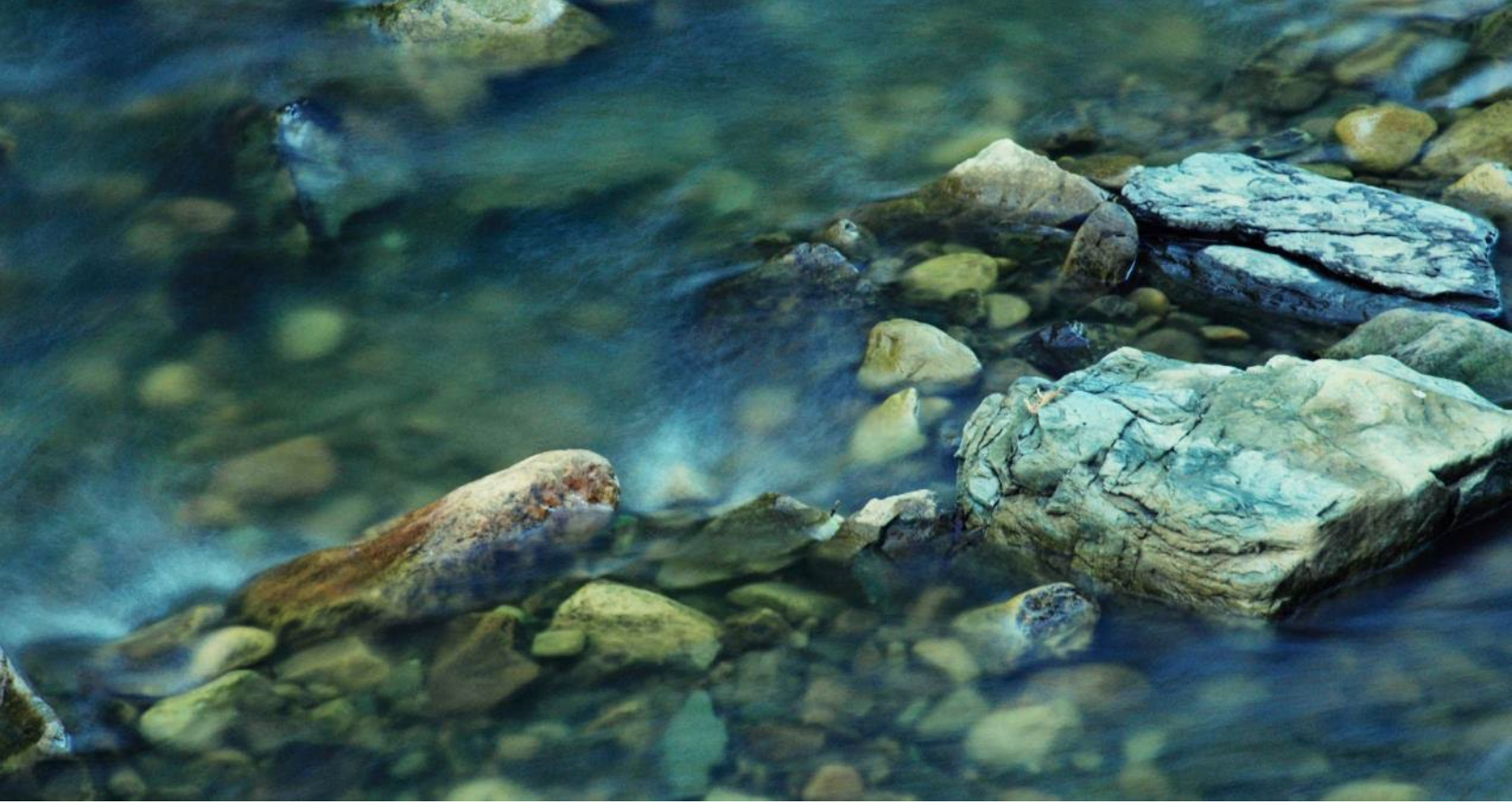

May 2024
Idledale Water and Sanitation District Water System Improvements Project

ANCHOR QEA

USDA Preliminary Engineering Report

Prepared for Idledale Water Sanitation District

May 2024
Idledale Water and Sanitation District Water System Improvement Project

USDA Preliminary Engineering Report

Prepared for
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Appendix B District Financial Documentation
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ABBREVIATIONS

AMR	Automatic Meter Reading
AWWA	American Water Works Association
CDPHE	Colorado Department of Public Health and Environment
CONUS	Continental United States
CPW	Colorado Parks and Wildlife
District	Idledale Water and Sanitation District
DWR	Colorado Division of Water Resources
EA	Each
FEMA	Federal Emergency Management Agency
GPCD	Gallons Per Capita Per Day
GPD	Gallons Per Day
GPM	Gallons per minute
GWDUI	Groundwater Under Direct Influence of Surface Water
HDD	Horizontal Directional Drilling
IWSD	Idledale Water and Sanitation District
LF	Linear Feet
LS	Lump Sum
MCL	Maximum Contaminant Limit(s)
Mg/L	Milligrams per Liter
NPV	Net Present Value
O&M	Operation and Maintenance
PE	Polyethylene
PER	Preliminary Engineering Report
PNA	Project Needs Assessment
PRV	Pressure Reducing Valve
SCADA	Supervisory Control and Data Acquisition
SHPO	Colorado State Historic Preservation Office
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
VFD	Variable Frequency Drive(s)

Executive Summary

The follow Preliminary Engineering Report (PER) has been prepared by the Idledale Water and Sanitation District (IWSD, District) of Idledale, Colorado for the United States Department of Agriculture's (USDA) Rural Development group for consideration of grant and loan opportunities. This PER reflects the preliminary design of water system improvements to improve the firm capacity of the District's potable water supply.

The District has experienced compounding negative impacts that have included equipment failures, unchecked system leaks, multiple years of drought, and reduced groundwater recharge. These issues have caused repeated water shortages and use restrictions to customers. The District has even resorted to purchasing bulk water and hauling it from other water districts in Frederick, Golden and the Genesee on multiple occasions to reduce their supply deficit. Given their limited financial resources for operational expenses, the water hauling activities has also reduced financial capital reserves. The proposed improvements to the raw water supply are intended to meet the existing deficit, as well as provide sufficient capacity to meet the demands of a 20-year planning period.

Anchor QEA, working as engineering consultants for the District, has identified several water system improvements that will improve firm capacity water supply and eliminate the current supply deficit. Proposed improvements include constructing an additional groundwater supply well, installing a new water transmission line, improving existing monitoring capabilities and controls, expanding, and centralizing the existing water treatment facility, and replacing broken water distribution system components.

This project, referred to as the Idledale WSD Water System Improvements Project (project), is currently in the initial design phase. Information presented in the PER accurately reflects the anticipated project conditions, as they are understood at the time of writing.

1 Project Planning

This section includes pertinent background information on the District and service area, including project location, environmental resources located near the project site, service area population trends, and community engagement procedures the District follows.

1.1 Location

Idledale is geographically located on Colorado State Highway 74 approximately 3 miles west of Morrison in Jefferson County. The District services approximately 137 water taps located within the town of Idledale. Planned improvements discussed in this report are located near the northern portion of the distribution system. Specific locations of planned improvements include:

- New groundwater supply well: located on District owned property near the Upper Treatment Building
- New transmission line: Located between the water storage tank adjacent to the Upper Treatment Building and the Ridgeway Well, which is located near the Forks Treatment Building towards the center of the system.
- Treatment facility improvements: Located within the Upper Treatment Building.
- Distribution system zone meters: to monitor and alarm high demand conditions located throughout the District in below grade vaults in public rights of way

Figure 1 provides a map of the service area and project areas, including parcel boundaries, District owned facilities, and service lines. Figure 2 provides photos of key existing facilities.

