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Memorandum

Date: August 10, 2021

To: Board of Directors, The Valley at Winter Park Water District

From: David Hach, PE - Diamondback Engineering

Regarding: Water System Infrastructure Report and Rate Study

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Valley At Winter Park Water District – Water System Evaluation

The purpose of this document is to provide an overview of the Valley at Winter Park Water District's water system infrastructure, an evaluation of the water system's deficiencies, and a rate structure analysis to ensure the District is adequately prepared to provide safe and reliable operation in the future. This document is intended to be integrated into a more comprehensive Water System Master Plan in the future if or when the Board sees fit.

Water System Summary

Valley at Winter Park is a 48-lot subdivision in Grand County, Colorado. It is primarily located in Section 9 of Township 1S Range 76W. The subdivision includes 48 developable lots of which 11 have single family homes as of June 2021.

The water distribution system consists of the following:

- One water well with 6" diameter casing and 4" PVC riser at 5 horsepower (hp) well pump. Drilling records are included in Attachment 1 and well permit included in Attachment 4.
- One well house structure housing the master meter and chlorine disinfection equipment.
- One 10' x 52', 30,000-gallon buried fiberglass water storage tank.
- Approximately 1,400 LF of 3" PVC connecting the well to the storage tank.
- Approximately 14,600 LF of 4" and 650 LF of 8" PVC distribution pipe.
- 2 pressurized fire hydrants
- 1 dry hydrant

Water System Overview

The Valley at Winter Park water distribution system ("the system") was constructed in 2003 to serve the Valley at Winter Park subdivision. The subdivision consists of 48 lots intended for single family residences. There are currently 11 water taps in use. The board anticipates 15 taps in use by the end of 2021. The distribution system consists primarily of 4" PVC pipe except for a small portion of 8" PVC that runs from the water storage tank to the distribution system.

The distribution system is supplied by a single water well located approximately at the middle of the distribution system. The well was drilled in 2001 and is 298 feet deep. Drilling records are included in Attachment 2. The well pump is 5 hp and produces 45 gallons per minute. At the time the well was drilled, the static water level was 90 feet below the well head. According to well records, the pump was placed at the bottom of the well at 298 feet.

Water is pumped into the well house via a vault. Once inside the well house, the raw well water is metered and disinfected with chlorine supplied by a peristaltic metering pump. Water then flows out of the well house through a 1,400 foot, 3" PVC pipe to the water storage tank. The well also has the ability to direct flow to a pond located approximately 1,200 ft southeast of the well house. The operator has indicated that this configuration is not currently in use and would be a potential source of contamination if were put into use. The district should disconnect this pipe from the water supply at the well house. Future use of the pipe should include a backflow prevention device to ensure the pipe cannot contaminate the water distribution system.

Water storage is provided by a buried 30,000-gallon cylindrical fiberglass tank approximately 10 feet in diameter and 52 feet long. The tank is filled from the top by the 3" inlet pipe. The tank has a simple level control system that is hard wired to the well pump controls. As part of the fire protection system, the tank's controls are designed to leave the tank nearly full at all times. Water flows from the storage tank to the distribution system through an 8" outlet pipe that runs approximately 650' to the north-east where it splits via a 8"x4"x4" tee.

Water is then distributed by a system of 4" PVC water mains. The mains follow roads and are typically buried 8' deep to protect against freezing. There are two fire hydrants connected to the system for fire protection.

Fire Flow

A simple water model was created in Bentley WaterCAD V8i (a water distributions system analysis tool) to estimate fire flow. Fire flow is modelled by an iterative process for each node in the system. Available Fire Flow is the maximum flow available where no point in the system drops below 20 psi. Fire flow was modeled at both existing hydrants.

The model shows that at the existing hydrant located on CR 5194W and adjacent to Lot 5 (H-2 on Figure 1), 260 gallons per minute (GPM) of water can be expected to be available without the system dropping below 20psi. The second hydrant, located below the tank on the west side of CR 5194 across from Lot 34 (H-1 on Figure 1) is served by an 8" pipe, and can be expected to flow at 1,220 GPM.

Valley at Winter Park is served by East Grand Fire Protection District. Discussions with the fire chief confirm that the District's 30,000 gallon water store tank is considered a creditable water supply for fire protection insurance ratings. Homes within 1,000 feet of Hydrant 1 are eligible for a Class 3 rating, while home outside 1,000' are eligible for Class 4 rating. According to the Fire Chief, at the time the water system was constructed, the 30,000-gallon storage tank was the minimum size required to qualify as a creditable water supply. Part of the fire district's acceptance of the plans was that the low-level switch to turn on the well pump was set intentionally high to maintain a nearly full tank at all times so that 30,000 gallons would be available for firefighting.

The Valley at Winter Park Water District's water distribution system was designed and built primarily of 4" water mains. Small diameter water mains, especially smaller than 6", are not able to flow at the high rates needed for firefighting operations. According to the Fire Chief, it is unlikely that Hydrant 2 would be used at all.

In addition to the pressurized hydrants, there is a dry hydrant located just east of the intersection of CR 5194 and CR 5194B. A fire engine could attach to this dry hydrant and pull water from the nearby pond. The dry hydrant is not connected to the rest of the water distribution system.

Development

The Valley at Winter Park subdivision has 48 developable residential lots. As of April 2021, 11 single family residences (SFR) have been built. The board anticipates the completion of 4 new residences by the end of 2022. It is not possible to accurately predict final buildout with certainty, however the board generally agrees that most of the lots will be developed in the next 15-20 years. A few points of interest from the board include:

- Four owners own two lots, potentially bringing the total number of residences down to 44.
- As of June 2021, six owners have submitted building applications to the County with three owners planning to submit in the next year.

With the uncertain nature of development, this report uses a "best approximation" timeline for usage and financial projects. This timeline includes building applications that have already been submitted to the county and are anticipated being submitted in the next year. After 2024, the timeline assumes 3 new residences per year until 2027, 2 per year from 2027-2031, and 1 per year from 2032-2041. The following buildout timeline will be used to estimate future demand and revenue:

Table 1: "Best approximation" development timeline

Year	# SFR	Year	# SFR
2020	11	2031	38
2021	11	2032	39
2022	14	2033	40
2023	17	2034	41
2024	21	2035	42
2025	24	2036	43
2026	27	2037	44
2027	30	2038	45
2028	32	2039	46
2029	34	2040	47
2030	36	2041	48

Operation

The system is operated by a locally contracted certified water operator who ensures safe and reliable operation year-round. The operator is responsible for regular maintenance and recordkeeping. Regular system maintenance includes flushing dead end water lines, exercising valves and hydrants, and ensuring the chlorine disinfection system is operating properly and supplied with chlorine. Recordkeeping includes maintaining accurate pumping, disinfection, and maintenance logs.

