481

Amount Pumped from Willow Creek Well
7,158,000

City of Victor - Water Flow Data

Month: Nov-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:25	17748	17748	0	57	86
2	7:28	17750	17750	341	75	81
3						
4						
5	7:25	17754	17754	345	242	212
6	7:22	17757	17756	340	146	98
7	7:25	17760	17759	390	147	146
8	7:42	17762	17762	385	104	145
9	7:40	17763	17763	0	85	42
10						
11						
12						
13	7:50	17769	17769	679	298	301
14	7:35	17770	17771	23	60	88
15	7:40	17772	17771	310	84	45
16	7:30	17773	17773	336	85	89
17						
18						
19	7:15	17778	17778	347	266	217
20	7:20	17780	17780	359	93	109
21	7:25	17782	17782	0	88	96
22						
23						
24						
25						
26	7:55	17793	17793	1559	632	601
27	7:17	17795	17794	0	85	58
28						
29	7:25	17779	17799	370	200	213
30	7:30	17802	17802	407	153	158
31						
			Totals	**6,191**	**2,900**	**2,785**

Days Measured
30

Average Flow from Spring (gpm)
311

Estimated Time of Use of Spring (hrs)
612

Approximate Monthly Spring Flow (gal)
11,419,920

Monthly Pump Hours	
Pump 1	Pump 2
54	54

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
2,900,000	2,785,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
895	860

Monthly Average Daily Use (Gal)	
Booster Total (gal)	5,685,000
Spring Total (gal)	11,419,920
Monthly Total	17,104,920
Average Daily Total	570,164

Amount Pumped from Willow Creek Well
6,191,000

City of Victor - Water Flow Data

Month: Dec-18

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2						
3	7:40	17808	17808	828	361	341
4	7:45	17811	17811	319	140	87
5	7:45	17813	17813	65	96	136
6	7:45	17815	17815	345	139	86
7	7:45	17817	17816	348	97	87
8						
9						
10	8:05	17822	17822	335	253	268
11						
12	7:28	17825	17825	363	176	175
13	8:35	17826	17827	306	56	80
14	7:40	17828	17828	324	82	81
15						
16						
17	7:15	17833	17833	338	278	252
18	7:40	17835	17835	346	139	90
19	7:35	17837	17836	269	85	89
20	7:35	17839	17838	70	86	92
21	7:45	17840	17841	390	91	132
22						
23						
24	8:05	17846	17846	402	325	265
25						
26	7:25	17850	17850	743	189	220
27	7:37	17852	17853	85	479	138
28	7:43	17855	17855	280	157	107
29						
30						
31						
			Totals	6,156	3,229	2,726

Days Measured
26

Average Flow from Spring (gpm)
315

Estimated Time of Use of Spring (hrs)
530

Approximate Monthly Spring Flow (gal)
10,017,000

Monthly Pump Hours	
Pump 1	Pump 2
47	47

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
3,229,000	2,726,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,145	967

Monthly Average Daily Use (Gal)	
Booster Total (gal)	5,955,000
Spring Total (gal)	10,017,000
Monthly Total	15,972,000
Average Daily Total	614,308

Amount Pumped from Willow Creek Well
6,156,000

City of Victor - Water Flow Data

Summary Sheet

Metric	Month												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Booster Flow (gal)	4,137,000	3,795,000	4,178,000	3,550,000	2,085,000	6,691,000	13,062,000	12,919,000	11,779,000	6,734,000	5,685,000	5,955,000	80,570,000
Spring Flow (gal)	11,857,230	10,799,880	12,153,060	12,669,120	14,950,650	12,088,800	9,940,080	8,754,720	7,871,940	11,880,900	11,419,920	10,017,000	134,403,300
Period Total (gal)	15,994,230	14,594,880	16,331,060	16,219,120	17,035,650	18,779,800	23,002,080	21,673,720	19,650,940	18,614,900	17,104,920	15,972,000	214,973,300
Days Measured	30	28	30	29	31	28	30	30	25	31	30	26	348
Average Daily Flow (gpd)	533,141	521,246	544,369	559,280	549,537	670,707	766,736	722,457	786,038	600,481	570,164	614,308	

Annual Average Daily Flow (gpd) **617,739**

City of Victor - Water Flow Data

Month: Jan-19

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2		17866	17866	1531	630	602
3		17868	17868	0	89	139
4		17870	17870	408	145	92
5						
6						
7		17878	17877	737	387	372
8		17879	17879	415	89	92
9	8:00	17881	17882	0	91	137
10	7:55	17883	17883	343	94	85
11	8:40	17885	17885	344	141	90
12						
13						
14	7:45	17891	17891	386	330	310
15	8:45	17893	17894	216	94	142
16	7:48	17897	17897	388	219	159
17						
18	9:30	17901	17901	686	229	233
19						
20						
21						
22	7:25	17909	17909	818	466	420
23	7:32	17911	17911	403	92	132
24						
25	7:23	17915	17916	343	228	227
26						
27						
28	7:32	17921	17921	756	372	314
29	7:45	17923	17923	356	98	132
30	7:45	17925	17925	14	126	94
31	7:50	17927	17927	384	108	100
			Totals	**8,528**	**4,028**	**3,872**