1.2 Environmental Resources Present

The District is in a developed rural community, with minimal critical environmental resources present that will necessitate coordination with local, state, or federal agencies. The District's service area is mostly composed of evergreen forest, shrub/scrub, developed land, and some woody wetlands (NLCD 2019 CONUS Land Cover). No construction activities are planned within the 100-year floodplain (FEMA 2023) and the existing floodplain will not be impacted by the planned improvements.

While no wetlands are present within the boundaries of proposed construction activities, an intermittent stream that runs through a stormwater culvert is located near the proposed transmission line near the Upper Treatment Building, as indicated in the US Fish and Wildlife Service's National Wetlands Inventory (USFS 2024). Coordination efforts with the US Army Corps of Engineers (USACE) have been initiated in regard to permitting procedures and implications due to this intermittent stream crossing. A wetlands delineation may be required to determine the permitting approach with USACE.

A Project Needs Assessment (PNA) was prepared for the Colorado Department of Public Health and Environment (CDPHE) as part of initial project development and state-level funding assistance (OWC 2022). A requirement of the PNA deliverable included coordination with Colorado Parks and Wildlife (CPW) and the Colorado State Historic Preservation Office (SHPO). Coordination included a review of maps showing the conceptual layout of the planned improvements. Following review of the PNA, both CPW and SHPO provided statements that the planned project would not have significant impacts to biological resources, environmental resources, or historical resources, and the project could commence without modification. Records of this coordination is provided in Appendix A – CDPHE Project Needs Assessment.

The planned improvements for this project include primarily subgrade utility installations, including a new groundwater well installation, a new raw water transmission line, and a total of four (4) distribution zone water meter vaults. The subgrade utility installations are located on either District-owned property, within an existing water utility easement, or within public road rights of way. Additionally, the new transmission line will be constructed using trenchless installation methods where feasible, which will reduce the amount of required earthwork for installation. Water treatment improvements are included in the project that will extent the footprint of an existing treatment building, which is located on District-owned property.

Due to the location of the planned improvements existing within previously developed utility easements, rights of way, or within parcels owned by the District, limited impacts to existing environmental resources are anticipated because of this project. Furthermore, coordination with state level agencies provided findings of no significant impact on environmental or historical resources. The limited impacts anticipated will be restricted to construction-phase impacts, which will be mitigated using appropriate mitigation strategies that comply with relevant local, state, and federal environmental regulations.

1.3 Population Trends

Idledale and the District's service area has shown some growth potential but is limited by existing zoning restrictions, topography, and the fact that most of the parcels within the community are already developed. As of February 2022, Idledale had a population of 274 people. Population in the area is expected to remain relatively steady with potential for slight growth. A water consumption study conducted in Jefferson County projects an anticipated population growth rate of 1% until 2030 (CDM, 2011). A population growth assessment was completed as part of the CDPHE PNA, which is attached as Appendix A (Population Growth Projection is included in the PNA as Attachment 17 [OWC 2022]). This population growth assessment included a 20-year population projection using a 1% growth rate (CDM 2011). The assessment resulted in an anticipated population of 336 individuals within 20 years.

1.4 Community Engagement

The District is a quasi-municipal water district of the State of Colorado and has established procedures for community engagement during capital improvements expenditures. The District operates with a Board of Directors (Board), which are elected from within the community and hold monthly meetings to discuss District operations, issues, rates, and capital improvements. Capital improvements projects are discussed and voted on by Board members prior to contracting engineering services from non-internal resources. Community and service area members are provided opportunities during Board meetings to share their views on District issues, strategies, rate modifications, and capital improvements projects.

District project planning procedures are typically driven by operational requirements, including compliance with state and federal regulations. Operational issues will be discussed at Board meetings and action will be carried out with majority approval of Board members. Funding frequently restricts capital improvements projects to those required for compliance with state and federal regulations. Any increase in funding to cover capital improvements requires a vote by the Board and will frequently require a vote if additional funds are required past income from tapping fees and mill levees.

Issues related to water supply deficits have been openly discussed in Board meetings due to regularly occurring water use restrictions. Water supply deficits and associated restrictions have occurred frequently in the last five years, mainly during the late summer and early fall months (OWC 2021). These supply deficits have required the District to import water from other water districts by truck hauling, which is an expensive and unsustainable practice. The main purpose of this proposed project is to address the supply deficits through infrastructure improvements. The Board, with community support, has approved engineering and funding assistance services in support of this project.

2 Existing Facilities

The District provides potable water service to 137 residential service taps by owning and operating three groundwater supply wells, a 250,000-gallon water storage tank, two treatment systems, and the water distribution system including buried piping, valves, and fire hydrants. Each individual water service line is owned and maintained by the individual water service customer from the tap at the main to the point of service.

The existing groundwater supply wells include Well 1A, Well 1B, and the Ridgeway Well. Existing facilities are shown on Figure 1 and a process flow diagram of the existing system is shown on Figure 3. Existing facilities are discussed in more detail in this section.

2.1 Existing Supply Wells

2.1.1 Well 1A

Well 1A is a hard rock groundwater supply well located near the Upper Treatment Building. Well 1A has a total depth of 708 feet with two screened intervals located in zones of concentrated rock matrix fractures. Well 1A is the most consistently producing well in the system and typically produces between 4-10 GPM, depending on the time of year. Well production is highest during spring months and lowest during late summer to early winter. The decrease in production during the late summer and fall strains the total supply of the system. Flow from Well 1A is directed to the Upper Treatment Building for disinfection, prior to storage in the existing water storage tank.

Raw water quality from Well 1A is generally good, with no elevated primary or secondary maximum contaminant limits (MCLs) of measured contaminants. CDPHE has determined through water quality testing that Well 1A is classified as groundwater under direct influence of surface water (GWUDI). As such, the District has been mandated to provide GWUDI treatment of both Wells 1A and 1B and has also been directed to increase the disinfection dosage to confirm 4-log removal of pathogens until the improvements have been implemented. A GWUDI-compliant treatment system, capable of treating both Well 1A and Well 1B, is planned to be installed in the Upper Treatment Building in 2024. The proposed project will incorporate GWUDI treatment into the improvements of the Upper Treatment Building to maintain disinfection requirements.

Well 1A experienced an electrical failure shortly after a new pump and motor were installed in 2021. The District has observed that the well output had been decreasing in the 6 months leading up to the failure and the reduced production may have resulted in insufficient motor cooling, leading to premature motor failure. The well pump system was repaired by replacing the failed pump and motor, lowering the pump by 220 feet, and providing required electrical upgrades (CWS 2020). Results of the well improvements survey are included as Appendix C – Existing Well Improvements Survey.

2.1.2 Well 1B

Well 1B is a hard rock groundwater supply well located near the Upper Treatment Building. Well 1B has a total depth of 451 feet and typically produces between 5-6 GPM, depending on the time of year. Raw water quality from Well 1B is generally good, with no elevated primary or secondary MCLs of measured contaminants. As discussed in the previous subsection, Well 1B was also classified as a GWUDI well, which requires additional disinfection requirements and necessitates a GWUDI-compliant disinfection system that will be put in operation in 2024.

Well 1B is currently operational and does not have a history of operational issues. Well 1B was inspected and cleaned in 2021 and no issues of concern were observed that required attention and no recommendations for improvement were provided. Results of the well improvements survey are included as Appendix C – Existing Well Improvements Survey.