The water storage tank is located at approximately 8,761 ft. The lowest part of the system is approximately 8,593 ft. The system relies on gravity to pressurize the system. CDPHE requires normal working system pressures above 35 psi in normal operation. 60 psi is generally considered to be an ideal pressure for residential users. The water model shows that elevations above 8,680 ft are likely to have low water pressure. District staff and records show that most residences have water pressure booster pumps to raise water pressure inside the house.

Pressures above 80 psi should be reduced to less than 80 psi with a distribution-level pressure reducing valve or reduced at the service line with individual pressure reducing valves, however it is unlikely that any residence will see pressures greater than 80psi.

Historical Water Usage

The District provided well pumping records were for 2018, 2019, 2020, and the first quarter of 2021. Because all water pumped from the well during this period was pumped into the water distribution system, these records are an accurate substitute for residential water meter records.

Water systems are designed to accommodate a wide range of flows. Water use typically declines in the winter months when outdoor irrigation is dormant and increases in the summer months when outdoor irrigation is in use. A summary of usage figures for 2018-2020 are shown in Table 2. Monthly usage is available in Table A1 located in Attachment 3.

Table 2: Summary of water usage 2018-2020.

	Year		
	2018	**2019**	**2020**
Total Usage	409,518	804,719	639,520
Avg Daily (GPD)	1,122	2,205	1,752
Max Avg Daily (max month) (GPD)	2,194	5,223	3,529
Min Daily (min month) (GPD)	583	652	521
No. Active Taps	11	11	11
Average Usage per Tap (GPD)	102	200	159
Max Day Usage per Tap (GPD)	199	475	321
Peaking Factor (MDD/ADD)	1.96	2.37	2.01
Avg Peaking Factor (PF)	2.11		

Water Supply

The water system is supplied by one non-exempt tributary water well (the "PCA Well") identified in Figure 1. The well draws water from a shallow unconfined aquifer that is recharged from surface water and precipitation. The installed well pump is 5hp and pumps at 45 gallons per minute (GPM). The well permit (included in Attachment 4) allows up to 300 GPM to be pumped. The well is operated under an augmentation plan whereby water is stored and put back in the tributary watershed at Tabernash Reservoir using District owned surface water rights.

Well construction records show the well was constructed in July 2004. At the time it was constructed, the well's static water level was 90ft. The well does not currently have a level sensor installed so the current water level is unknown. A level sensor should be installed to ensure the well will continue to reliably produce water. A drop in static or pumping water level can be an early indication that the well is failing and could provide early warning of aquifer depletion or other well failure.

Records indicate that the well pump has not been replaced since its installation in 2004. The well pump was removed once in September 2004, three months after installation, due to a motor failure. The motor was replaced by a local contractor and has not been removed for service since. Typical submersible well pumps have an expected lifespan of 20 years. A replacement pump should be purchased and stored in preparation for a failure of the currently installed pump.

Water quality analysis results from 2002 show no items of concern, with no detectable level of organic contaminants from the well and no detectable disinfection byproducts (DBD) in the finished water. A new analysis should be performed to ensure the source and finished water quality has not changed.

Alternate Water Sources

The District does not have an immediately available backup source of water. While a catastrophic failure of the well is extremely unlikely, a pump failure is likely in the next 10 years. The District should purchase and store a replacement well pump so that it is immediately available to be put into service. At current water usage rates, the District would have a minimum of 8 days of available storage. At buildout, the District would have as little as 1 day of available storage. In the event of a pump failure, the District should have a plan for notifying all customers to reduce their water consumption to essential uses only, turning off outdoor water use.

There is a second well within the District's boundary located to the north of Lot 45 as shown in Figure 1. There are no records available for this well and its condition, water quality, and viability are unknown. Anecdotally, it is thought that the well was abandoned due to issues with production or contamination. A well condition assessment could be performed by a qualified contractor to sample water quality and production to determine the well's viability as an alternate water source.

Future Demand Projections

The EPA estimates that nationally, each person uses 80-100 gallons of water per day (GPD)[1]. According to U.S. Census Bureau statistics, there are 2.56 people per household[2], equating to 256 GPD/SFR. Actual usage statistics for Valley at Winter Park Water District over the past 3 years vary from 102 GPD – 200 GPD. Projections for this report will assume 260 GPD/SFE for future demand calculations to ensure a conservative planning approach with regard to water supply and the ability of the system to reliably serve customers. 260 GPD/SFE is the same figure used for planning by nearby Tabernash Meadows Water and Sanitation District.

Table 3 shows the expected average day demand (ADD) and maximum day demand (MDD) for the water system for the 20-year "best approximation" timeline.

Table 3: Projected 20-year Demand

Year	# SFR	Average Day Demand (260 GPD x #SFR) (in GPD)	Max Day Demand MDD (ADD x PF) (in GPD)
2021	11	2,860	6,035
2022	14	3,640	7,680
2023	17	4,420	9,326
2024	21	5,460	11,521
2025	24	6,240	13,166
2026	27	7,020	14,812
2027	30	7,800	16,458
2028	32	8,320	17,555
2029	34	8,840	18,652
2030	36	9,360	19,750
2031	38	9,880	20,847
2032	39	10,140	21,395
2033	40	10,400	21,944
2034	41	10,660	22,493
2035	42	10,920	23,041
2036	43	11,180	23,590
2037	44	11,440	24,138
2038	45	11,700	24,687
2039	46	11,960	25,236
2040	47	12,220	25,784
2041	48	12,480	26,333

Water Storage

The water system has a 30,000-gallon water storage tank located near the highest point in the subdivision. It is shown in Figure 1. The original developers' decision to install a 30,000-gallon tank was driven primarily by fire protection requirements and is larger than necessary to satisfy domestic water needs now and in the future. Water storage tanks that are not used for fire protection are typically sized to store the average daily demand of the system.

Residence time is the average duration between the time water enters a tank and the time it exits the tank. It varies by usage and is calculated by dividing the volume of the tank by the system demand. Excessive storage increases the residence time disinfected water in the storage tank. Long residence times can result in reduced disinfectant concentrations and allow for the formation of harmful disinfection byproducts (DBP's). DBPs are formed by a chemical reaction of chlorine disinfectant with naturally occurring organic matter in the water. DBP's can be avoided by minimizing the amount of time chlorinated water sits unused.

According to the available water quality analysis, water from the aquifer used by Valley at Winter Park has undetectable levels of organics, meaning DBPs should not have the opportunity to form. There is no evidence of DBPs forming despite long residence times in the tank and system. Current and projected residence times are shown in Table 4.