Days Measured
30

Average Flow from Spring (gpm)
270

Estimated Time of Use of Spring (hrs)
598

Approximate Monthly Spring Flow (gal)
9,687,600

Monthly Pump Hours	
Pump 1	Pump 2
61	61

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
4,028,000	3,872,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,101	1,058

Monthly Average Daily Use (Gal)	
Booster Total (gal)	7,900,000
Spring Total (gal)	9,687,600
Monthly Total	17,587,600
Average Daily Total	586,253

Amount Pumped from Willow Creek Well
8,528,000

Pumping Peak Day (gal) 378,000

City of Victor - Water Flow Data

Month: Feb-19

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:50	17929	17929	353	96	126
2						
3						
4						
5						
6	8:00	17941	17941	1132	674	604
7	7:35	17942	17942	412	91	139
8	7:40	17945	17945	348	137	93
9						
10						
11	9:15	17953	17952	807	452	379
12	7:25	17953	17954	352	52	134
13	7:45	17956	17957	0	137	414
14						
15	7:45	17962	17962	869	369	318
16						
17						
18						
19	7:40	17975	17976	1644	812	776
20	7:50	17979	17978	403	207	151
21	7:38	17982	17981	397	161	163
22		17984	17984	381	150	129
23						
24						
25						
26	7:24	17993	17993	1088	503	507
27						
28	7:25	17998	17997	645	265	230
29						
30						
31						
			Totals	**8,831**	**4,106**	**4,163**

Days Measured
28

Average Flow from Spring (gpm)
280

Estimated Time of Use of Spring (hrs)
535

Approximate Monthly Spring Flow (gal)
8,988,000

Monthly Pump Hours	
Pump 1	Pump 2
69	68

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
4,106,000	4,163,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
992	1,020

Monthly Average Daily Use (Gal)	
Booster Total (gal)	8,269,000
Spring Total (gal)	8,988,000
Monthly Total	17,257,000
Average Daily Total	616,321

Amount Pumped from Willow Creek Well
8,831,000

City of Victor - Water Flow Data

Month: Mar-19

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:30	18000	18001	178	152	198
2						
3						
4	7:40	18008	18009	1155	459	436
5	7:25	18011	18010	359	142	100
6	7:40	18013	53	53	147	131
7	7:45	18015	18015	413	128	137
8	7:30	18017	18018	360	113	141
9						
10						
11	7:35	18024	18024	783	438	373
12	7:40	18026	18027	366	96	137
13	7:20	18029	18029	0	140	94
14	9:48	18032	18031	410	149	134
15						
16						
17						
18	7:52	18040	18041	1141	480	573
19	7:40	18043	18042	363	146	90
20	7:45	18045	18045	6	115	136
21	7:48	18047	18047	404	126	140
22						
23						
24						
25	7:32	18056	18056	1209	538	505
26	7:42	18059	18059	377	146	116
27		18061	18061	0	95	132
28	7:20	18063	18063	398	137	90
29						
30						
31						
			Totals	7,975	3,747	3,663

Days Measured
28

Average Flow from Spring (gpm)
297

Estimated Time of Use of Spring (hrs)
547

Approximate Monthly Spring Flow (gal)
9,757,386

Monthly Pump Hours	
Pump 1	Pump 2
63	62

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
3,747,000	3,663,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
991	985

Monthly Average Daily Use (Gal)	
Booster Total (gal)	7,410,000
Spring Total (gal)	9,757,386
Monthly Total	17,167,386
Average Daily Total	613,121

Amount Pumped from Willow Creek Well
7,975,000

City of Victor - Water Flow Data

Month: Apr-19

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:30	18073	18073	354	1170	522
2	7:30	18075	18075	435	165	156
3	7:48	18078	18078	71	138	142
4	7:30	18080	18080	326	97	88
5						
6						
7						
8	7:24	18088	18087	887	463	402
9						
10	7:25	18091	18091	398	177	179
11	7:40	18093	18092	214	93	88
12						
13						
14						
15	7:40	18100	18100	474	375	397
16	7:08	18101	18101	347	102	86
17	7:30	18104	18103	346	137	87
18	7:25	18105	18105	0	87	91
19						
20						
21						
22	7:25	18112	18110	1028	365	348
23	7:31	18113	18113	0	90	87
24	7:25	18115	18114	336	87	87
25	7:20	18116	18116	0	50	80
26						
27						
28						
29	7:30	18121	18121	659	305	250
30	7:36	18122	18122	0	44	84
31						
			Totals	**5,875**	**3,945**	**3,174**