2.1.3 Ridgeway Well

The Ridgeway Well provides flow to the Forks Treatment Building in the back yard of a private residence on SW Grapevine Road, near the center of the distribution system. The Ridgeway Well has a total depth of 502 feet with two screened intervals located in zones of concentrated rock matrix fractures to improve recovery.

The Ridgeway Well has experienced several operational issues in the past ten years, including electrical issues which shut down well operation for several years. The Ridgeway Well became operational again in 2020 after the electrical system and well pump were repaired. Flow output from the well has been measured at 9-10 gpm continuously. However, existing piping conditions are limiting actual flow to the distribution system to 4 gpm. While the well pump appears to be operating without problems, this existing output is significantly less than the well's previous historic output. A partial blockage in the piping between the well and the Forks Treatment building is thought to be responsible for the flow reduction. Results of the well improvements survey are included as Appendix C – Existing Well Improvements Survey.

Raw water quality from the Ridgeway Well includes elevated levels of uranium. Water sampling conducted on August 12, 2020 indicated uranium concentrations of 0.046 mg/L, which is above the USEPA MCL of 0.03 mg/L. In order for the District to maintain use of the Ridgeway Well, the Forks Treatment Building is used to dilute the raw water stream at 50% dilution with treated potable water from the water storage tank. The blended stream is disinfected, blended with the dilution stream, and routed to the distribution system. The blending system has been approved by CDPHE and is currently in compliance with drinking water regulations for uranium.

In addition to uranium, raw water from the Ridgeway Well contains elevated concentrations of secondary contaminants including carbonates, sulfates, iron, and manganese. These contaminants do

not present direct health concerns, but they do contribute to taste, odor, and clarity issues of treated potable water. The blending system in the Forks Treatment Building provides sufficient dilution to comply with drinking water standards for the secondary contaminants in raw water from the Ridgeway Well.

The current configuration of the water distribution system does not permit the Ridgeway Well to be routed to the existing water storage tank. Water from the Ridgeway Well is blended at the Forks Building and treated water is routed directly to the lower portion of the distribution system. During periods of low water demand, water from the Ridgeway Well is not utilized and the full supply capacity of the well cannot be utilized. A transmission line is proposed to connect the Ridgeway Well to the Upper Treatment Building, which would consolidate treatment operations to a single building and would allow the full capacity of the well to be utilized to reduce supply deficits. This upgrade will also require a well pump, motor, and variable frequency drive replacement to provide the additional total dynamic head needed to deliver the water to the Upper Treatment Building.

2.1.4 Sawmill Well - Decommissioned

The Sawmill Well is a decommissioned hard rock groundwater supply well owned by the District and located between the Ridgewell and the Upper Treatment Building. The Sawmill Well was decommissioned from use due to elevated uranium concentrations and a failure to properly operate and maintain the required treatment equipment. This resulted in the District decommissioning the treatment process and the well. While no further investigations have been performed by the District, an abandoned uranium mine is located 800 feet up gradient from the well and is the apparent source of contamination.

The Sawmill Well is not currently used for production, however, recent well survey information indicates the well could be returned to service pending additional modifications to the treatment process. However, current Board direction has been to limit potential liability and keep the well in a decommissioned state. Currently the Sawmill well does not contain a functioning pump.

2.2 Existing Treatment Facilities

Drinking water treatment for Idledale's system occurs at two locations. The main treatment facility, referred to as the Upper Treatment Building, treats raw water from wells 1A and 1B. A secondary blending facility, referred to as the Forks Treatment Building, is used to treat raw water from the Ridgeway well that has exceedances for radionuclides. A process flow diagram of the existing treatment and distribution system is shown in Figure 3.

2.2.1 Upper Treatment Building

The Upper Treatment Building is the main treatment facility operated by the District and was constructed in the 1950s. Since its construction, the Upper Treatment Building has undergone several

minor modifications to maintain compliance with drinking water regulations. As currently configured, treatment processes are limited to disinfection using sodium hypochlorite, which is metered to the inflow from individual wells. Disinfection is provided through flow-paced injection of sodium hypochlorite at 3.0-3.5 mg/L to maintain a minimum 2.0 mg/L residual throughout the system. After sodium hypochlorite injection, residual chlorine levels are monitored before the water is stored in the 250,000-gallon storage tank.

A decommissioned subgrade water storage tank is located adjacent to the Upper Treatment Building. This storage tank was removed from service due to deteriorated structural condition. The existing buried concrete, circular 250,000-gallon storage tank replaced the decommissioned tank in the early 2000's.

The Upper Treatment Building contains an existing but simplistic supervisory control and data acquisition (SCADA) system used to monitor water levels in Wells 1A and 1B, pump motor variable frequency drives (VFDs), and storage tank water levels. Apart from this proposed project, a GWUDI-compliant filtration system is planned to be installed in 2024. The GWUDI-compliant filtration system will include a Harmsco HC/40-LT2 cartridge filtration unit and differential pressure sensors to assess cartridge replacement.

Photos of the interior of the Upper Treatment Building are provided in Figure 2.

2.2.2 Forks Treatment Building

The Forks Treatment Building is located in the central portion of the system along Grapevine Road. Constructed in the early 2000's, the Forks Treatment Building had previously provided additional filtration of the Ridgeway Well, as well as pressure boosting pumps to maintain pressure in the distribution system. As currently configured, the Forks Treatment Building consists of water metering equipment which blends raw water from the Ridgeway Well with treated water from the Upper Treatment Building to reduce contaminant levels to below acceptable MCL limits of 0.030 mg/l for uranium. Background concentrations of uranium in the Ridgeway Well raw water supply exceed the USEPA maximum contaminant level. As mandated by CDPHE, blending is required to reduce uranium concentrations and conform with drinking water regulations. The blending system designed and approved by CDPHE at the Forks Treatment Building currently provides for 50% dilution by volume with the District's existing potable water supply. The Forks Treatment Building blending system is illustrated in Figure 3.

Once water is blended at the Forks Treatment Building, it is piped directly into the distribution system without an opportunity for water storage. As currently configured, the Ridgeway Well is not capable of providing off-peak water supply and the full capacity of the well is not utilized. A new

transmission line, running from the Ridgeway Well to the Upper Treatment Building, is proposed to allow water storage and improve raw water supply to the District.

Photos of the Forks Treatment Building are provided in Figure 2.

2.3 Water Storage Tank

The District owns and operates a 250,000 gallon potable water storage tank located near the Upper Treatment Building, which was construction in 2010. Treated water from the Upper Treatment Building is routed to the storage tank prior to delivery to the distribution system. The tank is operationally sound with no significant maintenance issues to note. The water storage tank contains a water level pressure transducer that provides water levels to the SCADA system in the Upper Treatment Building. The water level of the tank governs well pumping through SCADA control set-points.

An existing and abandoned below grade rectangular water storage tank also exists immediately adjacent to the Upper Treatment Building. This facility is structurally unsafe and has been abandoned. There is no immediate plan to improve or remove this existing structure.

2.4 Existing Distribution System

The District operates a distribution system of water mains, pressure reducing valves, and fire hydrants that provide service to the majority of the community. The history of water distribution in Idledale goes back nearly 100 years with periodic extensions of water mains and lateral lines based on local development patterns. The current configuration of the distribution system was established in the 1960's, with occasional upgrades and replacements of pipe segments driven by operation and maintenance activities. The current drinking water distribution system consists entirely of pressurized pipelines that maintain five pressure zones. Three pressure reducing valves maintain pressure in the pressure zones and provide adequate pressure throughout the system. The distribution system is composed of iron and PVC pipe and diameters range from 2 to 8 inches. System losses that have been identified recently are predominantly along service tap connections and the condition of distribution mains appear to be in fair condition. Based on the field inspections conducted during the PNA in 2021, Anchor QEA determined that five fire hydrants were either broken or had substantial leaks and required replacement.