Because fire protection requirements stipulated tank sizing, and because the tank is projected to adequately store sufficient water for projected buildout, no additional storage is recommended.

Table 4: Current and projected water storage tank residence time

2018-2020 Average Residence Time (days)	
Minimum Month Residence Time	51.2
Average Month Residence Time	17.7
Maximum Month Residence Time	8.2
Projected Residence Time at Buildout (days)	
Minimum Month Residence Time	4.6
Average Month Residence Time	2.4
Maximum Month Residence Time	1.1

Identified Deficiencies

- The operator indicated that it is normal for the concrete well vault to have standing water. An automatic sump pump should be installed and piped away from the building to drain this water as it collects.
- A broad-spectrum water quality analysis should be performed on a sample of raw well water as well as finished water from a residence to ensure that source water quality as not changed since the last available lab analysis results from 2002. Water quality analyses cost approximately $100 per sample and should be performed at least once per year.
- A well level sensor should be installed to ensure that well levels can be monitored. The cost of an installed pressure transducer type level sensor is estimated at approximately $1,500.
- A replacement well pump should be purchased and available on short notice in preparation for a failure of the currently installed pump. The estimated cost of an *installed* pump is estimated at $20,000 which includes additional costs that could be expected if the District increases the capacity of the pump, including step testing the well and new controls.
- The pipe that runs from the well house to the pond should be disconnected until a suitable backflow prevention device is properly installed to prevent potential contamination. An installed backflow preventer is estimated to cost $3,500.
- A recent pipe failure caused erosion below the well house foundation and around the well vault. To prevent further settling and damage to the well house and plumbing below, the district should consult with a structural engineer on solutions for stabilizing the foundation.

Water Rate Analysis

The District's primary mission is to provide safe and reliable drinking water to the residences at the Valley at Winter Park. To carry out its mission, it is essential for the District to put itself in a financial position that allows for continued operation and upkeep. It must also prepare for the future which will include replacing life-limited components, repairs, and possible upgrades to keep pace with development. This analysis will forecast expected revenues and expenditures over the expected buildout of the subdivision over the next 20 years (2022-2042) and present three different rate structures that will put the District in a favorable financial position after major capital improvements.

Current Rate Structure

The current rate structure consists of a fixed "User Fee" of $1,200 per year that is paid by the owners of all 48 lots, whether they are connected to the system or not. This fee was $600 prior to 2021.

Tap fees have been paid by all lots and no future revenue can be expected.

The District does not currently charge fees based on consumption.

Water Rights Sales

Over the past 3 years, the District has engaged in the sale of water rights. The sale of these rights required large expenditures on legal consulting. These costs made up a significant percentage of the District's overall expenditures in 2018, 2019, and 2020 and were paid for using proceeds from the water rights sales. The VWPWD Board has indicated that the sale of water rights and associated legal expenditures are not expected to continue. This rate study assumes that regular annual legal expenditures will be no greater than 150% of legal expenses in 2017, the most recent year that did not include water rights sales. Future legal expenditures related to the sale of water rights should be paid for using the proceeds from said sales. Surplus legal budget should be added to a contingency fund until the fund is adequately able to pay for known future capital projects.

Assumptions

For the purpose of this rate study and to create a realistic operational budget using financial records supplied by the District, past legal expenditures were capped at $5,000 per year and proceeds from the sale of water rights were not included in historic revenues. This allows for the creation of a model for "normal" expected future revenue and expenditures without the effects of water rights sales.

To forecast projected revenue from usage fees, this report uses a different methodology than was used above to ensure adequate storage. Instead, the actual average usage from 2018-2020 will be used to estimate future demand. This methodology enables a more realistic projection of expected revenue for budgetary planning purposes.

Past expenditures have been separated into two categories:

- Administrative Expenses – expenses required to keep the district functioning normally, including line items like administrative expenses, insurance, legal, accounting, election expenses, office supplies and expenses, membership dues, engineering fees, and other miscellaneous expenses that are not directly related to expenses necessary to keep the water system operational. Annual Administrative Expenses from 2017-2020 have averaged:

    - $30,293 when legal costs are capped at $5,000 per year to remove costs associated with water rights sales. This will be the figure used for future cost projections in the rate analysis.
    - $75,697 when including legal expenditures associated with water rights sales.
- Water System Expenses – expenses directly related to keeping the water system operational, including line items like operator fees, utilities (electricity), supplies, repairs and maintenance, and expenses paid for augmentation. Water System Expenses have averaged $20,126 annually from 2017-2020.

To forecast future costs, the average expenditures for 2017-2020 will be used as a baseline and are tied to the average Consumer Price Index (CPI) from 2014-2020 of 2.6%.

Capital Expenditures

To ensure safe and reliable water service in the future, the District should plan for major capital expenditures. The distribution infrastructure buried 4" PVC pipe, has an expected lifespan exceeding 100-years with minor repairs. Valves, if exercised regularly, should last approximately 50 years.

Regular maintenance and repairs are accounted for in the "Operational Expenses" line item. This includes events such as line repairs, valve replacements, etc.

There are two major components of the system that can be expected to require replacement at regular intervals:

- The well pump has an expected service life of approximately 20 years. Replacement cost is estimated at $20,000 in 2022, which includes additional costs that could be expected if the District increases the capacity of the pump, including step testing the well and new controls.
- The buried fiberglass water storage tank has a minimum expected service life of 30-40 years. The existing tank was installed in 2004, and this report conservatively plans for replacement in 2039. Present day cost for procurement, delivery, and installation of a similar 30,000-gallon buried fiberglass tank was quoted at $90,000. The adjusted price to replace the tank in 2035 is estimated at $150,000 to account for inflation as well as unexpected increases in installation costs. A similarly sized cast in place concrete tank would be roughly equal in price and expected lifespan.

Rate Structures

Due to its limited size, the Valley at Winter Park Water does not benefit appreciably from economies of scale. Fixed costs to run the water system, which do not change based on how much water the system supplies, comprise of approximately 97.5% of the adjusted expenditures from 2017-2020. Variable costs, which increase with the volume of water supplied by the system and are limited primarily to electricity and chlorine disinfectant, make up approximately 2.5% of expenditures.

This rate study will propose three separate rate structure options that will collect revenue from a combination of two fees fees. For ease of use and understanding, each structure attempts to use whole and round number wherever practical. For each option, fees will increase at 4-year intervals.

- All three options will include a "user fee", a fixed annual fee that will be assessed to all 48 lots regardless of if the lot has an active service tap. This fee is currently $1,200.

- Two of the options will include a "service fee", which will be a fee based on the volume of water used by each lot in 1,000-gallon increments. This fee could be collected as a monthly, quarterly, or annual payment.