Days Measured
30

Average Flow from Spring (gpm)
315

Estimated Time of Use of Spring (hrs)
622

Approximate Monthly Spring Flow (gal)
11,737,140

Monthly Pump Hours	
Pump 1	Pump 2
49	49

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
3,945,000	3,174,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,342	1,080

Monthly Average Daily Use (Gal)	
Booster Total (gal)	7,119,000
Spring Total (gal)	11,737,140
Monthly Total	18,856,140
Average Daily Total	628,538

Amount Pumped from Willow Creek Well
5,875,000

City of Victor - Water Flow Data

Month: May-19

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:20	18123	18124	327	91	81
2	7:40	18125	18125	0	89	61
3						
4						
5						
6	7:44	18131	18132	1078	374	371
7	8:05	18133	18134	0	97	83
8	7:50	18135	18135	336	90	55
9						
10						
11						
12						
13	7:25	18141	18141	656	283	255
14	7:17	18142	18141	0	69	82
15	7:25	18144	18143	363	65	62
16	7:03	18144	18145	18	52	82
17						
18						
19						
20	7:55	18148	18148	648	217	163
21	7:45	18149	18149	0	45	81
22	7:47	18150	18150	0	87	60
23	7:37	18153	18152	347	149	91
24						
25						
26						
27						
28	7:35	18159	18159	669	344	359
29	7:37	18160	18160	322	76	46
30	7:28	18162	18162	53	105	86
31						
			Totals	**4,817**	**2,233**	**2,018**

Days Measured
30

Average Flow from Spring (gpm)*
332

Estimated Time of Use of Spring (hrs)
643

Approximate Monthly Spring Flow (gal)
12,800,844

Monthly Pump Hours	
Pump 1	Pump 2
39	38

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
2,233,000	2,018,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
954	885

Monthly Average Daily Use (Gal)	
Booster Total (gal)	4,251,000
Spring Total (gal)	12,800,844
Monthly Total	17,051,844
Average Daily Total	568,395

Amount Pumped from Willow Creek Well
4,817,000

City of Victor - Water Flow Data

Month: Jun-19

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1						
2						
3	7:50	18169	18169	994	420	400
4	7:40	18170	18171	396	96	130
5	7:42	18172	18172	0	109	88
6	7:44	18174	18174	323	104	86
7						
8						
9						
10	7:36	18179	18180	687	328	339
11	7:43	18181	18182	401	149	123
12	7:39	18184	18184	388	155	116
13	7:28	18186	18186	5	144	128
14						
15						
16						
17	7:45	18193	18194	1069	423	468
18	7:49	18197	18197	536	259	182
19	7:44	18199	18199	374	111	120
20	7:52	18202	18201	372	162	412
21						
22						
23						
24	7:25	18209	18210	767	476	487
25	7:55	18212	18212	391	148	132
26	7:02	18215	18215	394	170	196
27	7:45	18219	18218	399	242	187
28						
29						
30						
31						
			Totals	7,496	3,496	3,594

Days Measured
25

Average Flow from Spring (gpm)*
349

Estimated Time of Use of Spring (hrs)
501

Approximate Monthly Spring Flow (gal)
10,490,940

Monthly Pump Hours	
Pump 1	Pump 2
50	49

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
3,496,000	3,594,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
1,165	1,222

Monthly Average Daily Use (Gal)	
Booster Total (gal)	7,090,000
Spring Total (gal)	10,490,940
Monthly Total	17,580,940
Average Daily Total	703,238

Amount Pumped from Willow Creek Well
7,496,000

City of Victor - Water Flow Data

Month: Jul-19

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)	
		1	2		1	2
1	7:45	18235	18235	2345	963	925
2	7:45	18240	18240	478	227	265
3	7:35	18243	18243	397	222	201
4						
5						
6						
7						
8	8:03	18261	18261	2504	1806	1028
9	7:10	18264	18265	460	162	146
10	7:25	18268	18268	408	172	193
11	7:50	18272	18272	471	278	202
12						
13						
14						
15	7:20	18292	18293	2127	971	1001
16	7:13	18298	18298	711	281	240
17	7:25	18303	18303	496	248	250
18	7:35	18309	18308	476	278	246
19						
20						
21						
22	7:30	18336	18335	2793	1142	1151
23	7:35	18343	18343	483	290	315
24	7:26	18349	18349	866	276	289
25	7:58	18357	18356	508	321	306
26						
27						
28						
29	7:25	18382	18382	2811	1189	1201
30	7:57	18387	18388	499	237	263
31	:7:25	18392	18392	489	238	223
			Totals	**19,322**	**9,301**	**8,445**