The system currently includes only two individual service tap meters and service fees are not directly connected to individual water consumption. The lack of service meters reduces the District's ability to quickly identify and locate system losses. Leaks are currently detected during regularly scheduled leak inspections performed by a contracted leak detection contractor. These leak inspections typically identify leaks on privately owned segments of service lines to individual properties. When leaks are identified, the property owners are contacted to repair the leaks at the owners' expense.

While effective at identifying the location of leaks, the current process of leak identification is slow and can result in significant losses in the system. In lieu of installing individual water service meters at a significant capital cost and disturbance to the community, the District wishes to install four zone meter vaults, dispersed geographically throughout the distribution system to monitor flow and detect abnormal flow demand and/or system leaks, while also providing better information on physical demand or leak locations for rapid solution response and resolution capabilities at significantly lower cost and impact.

2.5 Financial Status of any Existing Facilities

The District operates under annually prepared budgets with income primarily derived through mill levies on service users. Annual budgeting efforts account for general operating expenses, debt service obligations, contractual obligation expenses, and capital improvement project expenses. Annual O&M costs include equipment repair and rental fees, payroll and salaries of operators, treatment and testing costs, and contingency costs for water purchases and augmentation, a cost that will ideally be eliminated by implementing this improvements project. Existing loans include a General Obligation Refunding and Improvement Loan (Series 2017 Loan), which was used for the purpose of advanced refunding of the District's 2009 Water Activity Enterprise Revenue Bond. The District has no outstanding operating or capital leases on any existing facilities.

The District receives all revenue via property taxes collected by the Jefferson County Treasurer and remitted to the District. The tax paid by each property owner is derived by the property's assessed value (as determined by the Jefferson County Assessor) multiplied by the District's mill levy. Mill levies included in the 2023 operating budget include the following:

- Levy for General Operating Expenses: Used for on-going operation and maintenance expenses
- Levy for Debt Service Obligations: Used for funding existing debt repayment
- Levy for Contractual Obligations Expenses: Used for funding existing contractual obligations
- Levy for Capital Project Expenses: Used for funding capital improvements projects

Currently, the District acquires its revenues though a mil levy which is certified to the Jefferson County Assessor by December 15th of each calendar year for Collection by the County Treasurer in the following tax year. Property within the District is subject to the District's mill levy and must pay the resulting property tax. After the expenses are determined for the year, adjustments to mill levies are determined to ensure adequate funding is available.

The District's Account prepares and circulates a draft budget to the Board by October 15th of each year. Adoption of the budget is considered by the Board at a public meeting at which a public hearing is conducted, and members of the public may comment on the budget prior to adoption by

the Board. Notice of the date, time, and place where the Board will receive comment from the pubic prior to adopting its budget for the ensuing budget year is published in a newspaper having general circulation within the District.

Financial planning for capital improvements projects typically entails an evaluation of total project costs, potential funding through state-level revolving funds, and federal grant and loan programs relevant to the project. Once capital improvements costs are determined, a funding strategy is developed that would permit the District to pay for the debt obligations with their available funding, as assessed on an annual basis.

The most recently available District budget and most recently conducted financial audit are attached as Appendix B – District Financial Documentation.

2.6 Water/Energy/Waste Audits

A Water Balance Assessment was performed by Orsatti Water Consultants in 2020 to assess water supply deficits (OWC 2020). This assessment was performed after multiple years of water supply deficits, which required the District to import water from other water districts to meet base demands. A maximum deficit was identified of 2,620 gallons per day (1.8 gallons per minute) and system supply deficits occurs between May and November. Recommendations resulting from this assessment included improving the firm raw water supply of the District, which is the main purpose of this project, as well as addressing existing operational deficits to reduce leaks, and installing zone water meters to allow early detection of leaks and reduce system losses.

3 Need for Project

The need for this project is primarily driven by long term drought and an existing raw water supply deficit which has required the District to import water from other water districts. Importing water through trucking was an expensive and unsustainable practice that has strained District financial resources. A Water Balance Assessment was performed in 2020 (OWC 2020), which identified the supply deficit. Additionally, a Project Needs Assessment has been prepared and approved from CDPHE, which is attached as Appendix A – CDPHE Project Needs Assessment.

This section provides additional information on the need for this project.

3.1 System Operations and Supply Deficit

The District experiences supply deficits typically starting in early May and continuing through the fall months, approximately from late-April to November for the past five years. During this time, Wells 1A and 1B and the Ridgeway Well have been unable to meet the water demand even with restrictions on outdoor water use. This deficit required the District to truck in additional water from Fredrick, Golden, and Genesee and set up an emergency treatment system last summer to provide an additional 500,000 gallons to meet the demand (OWC 2020). While these emergency steps kept the water flowing to residents, both were expensive and unsustainable practice for long-term system operation. Leak testing and repairs have been implemented but supply deficits remain a major issue during summer and fall months.

The District in a precarious situation where demand outweighs supply during periods of high temperature and low precipitation. The aquifer supplying these wells is predominantly replenished by precipitation. During periods of low rainfall, the water table becomes depleted, limiting the available drawdown and volume available for pumping. Once the water table drops below a certain depth, well pumping will produce reduced flow until the aquifer is replenished through precipitation. This operating condition will continue to create supply shortfalls during periods of drought in the summer and fall months unless additional sources of water are brought into the system. Based on water supply and demand data from 2018-2020, a 320-2,620 GPD supply deficit occurred between April and September, which necessitated the import of additional water.

The District has performed several inspections and improvements to the existing wells to improve raw water supply in 2020 and 2021. While these improvements have provided some improvements to raw water supply, the District is likely to continue to experience supply deficits during periods of drought or reduced groundwater recharge.

To further improve the supply deficit, a leak detection survey was performed in the summer of 2020. A total of 33 isolation valves, 126 curb-stops, and 8 hydrants were tested for leaks, which represents all known curb-stops and all isolation valves that could accessed without significant excavation and

utility line conflicts. A total of five leaks were identified: two in hydrants and three in residential service lines. A conservative total of 11 gallons per minute was estimated as being lost through leaks in the system, which represents a significant percentage of the total raw water supply to the system. The average annual combined pumping rates from Wells 1A and 1B are approximately 14.6 GPM. Water losses through leaks could then be calculated at 75% of the total water supply.

As of writing, there have been subsequent annual district-wide leak detection events and there are no apparent major system losses or identified leaks that have not been addressed. It would be conservative to assume that existing system losses are approximately 15%, the average losses anticipated for a system of this size. Six fire hydrants have been identified, along with six isolation gate valves, for replacement due to malfunctions or difficulties in operation. These fire hydrants and isolation gate valves are intended to be replaced as part of this project to improve overall system operation and to provide additional fire protection for the service area.

Given the seasonal variability of the current water source and the observed shrinking availability, this project is intended to provide additional water supply to improve year-round firm water capacity for the system. Failure to respond will result in water shortages, continued water hauling, and associated financial repercussions.