The goal of each rate structure is the same: to keep the water system in good working order and prepare for necessary future capital expenditures in a fiscally responsible and fair manner while maintaining the District's ability to pay for any unforeseen expenses. The proposed rate structures fund anticipated expenditures using only revenue collected from fees and does not consider potential proceeds from water rights sales. Each rate structure attempts to leave the District with approximately $50,000 in the general fund after the tank is replaced. The rate structures attempt to use round numbers to simplify planning for the Board and customers.

Rate Structure Option A

This structure models an increase in User Fees only and does not include a Usage Fee. This reflects the fact that the water system has very little variable cost; the number of residences connected to the system is not reflected by the cost of keeping the system up and running. Option A reflects the idea that each lot owner is equally financially responsible for keeping the system operational whether they use it yet or not. The rate structure is broken down as follows:

- User fees remain $1,200 from 2022-2025 and increase by $200 every 4 years through 2042. These increases outpace CPI to raise the capital necessary to replace the tank.
- There are no service fees for using the water.

Table 5: Rate Structure Option A

	Year					
	2022-2025	2026-2029	2030-2033	2034-2037	2038-2041	2042-
Annual User Fee	$ 1,200.00	$ 1,400.00	$ 1,600.00	$ 1,800.00	$ 2,000.00	$ 2,200.00
Service Fee per 1000-gallons	$ -	$ -	$ -	$ -	$ -	$ -

A full 20-year analysis of expected revenues, expenditures, and expected annual and monthly fees are shown in Attachment 5.

The advantages of Option A are that the capital reserve fund will grow in a stable and predictable manner. Usage will have no bearing on the District's ability to fund future improvements, and users will have a predictable annual fee that doesn't change based on their usage habits. If buildout is not complete in the anticipated 20-year timeframe, the District will still be in a financial position to fund improvements.

The disadvantages of Option A are that there is no incentive to reduce water consumption, and owners of undeveloped lots may not feel it is fair that they are paying increased fees for a service they do not currently use.

The total projected 20-year cost of $34,800 per lot is the lowest of the three options. This cost is the same for all lot owners regardless of whether they are connected to the system.

Rate Structure Option B

This rate structure models a static user fee while introducing a service fee. The rate structure is affected by the buildout timeframe and consumption, so some variability will be seen based on the rate of development and the consumption of its users. Option B reflects the idea that the lot owners who are using the system should be held more financially responsible for its upkeep and improvements than low owners who are not using the system. The rate structure is broken down as follows:

- User fees remain $1,200 per year through 2042.
- Service fees are assessed at $5 per 1000-gallons of water used starting in 2022 and increase by $1.00 per 1000-gallons every 4 years through 2042.

Table 6: Rate Structure Option B

	Year					
	2022-2025	2026-2029	2030-2033	2034-2037	2038-2041	2042-
Annual User Fee	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00
Total Annual Service Fee	$ 5.00	$ 6.00	$ 7.00	$ 8.00	$ 9.00	$ 10.00

A full 20-year analysis of expected revenues, expenditures, and expected annual and monthly fees are shown in Attachment 6.

The advantages of Option B include shifting more of the financial burden of the system to the owners that are using the system and away from owners who have not developed their lot. Users will be able to reduce their water bills by cutting consumption.

The disadvantages of Option B include potential for instability and unpredictability in revenue due to fluctuating usage. Revenue may not accumulate as forecast if users significantly reduce their consumption. Because the system has little variable cost related to water production, a reduction in water consumption will not appreciably reduce the District's expenditures.

The total projected 20-year cost for a user already connected to the system is the highest of the 3 options at $37.126.

Rate Structure C

This rate structure models increased user fees and the introduction of a service fee. The rate structure blends aspects of Options A and B such that existing users pay more for the service that they are using but are not unduly responsible for ensuring the financial health of the District. The rate structure is broken down as follows:

- User fees remain $1,200 per year until 2025 and increase by $75 every 4 years through 2042.
- Service fees are assessed at $1.50 per 1000-gallons of water used in 2022 and increase by $0.50 per 1000-gallons every 4 years through 2042.

Table 7: Rate Structure Option C

	Year					
	2022-2025	2026-2029	2030-2033	2034-2037	2038-2041	2042-
Annual User Fee	$ 1,200.00	$ 1,275.00	$ 1,350.00	$ 1,425.00	$ 1,500.00	$ 1,575.00
Service Fee per 1000-gallons	$ 1.50	$ 2.00	$ 2.50	$ 3.00	$ 3.50	$ 4.00

A full 20-year analysis of expected revenues, expenditures, and expected annual and monthly fees are shown in Attachment 7.

The advantages of Option C are a more stable revenue stream than Option B, while still giving users the ability to reduce their water bill by reducing consumption. While a user reduction in water consumption will still reduce forecast revenue, the District would be less affected.

The disadvantages of Option C are a less stable revenue stream than Option A.

The total projected 20-year cost for a user already connected to the system is $35,408

Recommendation

Because the system's variable costs are not significant to the overall cost of operating the system, Option A is the recommended rate structure. The introduction of usage-based Service Fees introduces significant unpredictability to the District's revenue stream; user consumption reductions could result in the District being financially unprepared for scheduled system improvements that would leave the system at risk of failure.