Days Measured
31

Average Flow from Spring (gpm)*
325

Estimated Time of Use of Spring (hrs)
430

Approximate Monthly Spring Flow (gal)
8,385,000

Monthly Pump Hours	
Pump 1	Pump 2
157	157

Monthly Amount Pumped (gal)	
Pump 1	Pump 2
9,301,000	8,445,000

Average Pumping Rate (gpm)	
Pump 1	Pump 2
987	896

Monthly Average Daily Use (Gal)	
Booster Total (gal)	17,746,000
Spring Total (gal)	8,385,000
Monthly Total	26,131,000
Average Daily Total	842,935

Amount Pumped from Willow Creek Well
19,322,000

City of Victor - Water Flow Data

Month: Aug-19

Day	Time	Booster Hours		Willow Creek	Booster Flow (1,000 gal)		North Well		
		1	2	Well (1000 gal)	1	2	Time	Well Hours	Total Flow (Gal)
1	7:32	18398	18398	665	285	253			
2									
3									
4									
5	7:40	18419	18419	2368	1029	1006			
6	7:15	18425	18425	592	287	2525			
7	7:47	18431	18431	702	263	308			
8	7:35	18437	18436	552	292	239			
9									
10									
11									
12	7:45	17211	17210	854	314	328			
13	7:49	17212	17212	368	96	88		72	30380000
14	7:42	17214	17213	368	96	88	10:07	83	30856707
15	7:37	17215	17215	0	67	77	8:07	97	31335555
16									
17									
18									
19	8:05	17220	17220	639	296	299	11:00	148	33278978
20	8:37	17221	17221	0	65	35	8:18	164	33870892
21	8:49	17222	17222	373	71	67	8:30	178	34414678
22	8:23	17223	17223	0	38	83	9:15	194	35046799
23									
24									
25									
26	8:17	17228	17228	767	299	265	8:57	253	37282417
27	7:47	17229	17229	0	73	69	7:10	265	37778042
28	7:43	17230	17231	388	40	96	8:07	280	38357190
29	7:49	17231	17231	0	72	0	8:23	300	39082400
30									
31									
			Totals	8,636	3,683	5,826			

Days Measured
29

Average Flow from Spring (gpm)*
311

Estimated Time of Use of Spring (hrs)
350

Approximate Monthly Spring Flow (gal)
6,537,300

Monthly Pump Hours	
Booster Pump 1	Booster Pump 2
59	59

Monthly Amount Pumped (gal	
Booster Pump 1	Booster Pump 2
3,683,000	5,826,000

Average Pumping Rate (gpm)	
Booster Pump 1	Booster Pump 2
1,040	1,646

Monthly Average Daily Use (Gal)	
Booster Total (gal)	9,509,000
North Well Total (gal)	8,702,400
Spring Total (gal)	6,537,300
Monthly Total	24,748,700
Average Daily Total	853,403

Amount Pumped from Willow Creek Well
8,636,000

City of Victor - Water Flow Data

Month: Sep-19

Day	Time	Booster Hours		Willow Creek	Booster Flow (1,000 gal)		North Well		
		1	2	Well (1000 gal)	1	2	Time	Well Hours	Total Flow (Gal)
1									
2									
3	7:35	17234	17234	392	187	170	8:18	395	42625599
4	7:40	17234	17235	0	0	69	8:40	414	43340980
5	7:49	17235	17235	0	74	0	9:15	434	44060950
6									
7									
8									
9	7:49	17240	17239	718	244	250	8:24	489	46146394
10	7:21	17241	17240	0	67	61	7:51	502	46648927
11	7:15	17242	17241	361	69	65	7:42	515	47133875
12	7:30	17243	17244	0	67	137	7:56	523	47456442
13									
14									
15									
16	7:48	17248	17248	705	327	243	8:31	577	49478350
17	7:50	17249	17249	0	73	62	8:18	590	49954053
18	7:35	17251	17250	374	80	85	8:01	599	50333942
19	7:39	17252	17252	7	87	80	8:06	612	50805695
20									
21									
22									
23	7:53	17257	17257	724	303	298	8:29	659	52572512
24	7:52	17258	17259	390	39	97	8:21	673	53159685
25		17259	17259	0	74	0	8:14	692	53858090
26	7:47	17259	17260	0	0	66	8:14	711	54552575
27									
28									
29									
30	8:20	17265	17265	735	370	286	8:41	747	55885695
31									
			Totals	4,406	2,061	1,969			