3.2 Health, Sanitation, and Security

While the main purpose of this project is to improve raw water supply, several other needs have been identified that relate to system performance and treatment. The District has received a Tier II Violation notice from CDPHE due to a failure to implement GWUDI treatment at Wells 1A and 1B. The necessity for GWUDI treatment is driven by a determination of hydraulic connection between surface water sources and the groundwater well locations and depth. The District is actively working on installing a GWUDI compliant treatment process that will be installed in 2024. Approval for the GWUDI treatment process was received on November 7, 2023 and long-lead treatment equipment will be purchased by the District as soon as feasible.

The GWUDI treatment system will remain in operation after the proposed improvements are constructed. This project will incorporate all existing treatment elements that are required for drinking water treatment compliance with local, state, and federal regulations to remain in compliance and to be protective of the health of individuals in the service area.

3.3 Aging Infrastructure

Operation and maintenance issues with the system are limited to reduced raw water supply that does not meet the demands of the service area. The reduced raw water supply is associated with extended periods of drought. Well production rates for the existing wells typically decline in the late summer and early fall months.

Higher rates of production from the Ridgeway Well could be achieved through connection improvements to remove an apparent blockage that restricts flow to the Forks Treatment Building. Additionally, water from the Ridgeway Well cannot be stored in the existing water storage tank due to a lack of existing transmission lines. The recommended design approach intends to mitigate these issues through construction of a transmission line to allow treatment at the Upper Treatment Building of water from the Ridgeway Well and subsequent delivery to the water storage tank.

As currently configured, the system cannot be continuously monitored for losses in the distribution system. Individual service meters are not currently installed on service lines. Losses are tracked via monitoring water levels in the water storage tank and operator knowledge of typical water usage. Leak detection surveys are performed regularly, or if significant losses are suspected based on water storage tank levels. Individual water service meters have been considered by the District to assist with early detection of leaks but the costs associated with installation is currently prohibitive. The interim solution has been to increase the frequency of leak detection surveys, which has been effective at identifying significant losses and to incorporate four new zone meter vaults dispersed through the system to monitor and detect excessive water demand and/or system leaks .

3.4 Reasonable growth

Proposed improvements will not increase the service area of the District and is primarily focused on reducing existing supply deficits to the existing service area. Population growth and 20-year projected water demand is discussed in Section 1.3 – Population Trends. A 20-year planning cycle for water demand projections was selected based on guidance documents from CDPHE.

Both total annual and average daily water demand are anticipated to increase as population and development continues to grow in the District's service area. The District's service area includes approximately 418 individual parcels. These parcels consist of road rights-of-way, residentially zoned parcels, and properties owned by Idledale Water and Sanitation District, Jefferson County and the City and County of Denver. A breakdown of parcel type and area is shown in Table 1.

Table 1
Summary of Land Parcels in IWSD Service Area (based on data from Jefferson County [2024]).

Parcel Type	Number of Parcels	Area of Parcels (Acres)
Right-of-way Parcels (Roads)	138	124
City & County of Denver	3	<1
Jefferson County	7	3
Idledale Water & San. District	7	3
Residential (Developed)	188	355
Residential (Vacant Land)	75	189
Total	418	675

The total area zoned for residential use is approximately 545 acres, of which 355 acres have been developed and the remaining 189 acres are listed as vacant land. The vacant land is of importance to the District for projecting future water demand since these parcels could be developed in the future, requiring either District supplied water service or privately owned wells.

Currently Idledale is suppling water to approximately 137 properties or 71% of the developed parcels. The remaining developed properties that are not connected to the system are likely connected to privately-owned groundwater wells, as is the case for multiple properties located near Bear Creek. A total of 44 wells have been permitted in Idledale but records do not indicate which of these wells are still in operation (CODWR, 2020). 44 residential groundwater wells correspond to approximately 23% of water service connections in Idledale.

While a maximum of 75 vacant parcels could require water service or wells if they were to be developed, at least 40% of the topography appears difficult to develop due to the mountainous terrain. This translates to an estimate of 45 more taps or a 25% increase as a conservative upper limit of water demand, without further service area annexation. While this estimate may be high, additional development will likely continue in Idledale at a projected rate of 1% due to documented regional population pressures.

This water demand increase could be reduced if some properties permit and construct their own personal groundwater wells. However, the increased use of privately owned groundwater wells will adversely impact the water supply available to the District by further lowering the groundwater table in summer months or during periods of drought. A lowered groundwater table will reduce the rate and total quantity of water available to the existing District wells.

At some point, normal economic growth forces and development pressures are expected to increase water demand in the District. Different methodology has been applied to project 20-year population increase and the resultant impact on water demand. The current demand used in Table 2 includes the current water restrictions consumption rate of 30,240 GPD which establishes a daily demand of approximately 120 GPCD. An increased per capita demand value of 135 GPCD presented in this table reflect potential maximum water demands without water restrictions and a 1% population growth for 20-years. The final value projects a future daily water demand of approximately 40,000 GPD to support a conservative full development build out scenario for the District.

Table 2
Ranges of Projected Water Demand Based on Growth

Water Demand Driver	Est. Water Service Taps	Est. Service Area Population	Avg. Daily Demand (GPCD)	Avg. Max Daily Demand (GPD)	Increased Demand (GPD)
Current Demand (Data from 2018-2020)	137	252	120	30,240	NA
Population Increase[1]	162	307	120	36,840	6,600
Population Increase[1] w/ increased demand	162	307	135	41,445	11,205
Service Area Fully Developed[2]	170	322	135	43,470	13,230

Notes:
1. Population increase at 1% population growth rate for rural Jefferson County for 20-years (CDM 2011).
2. The service area will be considered fully developed after an additional 41 service taps are installed.

The highest demand increase projected for the 20-year planning period is 13,230 gallons per day and reflects the highest demand anticipated for the District nearing full development. Additional demand would only be required if the service area is expanded, which is not being considered. The maximum demand increase is equivalent to approximately 9 gallons per minute of additional flow. This 20-year planning demand projection has been incorporated into the preliminary design of the project.

4 Alternatives Considered

Design objectives of this project are to provide a sustainable approach to meeting existing water demand, as well as the demand projected for the 20-year planning cycle. Meeting sustainability objectives will involve formulating a solution to the water supply deficit that will be reliable during periods of extended drought, as well as a solution that is financially sustainable to the District's restricted operating budget. A total of 5 alternatives, including a no action alternative, have been considered during initial project development efforts. Alternatives were formulated to meet the District's objective. Considered alternatives include:

- Alternative 1: No Action
- Alternative 2: Transmission Line Installation
- Alternative 3: New Well Development
- Alternative 4: Installation of Service Meters
- Alternative 5: Consolidation with Genesse Water and Sanitation District

Each alternative considered for this project is described in the following sections.

4.1 Alternative 1: No Action

Alternative 1 is a no action alternative used as a baseline comparison of other options. The no action alternative consists of performing no additional capital improvements to reduce the existing supply deficit. As discussed in Section 3, the existing water supply deficit has necessitated the District utilize water hauled in from other water districts during periods of reduced groundwater recharge. If no action is taken to alleviate the supply deficit, it is anticipated that water trucking will continue to be required during late summer and fall months. The required volume of water needed for import will vary depending on precipitation and drought conditions. Based on past expenditures on water purchases and transportation, costs associated with hauling water have ranged from $15,000 to $75,000 per year in current dollars. These costs reflect delivery of water to supply water demand on an emergency basis and included severe water restrictions, including no outdoor water usage and occasional service interruptions. Were water to be delivered at a rate sufficient to meet average demand (159 gallons per capita per day [CDM 2011]), the cost would increase to approximately $110,000 per year to augment the existing supply. Therefore, the conservative value of $110,000 per year is used to forecast the lifetime costs associated with water augmentation for the no action alternative.