Alternatives

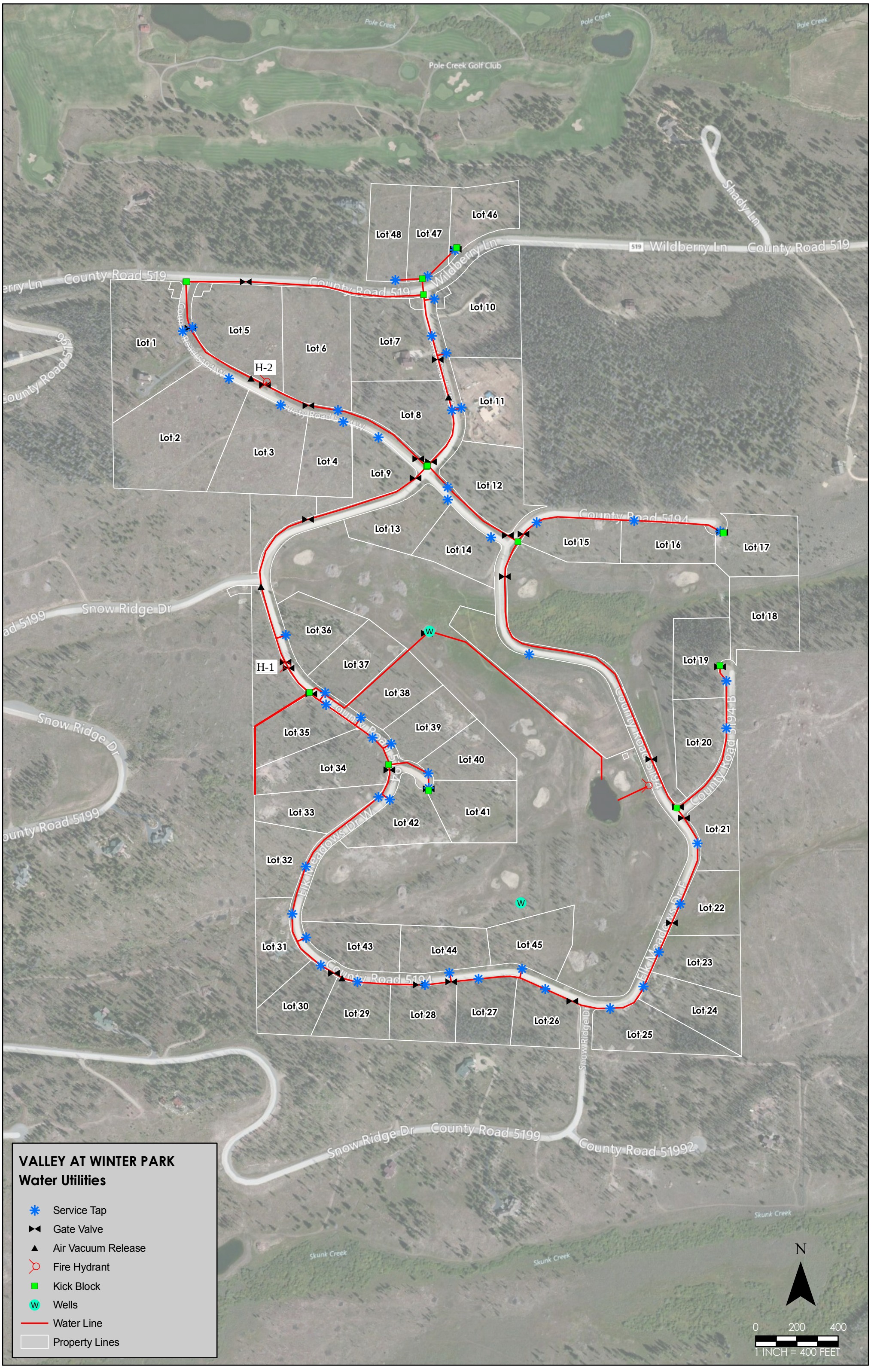
The District owns water rights that can be sold or leased to fund improvements. If the increases proposed by the rate structures are deemed to be unfeasible, the District's Board could choose to sell some of these water rights to offset or fund the tank expenditure. Additionally, the board could explore leasing their water rights, which would add a revenue stream while maintaining the District's ownership of valuable assets.

Citations:

1. https://www.epa.gov/watersense/statistics-and-facts
2. https://www.census.gov/quickfacts/CO

ATTACHMENT 1

WATER SYSTEM MAP


Pole Creek Golf Club
Pole Creek
Pole Creek
Pole Creek
Shady Ln
519 Wildberry Ln County Road 519
Wildberry Ln County Road 519
County Road 519
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Lot 48
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County Road 5199
County Road 5194
County Road 5194
County Road 5194 B
Elk Meadows Dr W
Elk Meadows Dr E
Snow Ridge Dr
County Road 51992
Skunk Creek
Skunk Creek
Skunk Creek
VALLEY AT WINTER PARK
Water Utilities
Service Tap
Gate Valve
Air Vacuum Release
Fire Hydrant
Kick Block
Wells
Water Line
Property Lines
N
0 200 400
1 INCH = 400 FEET

ATTACHMENT 2

WELL CONSTRUCTION AND TEST REPORT

FORM NO. GWS-31 10/94

WELL CONSTRUCTION AND TEST REPORT
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Rm 818, Denver, CO 80203

For Office Use only

1. WELL PERMIT NUMBER 230071

2. OWNER NAME(S) Pole Creek Associates
Mailing Address P.O. Box 1686
City, St. Zip Fraser, Co. 80442
Phone (970) 726-3077

3. WELL LOCATION AS DRILLED: SW 1/4 NE 1/4, Sec. 9 Twp. 1 S, Range 76 W
DISTANCES FROM SEC. LINES:
2000 ft. from North (north or south) Sec. line, and 1850 ft. from East (east or west) Sec. line. OR
SUBDIVISION: LOT BLOCK FILING(UNIT)
STREET ADDRESS AT WELL LOCATION:

4. GROUND SURFACE ELEVATION Unknown ft. DRILLING METHOD Air
DATE COMPLETED 7-14-01 TOTAL DEPTH 298 ft. DEPTH COMPLETED 298 ft.

5. GEOLOGIC LOG:

Depth		Description of Material (Type, Size, Color, Water Location)	
0	2	Topsoil	
2	38	Red clay	
38	53	Clay & gravel, small	
53	65	Red clay	
65	75	Water	xx
75	130	Sand	xx
130	150	Clay	
150	160	Sand	xx
160	190	Clay	xx
190	205	Sand	xx
205	240	Clay	
240	250	Sand	xx
250	298	clay	

6. HOLE DIAM. (in.)

(in.)	From (ft)	To (ft)
9	0	56
driven	56	59
6 1/8	59	298

7. PLAIN CASING

OD (in)	Kind	Wall Size	From(ft)	To(ft)
7	Steel	.250	+1	59
4.5	P.V.C.	.214	18	78
4.5	P.V.C.	.214	158	178
4.5	P.V.C.	.214	198	238
PERF. CASING: Screen Slot Size: .032				
4.5	P.V.C.	.214	78	158
4.5	P.V.C.	.214	178	198
4.5	P.V.C.	.214	238	258

8. FILTER PACK:
Material
Size
Interval

9. PACKER PLACEMENT:
Type
Depth

10. GROUTING RECORD:

Material	Amount	Density	Interval	Placement
Cement	8cuft.	15#	14-56	Poured & vibrated

REMARKS: See attached for rest of Casing

11. DISINFECTION: Type H. T.H. Amt. Used 7 oz.

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form No. GWS 39 Supplemental Well Test.
TESTING METHOD Air
Static Level 90 ft. Date/Time measured 7-14-01, Production Rate, 50+ gpm.
Pumping level 298 ft. Date/Time measured 7-14-01, Test length (hrs.)
Remarks

13. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge. [Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

CONTRACTOR James Drilling Company Phone (303) 420-5181 Lic. No. 1134
Mailing Address 6235 West 56th Avenue Arvada, Co. 80002

Name/Title (Please type or print)	Signature	Date
Michael Keaton, President		8-21-01

Casing Program for Permit 230071 Under Pole Creek Associates

Plain casing:

4.5" P.V.C. .214 wall from 258 ft. to 298 ft.