Days Measured
28

Average Flow from Spring (gpm)*
298

Estimated Time of Use of Spring (hrs)
258

Approximate Monthly Spring Flow (gal)
4,605,300

Monthly Pump Hours	
Booster Pump 1	Booster Pump 2
31	31

Monthly Amount Pumped (gal	
Booster Pump 1	Booster Pump 2
2,061,000	1,969,000

Average Pumping Rate (gpm)	
Booster Pump 1	Booster Pump 2
1,108	1,059

Monthly Average Daily Use (Gal)	
Booster Total (gal)	4,030,000
North Well Total (gal)	13,260,096
Spring Total (gal)	4,605,300
Monthly Total	21,895,396
Average Daily Total	781,978

Amount Pumped from Willow Creek Well
4,406,000

City of Victor - Water Flow Data

Month: Oct-19

Day	Time	Booster Hours		Willow Creek	Booster Flow (1,000 gal)		North Well		
		1	2	Well (1000 gal)	1	2	Time	Well Hours	Total Flow (Gal)
1	8:39	17266	17267	97	64	127	8:16	752	56073415
2	8:37	17267	17268	257	59	64	8:03	760	56357986
3	8:21	17269	17269	163	127	59	7:58	764	65523175
4									
5									
6									
7	7:50	17273	17273	537	209	222	8:13	780	57117550
8	7:34	17275	17274	0	61	55	7:57	787	57338891
9	7:54	17276	17276	389	72	116	8:30	792	575285500
10	7:18	17277	17277	389	131	165	7:45	796	57653400
11									
12									
13									
14									
15	7:40	17282	17282	722	288	250			
16	7:34	17283	17283	0	57	56	8:00	819	58496034
17	7:55	17284	17284	0	57	58	8:42	822	58619774
18									
19									
20									
21	7:38	17288	17287	691	232	171	8:02	836	59095478
22	7:55	17289	17288	0	59	54	8:19	840	59211531
23	7:30	17290	17290	0	57	54	7:53	843	59338900
24	7:38	17291	17290	371	53	53	8:01	847	59457923
25									
26									
27									
28	7:52	17295	17294	356	207	228	8:17	864	60098550
29	8:13	17296	17297	331	64	123	8:50	870	60273333
30	9:05	17297	17298	0	60	54	8:25	873	60404375
31	8:02	17298	17299	0	59	54	8:30	877	60537606
			Totals	4,303	1,916	1,963			

Days Measured
31

Average Flow from Spring (gpm)*
284

Estimated Time of Use of Spring (hrs)
555

Approximate Monthly Spring Flow (gal)
9,450,540

Monthly Pump Hours	
Booster Pump 1	Booster Pump 2
32	32

Monthly Amount Pumped (gal	
Booster Pump 1	Booster Pump 2
1,916,000	1,963,000

Average Pumping Rate (gpm)	
Booster Pump 1	Booster Pump 2
998	1,022

Monthly Average Daily Use (Gal)	
Booster Total (gal)	3,879,000
North Well Total (gal)	4,464,191
Spring Total (gal)	9,450,540
Monthly Total	17,793,731
Average Daily Total	573,991

Amount Pumped from Willow Creek Well
4,303,000

City of Victor - Water Flow Data

Month: Nov-19

Day	Time	Booster Hours		Willow Creek	Booster Flow (1,000 gal)		North Well		
		1	2	Well (1000 gal)	1	2	Time	Well Hours	Total Flow (Gal)
1									
2									
3									
4	7:42	17302	17303	564	227	214	8:20	891	61023636
5	7:44	17303	17304	216	56	50	8:12	895	61158023
6	7:43	17304	17305	134	58	51	8:10	898	61290846
7	7:05	17305	17306	0	56	51	7:26	902	61425768
8	7:20	17306	17307	195	56	50	7:45	906	61563561
9									
10									
11									
12	7:38	17311	17311	521	234	214	7:52	921	62092141
13	7:33	17312	17312	0	59	56	7:57	925	62230742
14	7:37	17313	17313	311	57	57	7:56	929	62363325
15	7:33	17314	17314	0	58	57	7:58	932	62489960
16									
17									
18	7:40	17317	17317	316	179	169	8:30	943	62872307
19	7:42	17318	17318	318	61	54	8:07	948	63054423
20	7:37	17319	17319	0	57	58	8:06	952	63181225
21	7:35	17320	17320	0	60	54	7:54	955	63304943
22	7:39	17321	17321	313	59	61	7:57	959	63428262
23									
24									
25	7:10	17324	17324	316	177	157	7:34	970	63817180
26	7:38	17325	17325	0	569	63	7:55	973	63943636
27	7:38	17326	17326	374	59	56	8:00	977	64068135
28									
29									
30									
31									
			Totals	3,578	2,082	1,472			