An average value of $102,000 per year is applied for on-going operation and maintenance costs associated with the existing water treatment and distribution system. While annual operation and maintenance costs may fluctuate year-to-year, the budgeted 2023 cost is included as a baseline for these on-going costs. See Appendix B – District Financial Information for additional details. Although

there are no capital improvements costs associated with the no action alternative, the total annual operation and maintenance costs plus the on-going costs for water augmentation total $212,000 annually.

The no action alternative does not meet District objectives for financial or water supply sustainability. The water supply deficit is unlikely to decrease due to prevailing regional drought conditions. Population increases in the service area will further strain the water supply, as well as District financial resources.

4.2 Alternative 2: Transmission Line Installation

4.2.1 Description

The Ridgeway Well is located near the Forks Treatment Building near the center of the distribution system. This well does not have a connection to the Upper Treatment Building or storage tank and instead is treated at the Forks Treatment Building before discharging to the distribution system. As currently configured, this approach only allows approximately 30% utilization of the well's hydraulic capacity. This project alternative includes installing a new transmission line to connect the Ridgeway Well to the Upper Treatment Building. This alternative would double the current hydraulic utilization of the Ridgeway Well, consolidate system treatment into a single building, and significantly improve the District's ability to respond to peak water demand conditions. The layout of the transmission line is shown in Figure 6.

Various alternatives were evaluated for a pipeline including constructing a new pipeline by conventional open-trench excavation, utilizing horizontal directional drilling (HDD) methods, and by slip lining a new smaller pipe within an existing pipeline that has been permanently taken out of service. An abandoned 6-inch coated steel water line runs between the Forks Treatment Building and the Upper Treatment Building and was previously used as a water main. After assessing construction methodology for the transmission line, this presents the most cost-effective means of constructing a new 2" transmission main. The existing decommissioned water line can be used as a conduit to run a new 2" transmission line. By utilizing the existing pipe, surface construction disturbance is significantly reduced, as well as construction costs. This pipeline is already owned and protected by existing District utility easements, eliminating any needs for additional property acquisitions or new utility easements.

An additional benefit of Alternative 2 would be the consolidation of treatment processes to the Upper Treatment Building. Once Ridgeway Well flow is routed through the transmission line, the Forks Treatment Building blending system will be decommissioned and treatment processes will be upgraded and centralized at the Upper Treatment Building to accommodate the raw water quality of the Ridgeway Well, reducing operations and maintenance labor requirements.

4.2.2 Design Criteria

The existing water line is approximately 2,530-feet long. An additional 900-feet of water line would be required to connect the Ridgeway Well with the existing waterline conduit, for a total piping length of 3,430-linear feet. This 2" waterline would connect to the Ridgeway Well and would add approximately 100 ft of additional head to the pump hydraulic requirements. This will also increase the pump motor horsepower requirements and necessitate a new replacement pump, motor, and variable frequency drive. No additional electrical improvements are anticipated as the well electrical service was recently updated.

Due to existing water quality concerns of the Ridgeway well that include elevated levels of uranium and various secondary MCLs, provisions for automated water blending and treatment will need to be provided at the Upper Treatment Building site. It is planned to utilize automated flow rate control valves on all working wells feeding the Upper Treatment Building to assure that the Ridgeway water source continuously maintains the proper blending ratio for adequate dilution of the total raw water source being treated prior to delivery to water customers.

4.2.3 Environmental Impacts

Environmental implications to this alternative are limited to construction impacts. Some excavation will be required to access the existing decommissioned water line, as well as trenching and conventional installation to connect the transmission line to the Ridgeway Well and Upper Treatment Building. Up to approximately 900-feet of new transmission line may require conventional trench installation, all of which will be located in an established water utility easement and public ROW.

4.2.4 Land Requirements

No additional land acquisitions would be required for Alternative 2. All work will be performed on District-owned property or within existing water utility easements.

4.2.5 Sustainability Considerations

From a sustainability perspective, this alternative would provide up to an additional 6 gallons per minute of raw water supply. This is a considerable improvement but not sufficient to provide the additional 9 gallons per minute required for the 20-year planning period. The addition of the transmission line would likely eliminate the existing water supply deficit but appears insufficient to address increased demand from population growth for the 20-year planning period. Financial sustainability would be improved through this alternative as water importation would decrease or be eliminated.

4.2.6 Potential Construction Problems

The existing decommissioned water line may contain obstructions or structural issues due to deterioration. The line was originally installed in the 1960's and was replaced by a larger diameter water main. An investigation is currently underway to determine the condition of the existing water line planned for use in Alternative 2. This investigation includes a closed-circuit television survey of the length of the alignment. Areas of pipe with obstructions, such as pipe wall failures, valves, corroded fittings, or root intrusions, will be identified during this investigation. Areas where a pipe cannot be pushed through a particular area will require spot excavation during installation. During site visits to complete the video survey, the existing pipe interior condition appears to support the proposed pipe-in-pipe configuration.

4.2.7 Cost Estimate

Costs for installing a new transmission line, connections, valves and associated electrical componentry is estimated at $391,000. This includes a new well pump, new variable frequency drive and control updates at the Forks Treatment Building, 2,530 LF of 2" pipe installed using pipe-bursting or sliplining methods through the abandoned water line, 900 LF of 2" pipe installed using conventional trenching techniques, isolation valves, and 2" altitude relief valve. Raw water blending and treatment equipment will also be required at the Upper Treatment Building for the Ridgeway well. Operations and maintenance costs are primarily associated with estimated annual expenditure on increased electrical requirements due to the upgraded pump, typical annual repair costs on water distribution pipelines and well maintenance. Ongoing O&M costs are estimated at approximately $20,000 per year.

4.3 Alternative 3: New Well Development

4.3.1 Description

Alternative 3 – New Well Development consists of constructing a new groundwater well to increase the raw water supply of the system. A new well would be constructed to extract water from a different zone in the groundwater table, providing additional supply and increasing system-wide reliability and redundancy.

Three potential locations for the new well have been identified using aquifer maps, locations of municipal and residential groundwater wells and production rates, topography, and parcel ownership maps. Each of these locations are near the Upper Treatment Building and storage tank, which provides close access to existing system piping and tie-in locations. Additional hydrologic and borehole analysis will be required to determine depth of drilling, screened intervals, pump sizing, water treatment requirements, and pump placement elevation.

Well placement sites include installation within the Piney Creek Alluvium, which is the same geologic layer that all existing District wells are currently located. Identified well locations are near the Junction Ranch Fault, which contains zones of fractured bedrock that promote well production and funnel water to well capture zones. The identified areas are all within a zone of known water-bearing geologic formations, which reduces production risks by extracting within a proven formation. All feasible well locations are substantially upgradient from the historic Grapevine Uranium mine, reducing potential radionuclide contamination. The recommended well location is shown on Figure 6.

The new well will require a new well pump, VFD and motor, associated piping, electrical power, and level controls to connect the new well to the Upper Treatment Building. Required flow meters, and treatment process equipment, piping and system modifications will be required at the Upper Treatment Building to connect the treated effluent to a common treated water manifold prior to the storage tank.

4.3.2 Design Criteria

The well will need to follow the Rules and Regulations for Water Well Construction, Pump Installation, Cistern Installation, and Monitoring and Observation Hole/Well Construction, which is provided in 2 CCR 402-2 in the Code of Colorado Regulations. Design of this alternative would be according to all requirements established at the local, state, and federal level for construction of a new municipal-use drinking water well.