ATTACHMENT 3

MONTHLY USAGE

Attacment 3 - Monthly Usage Statistics

	Year		
Month	**2018**	**2019**	**2020**
Jan	24,500	87,500	22,600
Feb	21,700	70,600	14,600
Mar	18,700	139,500	21,200
Apr	17,500	156,700	59,800
May	28,900	58,300	62,700
June	53,100	67,000	108,700
July	43,200	54,500	109,400
Aug	30,800	56,800	44,900
Sept	23,300	41,000	32,900
Oct	31,000	20,200	29,400
Nov	46,800	24,100	88,200
Dec	68,000	26,500	43,100
Total Usage	409,518	804,719	639,520
Avg Daily (GPD)	1,122	2,205	1,752
Max Avg Daily (max month) (GPD)	2,194	5,223	3,529
Min Daily (min month) (GPD)	583	652	521
No. Active Taps	11	11	11
Average Usage per Tap (GPD)	102	200	159
Max Day Usage per Tap (GPD)	199	475	321
Peaking Factor (MDD/ADD)	1.96	2.37	2.01
Avg Peaking Factor (PF)	2.11		

ATTACHMENT 4

WELL PERMIT

Form No. GWS-25

OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

LIC

WELL PERMIT NUMBER 57847 -F -
DIV. 5 WD 51 DES. BASIN MD

APPLICANT

POLE CREEK ASSOCIATES
PO BOX 1686
FRASER, CO 80442-

(970) 726-3077

PERMIT TO USE AN EXISTING WELL

APPROVED WELL LOCATION
GRAND COUNTY
SW 1/4 NE 1/4 Section 9
Township 1 S Range 76 W Sixth P.M.

DISTANCES FROM SECTION LINES
2000 Ft. from North Section Line
1850 Ft. from East Section Line

UTM COORDINATES
Northing: Easting:

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT

CONDITIONS OF APPROVAL

1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
3) Approved pursuant to CRS 37-90-137(2) on the condition that this well is operated in accordance with the Pole Creek substitute water supply plan approved by the State Engineer on July 15, 2002. The plan was approved per the terms and conditions contained in the proposed decree for Case No. 01CW217, which adds four wells to the Pole Creek Associates and Winter Park Associates Augmentation Plan approved by the Division 5 Water Court in case no. 80CW67 and changed in case no. 95CW354. The subject water supply plan is currently valid through July 15, 2003, and if not extended or if Case No. 01CW217 is not decreed as proposed, diversion of ground water from this well must cease immediately.
4) The use of ground water from this well is limited to ordinary household purposes for 48 residential units, irrigation of a nine-hole golf course, and commercial use in a clubhouse and golf maintenance facility, all within the 208.3 acre development identified in case no. 95CW354.
5) The simultaneous maximum pumping rate of this well, Well T-3, Well T-4, Well T-5 and the PCA Well (Permit No. 54335-F) shall not exceed 300 GPM.
6) The combined average annual amount of ground water to be appropriated by this well, Well T-3, Well T-4, Well T-5 and the PCA Well (Permit No. 54335-F) shall not exceed 63.71 acre-feet.
7) This well shall be constructed at least 600 feet from any existing well that is not owned by the applicant and not more than 200 feet from the permitted location and the location specified for Well T-2 in Case No. 01CW217.
8) The owner shall mark the well in a conspicuous place with well permit number(s), name of the aquifer, and court case number(s) as appropriate. The owner shall take necessary means and precautions to preserve these markings.
9) A totalizing flow meter must be installed on this well and maintained in good working order. Permanent records of all diversions must be maintained by the well owner (recorded at least annually) and submitted to the Division Engineer upon request.
10) The issuance of this permit hereby cancels permit no. 230071. 7-18-02

APPROVED
CML

Hal D. Simpson
State Engineer

By

Receipt No. 0494788

DATE ISSUED JUL 18 2002

EXPIRATION DATE JUL 18 2003

ATTACHMENT 5

RATE STRUCTURE OPTION A

Rate Structure Option A

	Year					
	2022-2025	2026-2029	2030-2033	2034-2037	2038-2041	2042-
Annual User Fee	$ 1,200.00	$ 1,400.00	$ 1,600.00	$ 1,800.00	$ 2,000.00	$ 2,200.00
Service Fee per 1000-gallons	$ -	$ -	$ -	$ -	$ -	$ -
CPI	2.6%					
Avg Daily Flow per tap	154					