Days Measured
24

Average Flow from Spring (gpm)*
270

Estimated Time of Use of Spring (hrs)
443

Approximate Monthly Spring Flow (gal)
7,176,600

Monthly Pump Hours	
Booster Pump 1	Booster Pump 2
24	23

Monthly Amount Pumped (gal	
Booster Pump 1	Booster Pump 2
2,082,000	1,472,000

Average Pumping Rate (gpm)	
Booster Pump 1	Booster Pump 2
1,446	1,067

Monthly Average Daily Use (Gal)	
Booster Total (gal)	3,554,000
North Well Total (gal)	3,044,499
Spring Total (gal)	7,176,600
Monthly Total	13,775,099
Average Daily Total	573,962

Amount Pumped from Willow Creek Well
3,578,000

City of Victor - Water Flow Data

Month: Dec-19

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)		North Well		
		1	2		1	2	Time	Well Hours	Total Flow (Gal)
1									
2	7:24	17331	17331	366	290	246	7:44	995	64695058
3	7:35	17332	17333	315	60	87	7:52	999	64818654
4	7:33	17333	17334	0	61	59	9:30	1002	64945433
5	7:44	17334	17335	327	61	58	9:00	1006	65068856
6	7:25	17335	17336	0	59	37	7:45	1010	65190196
7									
8									
9	9:43	17338	17339	317	176	184	10:14	1021	65576325
10	8:03	17339	17340	156	59	56	8:33	1024	65706207
11	7:45	17340	17341	216	59	56	8:05	1028	65836719
12	7:25	17341	17342	0	58	57	8:40	1032	65965353
13									
14									
15									
16	7:38	17346	17345	687	292	163	8:15	1047	66493094
17	0:00	17347	17346	0	51	55	8:00	1051	66632531
18	7:48	17348	17347	0	52	55	8:20	1056	66819942
19	7:50	17349	17348	0	53	55	8:20	1060	66974900
20	7:59	17350	17349	0	53	56	8:23	1064	67121728
21							8:25	1076	67534152
22									
23	7:45	17353	17353	597	167	169			
24	7:43	17354	17354	374	59	57	8:10	1080	67656480
25									
26	7:40	17356	17357	314	117	169	8:45	1087	67912788
27	7:50	17357	17358	1	59	52	8:23	1091	68053192
28									
29									
30	7:41	17361	17361	0	179	156	8:05	1105	68548216
31	7:37	17362	17362	615	60	57	3:55	1108	68677390
			Totals	4,285	2,025	1,884			

Days Measured
30

Average Flow from Spring (gpm)*
286

Estimated Time of Use of Spring (hrs)
545

Approximate Monthly Spring Flow (gal)
9,352,200

Monthly Pump Hours	
Booster Pump 1	Booster Pump 2
31	31

Monthly Amount Pumped (gal	
Booster Pump 1	Booster Pump 2
2,025,000	1,884,000

Average Pumping Rate (gpm)	
Booster Pump 1	Booster Pump 2
1,089	1,013

Monthly Average Daily Use (Gal)	
Booster Total (gal)	3,909,000
North Well Total (gal)	3,982,332
Spring Total (gal)	9,352,200
Monthly Total	17,243,532
Average Daily Total	574,784

Amount Pumped from Willow Creek Well
4,285,000

City of Victor - Water Volume Data

Summary Sheet

1.0 Systemwide Volume Summary Sheet

Metric	Month												Totals
	January	February	March	April	May	June	July	August*	September	October	November	December	
Booster Flow (gal)	7,900,000	8,269,000	7,410,000	7,119,000	4,251,000	7,090,000	17,746,000	9,509,000	4,030,000	3,879,000	3,554,000	3,909,000	84,666,000
North Well Volume Pumped (gal)								8,702,400	13,260,096	4,464,191	3,044,499	3,982,332	33,453,518
Spring Flow (gal)	9,687,600	8,988,000	9,757,386	11,737,140	12,800,844	10,490,940	8,385,000	6,537,300	4,605,300	9,450,540	7,176,600	9,352,200	108,968,850
Period Total (gal)	17,587,600	17,257,000	17,167,386	18,856,140	17,051,844	17,580,940	26,131,000	24,748,700	21,895,396	17,793,731	13,775,099	17,243,532	227,088,368
Days Measured	30	28	28	30	30	25	31	29	28	31	24	30	344
Average Daily Flow (gpd)	586,253	616,321	613,121	628,538	568,395	703,238	842,935	853,403	781,978	573,991	573,962	574,784	

*The North Well was incorporated into the system on August 13th.