Additional design criteria, including well depth, diameter, screened intervals, and recovery rates, are anticipated to be in the range of the existing Wells 1A and 1B, due to proximity in location and comparable subsurface conditions. Based on the design criteria of Wells 1A and 1B, the depth of drilling will likely be between 450 and 700 feet below ground surface, with two to three screened intervals. The recovery rate of the new well is anticipated to be approximately 10 gallons per minute, on average.

Following water quality sampling and testing for the new well, design provisions will need to provide water treatment processes to meet EPA drinking water standards. Based on existing water quality of the existing wells, the District is anticipating the need to provide treatment for GWUDI and to remove excessive levels of secondary MCLs including carbonates, sulfates, iron and manganese by utilizing pressure filtration with oxidizing media. Required treatment equipment will be housed in the expanded Upper Treatment Building.

4.3.3 Environmental Impacts

Environmental implications of the new well installation will be limited to localized modifications to the groundwater table, as well as construction impacts. Impacts to groundwater resources in the area

will be addressed using procedures established by the Colorado Division of Water Resources (DWR). DWR has established the "600-Foot Rule", that requires coordination with well owners that operate wells within 600-feet of a proposed new well. The District will comply with DWR procedures on the 600-Foot Rule, including providing notice of the proposed well. If any well owners have concerns about the proximity of the new well to their existing well, a hearing will be held according to DWR procedures.

4.3.4 Land Requirements

Three well locations were identified as potential sites for construction of the new groundwater well described in this alternative. All three potential well locations have been located relatively close to the Upper Treatment Building and have favorable access for construction and maintenance activities. The recommended well location, shown on Figure 6, is the preferred location due to proximity to wells with acceptable water quality and production rates. Additionally, the preferred well location is located on property currently owned by the District and land purchases, utility easements, or lease agreements will not be required for installation.

4.3.5 Potential Construction Problems

The recommended location of the new well has taken into consideration the reliable well production rates of adjacent wells, and while this provides a high level of confidence of the performance of the proposed well, there is no guarantee that the new well will provide the required flow rates. Reduced concentration of rock fractures, reduced groundwater infiltration, and siltation issues may lower the new well production rates. If this is the case for the new well construction, additional well improvements with increased costs may be necessary.

Even with extensive investigation into subsurface characteristics, it is impossible to guarantee that a well will consistently produce the amount of water the system requires and there is the possibility a newly constructed well does not end up justifying its development costs.

To reduce potential production or treatment issues with the new well construction, a borehole will be drilled at the proposed well location prior to final well development. The borehole will be drilled to a depth between 450-800 feet below ground surface to remain consistent with the depths of Wells 1A and 1B, which provide adequate flow. Water quality samples will be collected from the borehole to determine treatment requirements and to comply with drinking water regulations. Hydraulic testing will be conducted to evaluate production rates. If the hydraulic testing results indicate insufficient production, the location or depth of the well will be modified to improve the flowrate.

4.3.6 Sustainability Considerations

From a sustainability perspective, this alternative would provide up to an additional 10 gallons per minute of raw water supply. This is a considerable improvement and would be sufficient to provide

the additional 9 gallons per minute required for the 20-year planning period. This alternative supports the project objectives for financial sustainability, as the new well will provide a long-term solution to the supply deficits. The capital improvement costs will have a reasonable period of return compared to water importation during periods of drought and supply deficits.

4.3.7 Cost Estimate

Cost estimates for a new hard rock water well include costs for well drilling and installation, costs to connect the well to the Upper Treatment Building, and costs to modify the Upper Treatment Building to accept an additional water source. Well Drilling, completion, and associated electrical connections are estimated at $330,000. That is assuming a 6-inch borehole, 700-feet deep well, with 2-inch connection line to the treatment building, and isolation valves, electrical power service, and complete electrical outfitting of the well and well pump controls. Operations and maintenance costs are estimated at approximately $10,000 per year for well maintenance and testing requirements.

4.4 Alternative 4: Installation of Service Meters

4.4.1 Description

The current configuration of the District's distribution system only provides for water quantity measurement coming from groundwater well pumping and two new residential service locations. The District currently does not contain flow meters along individual service taps. This prevents the District from monitoring water consumption at individual service locations and reduces the ability to quickly and efficiently identify system losses through leaks in service lines. Given the District's limited water supply, adding service meters along individual water supply lines would increase operational awareness and could improve the quantity of water available for delivery. While this alternative would not increase the firm raw water supply, the benefits of reducing system losses through leaks could substantially reduce average water demand.

If possible, each water meter installation will occur on the service line near the property line service corporation stop. The water meters will then record the water delivered along the service line, prior to any withdrawals. Complete meter pit assemblies including yokes or meter setters, and ball valves to isolate the water meter from the service line are anticipated. Water meter reading is proposed to use automatic meter reading (AMR) systems. AMR systems require specific water meters that are connected to an electronic transmission device, which transmits water meter data to a mobile collection device over radio frequency. This would require District personnel to drive or walk near the water meter locations and get within range of the water meter transmitter. Once within range, a mobile collection device will record the water meter reading into a digital database.

Approximately 137 service lines would be eligible for water meter installation, which would likely be rolled up in a phased approach dependent on funding and installation scheduling. Additional water

meters would be installed around PRV's for broader system flow monitoring, increasing the total water meters to be installed to 143.

Benefits of water meter installation include connecting system O&M and capital improvements costs to actual water usage, which will increase the revenue stream for the District. More importantly, the use of water meters will provide additional data to assess and address system losses. Currently, leak testing is the predominant method of identifying system losses and is typically performed twice annually. Leak testing is typically performed in the spring, after snowmelt occurs, and once during the early fall. With water meters installed on individual service lines, losses on tap lines and laterals will be able to be identified based on the frequency of meter monitoring, likely once a month. This will greatly improve the response time to leaks and improve the firm water supply of the system.

4.4.2 Design Criteria

Water meters would comply with American Water Works Association (AWWA) Manual M6 for guidance on water meter selection, installation, testing and maintenance (AWWA 2012). Water meters will be appropriately sized based on the service line diameter and will provide reading via electronic methods, such as AMR.

The District would be required to develop an operation and maintenance plan associated with meter installation, testing, and repairs. The operation and maintenance plan would be disseminated to service users during program rollout.

4.4.3 Environmental Impacts

Environmental impacts associated with water meter installation would be limited to construction impacts, including excavation and earthwork. All areas that undergo installation would comply with all applicable environmental procedures associated with the work to mitigate construction impacts. Work areas will be restored to the pre-construction condition.

4.4.4 Land Requirements

This alternative would not require any land purchases, lease agreements, or utility easements. All work would be limited to properties owned by service users.

4.4.5 Potential Construction Problems

Alternative 4 could involve a range of construction problems due to the nature of installation on developed properties. Potential construction problems associated with this alternative may include difficult to reach service lines, disruption to landscaping, service interruptions, or steep slopes. Meter installation would need to occur on a case-by-case basis, as subgrade utility conflicts may prevent access to existing service lines. These construction problems can be mitigated by utilizing local

contractors that are familiar with the subgrade conditions and utility configuration. Additionally, community engagement performed by the District would be used to guide customers through the installation and rate transition process.

4.4.6 Sustainability Considerations

From a sustainability perspective, this alternative would provide an unquantified improvement towards the District raw water supply through the reduction of system losses. While beneficial, reducing losses alone are not anticipated to eliminate the supply deficit experienced by the District. Financial implications are significant. Installation of water meters could permit the District to shift the service costs to a direct use-based system for fee assessment.