increase $ 200.00

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Newly Active Taps	0	3	4	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0
Total Taps In Use	11	14	17	21	24	27	30	32	34	36	38	39	40	41	42	43	44	45	46	47	48	48
Projected Total Annual Flow (in 100	618	786	955	1,180	1,348	1,517	1,685	1,798	1,910	2,022	2,135	2,191	2,247	2,303	2,359	2,416	2,472	2,528	2,584	2,640	2,696	2,696
Annual use per tap (in 1000 gallons)	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Revenues																						
Service Fees	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 67,200.00	$ 67,200.00	$ 67,200.00	$ 67,200.00	$ 76,800.00	$ 76,800.00	$ 76,800.00	$ 76,800.00	$ 86,400.00	$ 86,400.00	$ 86,400.00	$ 86,400.00	$ 96,000.00	$ 96,000.00	$ 96,000.00	$ 96,000.00	$ 105,600.00
User Fees		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenue	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 67,200.00	$ 67,200.00	$ 67,200.00	$ 67,200.00	$ 76,800.00	$ 76,800.00	$ 76,800.00	$ 76,800.00	$ 86,400.00	$ 86,400.00	$ 86,400.00	$ 86,400.00	$ 96,000.00	$ 96,000.00	$ 96,000.00	$ 96,000.00	$ 105,600.00
Expenditures																						
Administrative Expenses	$ 30,292.66	$ 31,080.26	$ 31,888.35	$ 32,717.45	$ 33,568.10	$ 34,440.87	$ 35,336.34	$ 36,255.08	$ 37,197.71	$ 38,164.85	$ 39,157.14	$ 40,175.23	$ 41,219.78	$ 42,291.50	$ 43,391.07	$ 44,519.24	$ 45,676.74	$ 46,864.34	$ 48,082.81	$ 49,332.96	$ 50,615.62	$ 51,931.63
Operational Expenses	$ 20,126.38	$ 20,649.67	$ 21,186.56	$ 21,737.41	$ 22,302.58	$ 22,882.45	$ 23,477.39	$ 24,087.80	$ 24,714.09	$ 25,356.65	$ 26,015.93	$ 26,692.34	$ 27,386.34	$ 28,098.38	$ 28,828.94	$ 29,578.50	$ 30,347.54	$ 31,136.57	$ 31,946.12	$ 32,776.72	$ 33,628.92	$ 34,503.27
Total Expenses	$ 50,419.04	$ 51,729.93	$ 53,074.91	$ 54,454.86	$ 55,870.68	$ 57,323.32	$ 58,813.73	$ 60,342.88	$ 61,911.80	$ 63,521.51	$ 65,173.06	$ 66,867.56	$ 68,606.12	$ 70,389.88	$ 72,220.02	$ 74,097.74	$ 76,024.28	$ 78,000.91	$ 80,028.93	$ 82,109.69	$ 84,244.54	$ 86,434.90
Well Pump Replacement	$ -	$ 20,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tank Replacement	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000.00	$ -	$ -	$ -
Fund Balance	$ 34,069.00	$ 19,939.07	$ 24,464.16	$ 27,609.30	$ 29,338.62	$ 39,215.30	$ 47,601.57	$ 54,458.69	$ 59,746.89	$ 73,025.38	$ 84,652.32	$ 94,584.76	$ 102,778.63	$ 118,788.75	$ 132,968.74	$ 145,271.00	$ 155,646.72	$ 173,645.81	**$ 39,616.88**	$ 53,507.19	$ 65,262.65	$ 84,427.76
Average Annual User and Service Fe	$ 600.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,400.00	$ 1,400.00	$ 1,400.00	$ 1,400.00	$ 1,600.00	$ 1,600.00	$ 1,600.00	$ 1,600.00	$ 1,800.00	$ 1,800.00	$ 1,800.00	$ 1,800.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,200.00
Average Monthly Cost Per Tap	$ 50.00	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 116.67	$ 116.67	$ 116.67	$ 116.67	$ 133.33	$ 133.33	$ 133.33	$ 133.33	$ 150.00	$ 150.00	$ 150.00	$ 150.00	$ 166.67	$ 166.67	$ 166.67	$ 166.67	$ 183.33

Average 20-year cost per tap $ 34,800.00

ATTACHMENT 6

RATE STRUCTURE OPTION B

Rate Structure Option B

	Year					
	2022-2025	2026-2029	2030-2033	2034-2037	2038-2041	2042-
Annual User Fee	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00
Total Annual Service Fee	$ 5.00	$ 6.00	$ 7.00	$ 8.00	$ 9.00	$ 10.00
CPI	2.6%					
Avg Daily Flow per tap	154					

additional user fee 0
Additional usage fee 1

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Newly Active Taps	0	3	4	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0
Total Taps In Use	11	14	17	21	24	27	30	32	34	36	38	39	40	41	42	43	44	45	46	47	48	48
Projected Annual Flow (in 1000	618	786	955	1,180	1,348	1,517	1,685	1,798	1,910	2,022	2,135	2,191	2,247	2,303	2,359	2,416	2,472	2,528	2,584	2,640	2,696	2,696
Annual use per tap (in 1000 gall	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Revenues																						
Service Fees	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 62,400.00	$ 62,400.00	$ 62,400.00	$ 62,400.00	$ 62,400.00	$ 62,400.00	$ 62,400.00	$ 62,400.00	$ 72,000.00	$ 72,000.00	$ 72,000.00	$ 72,000.00	$ 72,000.00
User Fees		$ 3,932.00	$ 4,775.00	$ 5,898.00	$ 6,741.00	$ 9,100.00	$ 10,111.00	$ 10,785.00	$ 11,460.00	$ 14,156.00	$ 14,942.00	$ 15,336.00	$ 15,729.00	$ 18,425.00	$ 18,875.00	$ 19,324.00	$ 19,773.00	$ 22,751.00	$ 23,256.00	$ 23,762.00	$ 24,267.00	$ 26,964.00
Total Revenue	$ 57,600.00	$ 61,532.00	$ 62,375.00	$ 63,498.00	$ 64,341.00	$ 66,700.00	$ 67,711.00	$ 68,385.00	$ 69,060.00	$ 76,556.00	$ 77,342.00	$ 77,736.00	$ 78,129.00	$ 80,825.00	$ 81,275.00	$ 81,724.00	$ 82,173.00	$ 94,751.00	$ 95,256.00	$ 95,762.00	$ 96,267.00	$ 98,964.00
Expenditures																						
Administrative Expenses	$ 30,292.66	$ 31,080.26	$ 31,888.35	$ 32,717.45	$ 33,568.10	$ 34,440.87	$ 35,336.34	$ 36,255.08	$ 37,197.71	$ 38,164.85	$ 39,157.14	$ 40,175.23	$ 41,219.78	$ 42,291.50	$ 43,391.07	$ 44,519.24	$ 45,676.74	$ 46,864.34	$ 48,082.81	$ 49,332.96	$ 50,615.62	$ 51,931.63
Operational Expenses	$ 20,126.38	$ 20,649.67	$ 21,186.56	$ 21,737.41	$ 22,302.58	$ 22,882.45	$ 23,477.39	$ 24,087.80	$ 24,714.09	$ 25,356.65	$ 26,015.93	$ 26,692.34	$ 27,386.34	$ 28,098.38	$ 28,828.94	$ 29,578.50	$ 30,347.54	$ 31,136.57	$ 31,946.12	$ 32,776.72	$ 33,628.92	$ 34,503.27
Total Expenses	$ 50,419.04	$ 51,729.93	$ 53,074.91	$ 54,454.86	$ 55,870.68	$ 57,323.32	$ 58,813.73	$ 60,342.88	$ 61,911.80	$ 63,521.51	$ 65,173.06	$ 66,867.56	$ 68,606.12	$ 70,389.88	$ 72,220.02	$ 74,097.74	$ 76,024.28	$ 78,000.91	$ 80,028.93	$ 82,109.69	$ 84,244.54	$ 86,434.90
Well Pump Replacement	$ -	$ 20,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tank Replacement	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000.00	$ -	$ -	$ -
Fund Balance	$ 34,069.00	$ 23,871.07	$ 33,171.16	$ 42,214.30	$ 50,684.62	$ 60,061.30	$ 68,958.57	$ 77,000.69	$ 84,148.89	$ 97,183.38	$ 109,352.32	$ 120,220.76	$ 129,743.63	$ 140,178.75	$ 149,233.74	$ 156,860.00	$ 163,008.72	$ 179,758.81	**$ 44,985.88**	$ 58,638.19	$ 70,660.65	$ 83,189.76
Average Annual User and Servic	$ 1,200.00	$ 1,480.86	$ 1,480.88	$ 1,480.86	$ 1,480.88	$ 1,537.04	$ 1,537.03	$ 1,537.03	$ 1,537.06	$ 1,693.22	$ 1,693.21	$ 1,693.23	$ 1,693.23	$ 1,749.39	$ 1,749.40	$ 1,749.40	$ 1,749.39	$ 2,005.58	$ 2,005.57	$ 2,005.57	$ 2,005.56	$ 2,061.75
Average Monthly Cost Per Tap	$ 100.00	$ 123.40	$ 123.41	$ 123.40	$ 123.41	$ 128.09	$ 128.09	$ 128.09	$ 128.09	$ 141.10	$ 141.10	$ 141.10	$ 141.10	$ 145.78	$ 145.78	$ 145.78	$ 145.78	$ 167.13	$ 167.13	$ 167.13	$ 167.13	$ 171.81