2.0 Systemwide Demand Summary Sheet

System Demand	Amount
Annual Average Daily Demand (gpd)	660,141
Average Annual Daily Demand (gpm)	458
Number of ERU's in 2019	1,140
Average Monthly Usage per ERU (gal per month)	17,613
Max Daily Demand Peaking Factor	1.8
Max Daily Demand (gpd)	1,188,253
Max Daily Demand (gpm)	825
Max Instantaneous Hour Flow Peaking Factor	3.1
Max Instantaneous Hour Flow (gpm)	1,421
Fire Flow Demand	**Amount**
Fire Flow Requirment (gpm)	1,500
Peak Daily Demand + Fire Flow (gpm)	2,325
Peak Daily Demand + Fire Flow (cfs)	5.18

3.0 North Well Volume Estimates

System Totals for Water Pumped (Excluding Spring Totals)	
Total Volume Pumped (gal)	118,119,518
Number of Days Measured	344
Average Annual Daily Volume (gal)	343,371
Total Estimated Annual Volume (gal)	125,330,303
Recorded Max Daily Volume - July (gal)	#REF!
Calculated Max Daily Volume Peaking Factor	#REF!
North Well Estimated Totals	
Percentage of North Well	51%
Total Estimated North Well Annual Volume (gal)	63,918,454
Total Estimated Average Annual Daily Volume (gal)	175,119
Max Daily Volume Peaking Factor from Above	1.8
Estimated Max Daily Volume (gal)	315,214

City of Victor - Water Flow Data

Month: January-20

Day	Time	Booster Hours		Willow Creek Well (1000 gal)	Booster Flow (1,000 gal)		North Well		
		1	2		1	2	Time	Well Hours	Total Flow (Gal)
1									
2									
3	7:20	17366	17365	377	52	57	7:50	1120	69069008
4									
5									
6	8:20	17369	17368	362	157	172	9:57	1134	69564211
7	7:20	17370	17369	0	55	56	7:54	1138	69710575
8	7:41	17371	17370	367	57	56	8:17	1142	69853115
9	10:39	17372	17372	0	60	111			
10									
11									
12									
13	6:35	17376	17376	26	240	241	7:40	1160	70496660
14									
15	8:49	17378	17378	676	118	102	9:40	1169	70819019
16	7:23	17379	17379	363	58	51			
17									
18									
19									
20									
21	7:57	17385	17385	498	356	279	8:25	1193	71654622
22	7:30	17386	17386	204	52	57	8:15	1197	71794624
23	7:32	17387	17387		53	56	8:02	1202	71966100
24	7:50	17388	17388	360	52	57	8:34	1207	72141450
25									
26									
27									
28	7:34	17393	17393	317	296	230	8:45	1218	72543993
29	7:43	17394	17393	324	52	57			
30	7:35	17394	17395	0	0	107	8:05	1231	72969793
31	7:55	17395	17396	0	59	52	8:25	1236	73166333
			Totals	3,874	1,717	1,741			

Days Measured
29

Average Flow from Spring (gpm)*
301

Estimated Time of Use of Spring (hrs)
520

Approximate Monthly Spring Flow (gal)
9,391,200

Monthly Pump Hours	
Booster Pump 1	Booster Pump 2
29	31

Monthly Amount Pumped (gal	
Booster Pump 1	Booster Pump 2
1,717,000	1,741,000

Average Pumping Rate (gpm)	
Booster Pump 1	Booster Pump 2
987	936

Monthly Average Daily Use (Gal)	
Booster Total (gal)	3,458,000
North Well Total (gal)	4,097,325
Spring Total (gal)	9,391,200
Monthly Total	16,946,525
Average Daily Total	584,363

Amount Pumped from Willow Creek Well
3,874,000

City of Victor - Water Flow Data

Month: February-20

Day	Time	Booster Hours		Willow Creek Well	Booster Flow (1,000 gal)		North Well		
		1	2	(1000 gal)	1	2	Time	Well Hours	Total Flow (Gal)
1									
2									
3									
4									
5	7:26	17402	17402	367	57	56	7:55	1258	73931025
6	7:42	17402	17402	367	57	56	8:11	1262	74085647
7									
8									
9									
10	7:40	17408	17407	632	285	234	9:10	1280	74701630
11	7:40	17408	17408	0	30	58	8:15	1283	74835972
12	7:39	17409	17410	60	64	119	8:15	1287	74966678
13	7:32	17410	17411	270	60	52	8:06	1291	75116199
14									
15									
16									
17									
18	7:45	17417	17416	636	288	233	8:29	1315	75962475
19	7:43	17418	17417	0	58	57	8:45	1319	76103071
20	7:45	17419	17419	186	65	118	8:18	1323	76234321
21	7:40	17420	17420	186	125	171	8:06	1327	76386800
22									
23									
24	7:47	17424	17423	186	368	343	8:15	1341	76864202
25	7:50	17425	17424	0	54	58	8:16	1346	77066250
26	7:45	17426	17425	0	59	57	8:07	1351	77227766
27	7:29	17427	17427	0	65	117	7:55	1356	77359330
28	7:38	17428	17429	0	61	52	8:10	1360	77555555
29									
30									
31									
			Totals	2,890	1,696	1,781			