Average 20-year cost per tap	$ 37,126.13
Average Monthly	$ 142.56

ATTACHMENT 7

RATE STRUCTURE OPTION C

Rate Structure Option C

	Year					
	2022-2025	2026-2029	2030-2033	2034-2037	2038-2041	2042-
Annual User Fee	$ 1,200.00	$ 1,275.00	$ 1,350.00	$ 1,425.00	$ 1,500.00	$ 1,575.00
Service Fee per 1000-gallons	$ 1.50	$ 2.00	$ 2.50	$ 3.00	$ 3.50	$ 4.00
CPI	2.6%					
Avg Daily Flow per tap	154					

additional user 75
Additional usag 0.5

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Newly Active Taps	0	3	4	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0
Total Taps In Use	11	14	17	21	24	27	30	32	34	36	38	39	40	41	42	43	44	45	46	47	48	48
Projected Annual Flow (in 1000 gallo	618	786	955	1,180	1,348	1,517	1,685	1,798	1,910	2,022	2,135	2,191	2,247	2,303	2,359	2,416	2,472	2,528	2,584	2,640	2,696	2,696
Annual use per tap (in 1000 gallons)	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Revenues																						
Service Fees	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 57,600.00	$ 61,200.00	$ 61,200.00	$ 61,200.00	$ 61,200.00	$ 73,200.00	$ 73,200.00	$ 73,200.00	$ 73,200.00	$ 76,800.00	$ 76,800.00	$ 76,800.00	$ 76,800.00	$ 90,000.00	$ 90,000.00	$ 90,000.00	$ 90,000.00	$ 90,000.00
User Fees		$ 1,180.00	$ 1,432.00	$ 1,769.00	$ 2,022.00	$ 3,033.00	$ 3,370.00	$ 3,595.00	$ 3,820.00	$ 5,056.00	$ 5,337.00	$ 5,477.00	$ 5,617.00	$ 6,909.00	$ 7,078.00	$ 7,247.00	$ 7,415.00	$ 8,847.00	$ 9,044.00	$ 9,241.00	$ 9,437.00	$ 10,785.00
Total Revenue	$ 57,600.00	$ 58,780.00	$ 59,032.00	$ 59,369.00	$ 59,622.00	$ 64,233.00	$ 64,570.00	$ 64,795.00	$ 65,020.00	$ 78,256.00	$ 78,537.00	$ 78,677.00	$ 78,817.00	$ 83,709.00	$ 83,878.00	$ 84,047.00	$ 84,215.00	$ 98,847.00	$ 99,044.00	$ 99,241.00	$ 99,437.00	$ 100,785.00
Expenditures																						
Administrative Expenses	$ 30,292.66	$ 31,080.26	$ 31,888.35	$ 32,717.45	$ 33,568.10	$ 34,440.87	$ 35,336.34	$ 36,255.08	$ 37,197.71	$ 38,164.85	$ 39,157.14	$ 40,175.23	$ 41,219.78	$ 42,291.50	$ 43,391.07	$ 44,519.24	$ 45,676.74	$ 46,864.34	$ 48,082.81	$ 49,332.96	$ 50,615.62	$ 51,931.63
Operational Expenses	$ 20,126.38	$ 20,649.67	$ 21,186.56	$ 21,737.41	$ 22,302.58	$ 22,882.45	$ 23,477.39	$ 24,087.80	$ 24,714.09	$ 25,356.65	$ 26,015.93	$ 26,692.34	$ 27,386.34	$ 28,098.38	$ 28,828.94	$ 29,578.50	$ 30,347.54	$ 31,136.57	$ 31,946.12	$ 32,776.72	$ 33,628.92	$ 34,503.27
Total Expenses	$ 50,419.04	$ 51,729.93	$ 53,074.91	$ 54,454.86	$ 55,870.68	$ 57,323.32	$ 58,813.73	$ 60,342.88	$ 61,911.80	$ 63,521.51	$ 65,173.06	$ 66,867.56	$ 68,606.12	$ 70,389.88	$ 72,220.02	$ 74,097.74	$ 76,024.28	$ 78,000.91	$ 80,028.93	$ 82,109.69	$ 84,244.54	$ 86,434.90
Well Pump Replacement	$ -	$ 20,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tank Replacement	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000.00	$ -	$ -	$ -
Fund Balance	$ 34,069.00	$ 21,119.07	$ 27,076.16	$ 31,990.30	$ 35,741.62	$ 42,651.30	$ 48,407.57	$ 52,859.69	$ 55,967.89	$ 70,702.38	$ 84,066.32	$ 95,875.76	$ 106,086.63	$ 119,405.75	$ 131,063.74	$ 141,013.00	$ 149,203.72	$ 170,049.81	**$ 39,064.88**	$ 56,196.19	$ 71,388.65	$ 85,738.76
Average Annual User and Service Fe	$ 600.00	$ 1,284.29	$ 1,284.24	$ 1,284.24	$ 1,284.25	$ 1,387.33	$ 1,387.33	$ 1,387.34	$ 1,387.35	$ 1,665.44	$ 1,665.45	$ 1,665.44	$ 1,665.43	$ 1,768.51	$ 1,768.52	$ 1,768.53	$ 1,768.52	$ 2,071.60	$ 2,071.61	$ 2,071.62	$ 2,071.60	$ 2,099.69
Monthly Bill	$ 50.00	$ 107.02	$ 107.02	$ 107.02	$ 107.02	$ 115.61	$ 115.61	$ 115.61	$ 115.61	$ 138.79	$ 138.79	$ 138.79	$ 138.79	$ 147.38	$ 147.38	$ 147.38	$ 147.38	$ 172.63	$ 172.63	$ 172.63	$ 172.63	$ 174.97

Average 20-year cost per tap	$ 35,408.34
Average Monthly	$ 138.13