Days Measured
24

Average Flow from Spring (gpm)*
306

Estimated Time of Use of Spring (hrs)
421

Approximate Monthly Spring Flow (gal)
7,729,560

Monthly Pump Hours	
Booster Pump 1	Booster Pump 2
26	27

Monthly Amount Pumped (gal)	
Booster Pump 1	Booster Pump 2
1,696,000	1,781,000

Average Pumping Rate (gpm)	
Booster Pump 1	Booster Pump 2
1,087	1,099

Monthly Average Daily Use (Gal)	
Booster Total (gal)	3,477,000
North Well Total (gal)	3,624,530
Spring Total (gal)	7,729,560
Monthly Total	14,831,090
Average Daily Total	617,962

Amount Pumped from Willow Creek Well
2,890,000

City of Victor - Water Flow Data

Month: March-20

Day	Time	Booster Hours		Willow Creek Well	Booster Flow (1,000 gal)		North Well		
		1	2	(1000 gal)	1	2	Time	Well Hours	Total Flow (Gal)
1									
2	7:55	17432	17432	0	258	176	8:25	1373	78000957
3	7:55	17433	17433	0	54	59	8:55	1379	78232181
4	7:53	17433	17434	0	0	57	8:22	1385	78441756
5	7:20	17434	17434	0	64	14	7:45	1391	78644393
6	7:47	17435	17436	0	61	98	8:20	1395	78786156
7									
8									
9	7:38	17439	17439	0	247	171	8:45	1409	79274631
10	7:59	17440	17440	0	54	58	8:25	1413	79425748
11	7:10	17441	17441	0	57	58	7:36	1419	79634339
12	7:15	17443	17443	0	65	81	7:45	1423	79763008
13	7:16	17444	17444	0	61	88	7:50	1427	79907619
14									
15									
16	7:50	17448	17447	0	241	170	8:45	1441	80387175
17	8:00	17449	17448	0	53	58	9:08	1446	80583999
18	8:16	17450	17449	0	57	59	8:45	1451	80754106
19	5:55	17451	17450	0	63	60	6:35	1455	80887338
20									
21									
22									
23	7:45	17456	17456	0	372	350	8:10	1476	81659749
24	8:00	17457	17456	0	337	68	8:30	1481	81819935
25	7:45	17458	17459	0	65	56	8:15	1487	82033271
26	7:55	17460	17460	325	101	60	8:40	1490	82167228
27	7:45	17461	17461	0	76	58	8:05	1495	82311485
28									
29									
30	8:10	17465	17465	510	178	232	8:35	1508	82801506
31	9:00	17466	17466	129	61	52	9:20	1515	83019453
			Totals	964	2,525	2,083			

Days Measured
30

Average Flow from Spring (gpm)*
321

Estimated Time of Use of Spring (hrs)
510

Approximate Monthly Spring Flow (gal)
9,822,600

Monthly Pump Hours	
Booster Pump 1	Booster Pump 2
34	34

Monthly Amount Pumped (gal)	
Booster Pump 1	Booster Pump 2
2,525,000	2,083,000

Average Pumping Rate (gpm)	
Booster Pump 1	Booster Pump 2
1,238	1,021

Monthly Average Daily Use (Gal)	
Booster Total (gal)	4,608,000
North Well Total (gal)	5,018,496
Spring Total (gal)	9,822,600
Monthly Total	19,449,096
Average Daily Total	648,303

Amount Pumped from Willow Creek Well
964,000

State of Idaho
DEPARTMENT OF WATER RESOURCES
322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098
Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: www.idwr.idaho.gov

BRAD LITTLE
Governor

GARY SPACKMAN
Director

May 13, 2020

CITY OF VICTOR
PO BOX 122
VICTOR ID 83455-0122

PROOF ACKNOWLEDGEMENT LETTER

RE: Permit No. 22-13265

Dear Permit Holder(s):

The Department acknowledges receipt of the Proof of Beneficial Use form ("proof") and license examination fee for the above-referenced water right permit. Enclosed is an order that reinstates this permit since proof and the license examination fee were submitted after the proof deadline. Please note that the priority date for this permit has been advanced to **April 29, 2003**, as provided in section 42-218a(2), Idaho Code.

The next step in the process of developing a water right is for the Department to conduct a field examination to determine and confirm the use being made of the water according to the conditions of the permit.

Please be advised that Section 42-248, Idaho Code, requires you or the owner of this water right to maintain current ownership and address records on file with the Department. Forms to file a change of ownership of a water right and/or a change in the address of the water right owner are available from any Department office or at the Department's website at www.idwr.idaho.gov.

If you have any questions concerning the field examination, please contact the Eastern Region Office of the Department located in Idaho Falls at (208) 525-7161.

Sincerely,

Debbi Judd
Technical Records Specialist

Enclosure(s)