The perceived costs associated with a use-based fee structure may be viewed negatively by the customer base. While use-based fee structures are common in nearby communities, the District would incur additional administration costs to change to the use-based revenue model. Public hearings and stakeholder meetings will serve to inform the service area of their necessity and how fees will be structured. Additionally, public hearings will include a discussion regarding the water savings associated with meter installation, which should reduce the dependence on water trucking and augmentation during periods of decreased well production.

4.4.7 Cost Estimate

Material and construction costs for installation of 143 water meters in pits at the individual property line is estimated at $804,000, which includes the meters with AMR connection, data collection equipment and software, meter pit installation, surface restoration, one-year service contract with data storage, contractor overhead and engineering. Operation and maintenance costs would likely be considerable due to the need for frequent data collection, as well as repairs and replacements of water meters on an as-needed basis. On-going operation and maintenance costs have been estimated as $30,000 per year, based on discussions with operators in comparably sized water districts.

4.5 Alternative 4.1: Zoned Service Meter Installation

4.5.1 Description

Alternative 4.1: Zoned Service Meter Installation is a modification of Alternative 4, where instead of installing individual service meters at each individual service tap, a total of four service meters are installed at select locations along the distribution system. Proposed locations for the four service meters are shown on Figure 1. The intention of this alternative is to provide additional flow data at select locations in the distribution system without installing water meters at each individual service meter. The rate structure for service area customers would not be modified in this alternative but the

information collected from the three service meters would assist in leak detection. This alternative would allow a faster response to system leaks at a substantially lower cost than full scale water meter installation.

4.5.2 Design Criteria

The zoned service meter installation would involve installing three water meters at select locations within the distribution system. Water meters would comply with American Water Works Association (AWWA) Manual M6 for guidance on water meter selection, installation, testing and maintenance (AWWA 2012). Water meters will be appropriately sized based on the service line diameter and will provide reading via readouts on the meters themselves. Meters would need to be manually checked on a regular basis to assess flowrates and system losses. The District would be required to develop an operation and maintenance plan associated with meter installation, testing, and repairs.

Water meters would be installed in an appropriately sized meter pit to allow surface access for meter reading and maintenance. The location of each service meter will be to allow for monitoring specific portions of the distribution system. If excessive flow rates are identified in a specific portion of the distribution system, leaks can be more quickly assessed than if a leak detection contractor were to be called out for an assessment.

4.5.3 Environmental Impacts

Environmental impacts associated with water meter installation would be limited to construction impacts, including excavation and earthwork. All areas that undergo installation would comply with all applicable environmental procedures associated with the work to mitigate construction impacts. Work areas will be restored to the pre-construction condition.

4.5.4 Land Requirements

No additional land leases, easements, or purchases would be required to implement this alternative. All water meters would be installed along existing water mains or laterals, which are in existing utility easements.

4.5.5 Potential Construction Problems

Potential construction problems associated with this alternative are anticipated to be limited to short-term service interruptions during installation, traffic control during installation, and potential excavation dewatering. As the installation locations will be along the existing utility easement, access to the water mains or laterals would not pose a challenge.

4.5.6 Sustainability Considerations

From a sustainability perspective, this alternative would provide an unquantified improvement towards the District raw water supply through the reduction of system losses. While beneficial, reducing losses alone are not anticipated to eliminate the supply deficit experienced by the District. Implementing this alternative would involve less new infrastructure and materials than the full scale water meter installation proposed in Alternative 4.

4.5.7 Cost Estimate

Material and construction costs associated with the zoned meter installation are significantly reduced compared to the full scale installation. The costs associated with installing four water meters and meter pits is estimated as $80,000. Ongoing operation and maintenance costs would be assessed on an as-needed basis but are anticipated to be approximately $2,500 per year.

4.6 Alternative 5: Consolidation with Genesee Water and Sanitation District

4.6.1 Description

In evaluating different alternatives to provide year-round reliable water supply to its customer base, it is essential to assess the opportunity to regionalize or become part of an adjacent, larger system rather than provide the capital required to significantly improve the existing water system. Alternative 5 – Consolidation with Genesee Water and Sanitation District involves utilizing potable water from an adjacent water district to provide an alternative source of potable water using a master water meter and a transmission main connection between the two systems. The Genesee Water and Sanitation District is contiguous to and immediately west of Idledale's service area. They have been contacted by the District to discuss and determine the viability of Idledale becoming a service customer of the Genesee District.

Alternative 5, shown on Figure 5, would require a piped connection between the District's distribution system and a connection point located on the distribution system operated by Genesee Water and Sanitation District. Water would be metered and the District would be assessed an on-going service charge based on consumption. This alternative would provide sufficient water supply to the District to eliminate any potential supply deficit.

As part of consolidation, wells and treatment facilities currently operated by IWSD would be decommissioned and the entirety of the District's demand would be supplied by the Genesee Water and Sanitation District. This would reduce operation and maintenance costs associated with well pumping and treatment but the District would remain responsible for maintaining the distribution system in Idledale's service area.

The Genesee Connection concept has significant benefits when compared to the alternative to improve and expand Idledale's groundwater well system infrastructure. By connecting to Genesee, the District would be connecting to a source that comes from surface water rights of supply which are inherently more reliable over the life of the District. There would be no further concerns about existing well facilities operation & maintenance or seasonal problems with groundwater recharge. The District functioning and associated day to day responsibilities would become far simpler, focusing on the continued operation and maintenance of the water storage tank and distribution system.

4.6.2 Design Criteria

Through numerous discussions between the two water districts, it has been determined that the best technical solution for this alternative includes the construction of a 1.5-inch master service meter station located in Genesee, just adjacent to 2136 Montane Drive East where an existing 8-inch watermain would be tapped. Immediately downstream of the Genesse master meter installation, Idledale would be required to construct, own and operate approximately 4,025 lineal feet of new 2-inch potable transmission main, crossing private property to ultimately connect to the Upper Treatment Building for delivery to the 250,000-gallon storage tank. Construction of the pipeline is anticipated to incorporate HDD to reduce construction costs and minimize surface disturbance.

4.6.3 Environmental Impacts

Environmental implications to this alternative would be limited to construction impacts associated with installing a subgrade water transmission line. HDD would be utilized to reduce environment impacts and disturbance to the ground surface. Limited excavation will be required to access the water mains in Idledale and Genesee, as well as trenching and conventional installation to perform final piped connections between the two districts. The connecting pipeline alignment is not located in the mapped floodplain and no wetlands are present in the proposed pipeline area.

4.6.4 Land Requirements

A new utility easement would be required to span the length of the pipeline connecting the two water districts. This utility easement would be the responsibility of Idledale to negotiate, acquire, and coordinate with the private landowner.

4.6.5 Potential Construction Problems

Potential construction problems associated with Alternative 5 include general issues associated with earthwork in mountainous areas, namely near-surface bedrock that might be present along the proposed pipeline connection alignment. Typically, this issue is initially mitigated by performing a geotechnical investigation along the proposed piping alignment following design concept development. Near-surface bedrock can be managed with horizontal and/or vertical pipeline

alignment modifications and utilizing appropriately selected HDD equipment capable of drilling through rock material.

Acquiring the utility easement may pose a challenge and additional cost but is not likely to eliminate this as a technically feasible alternative.

4.6.6 Sustainability Considerations

Consolidation with the Genesee Water and Sanitation District would provide substantial benefits for improving the environmental sustainability of IWSD operations. The main improvement to sustainability would be the transition from a raw water supply that utilizes groundwater to the use of surface water. As part of the consolidation process, the Genesee Water and Sanitation District would need to procure additional water rights to cover the increased supply to Idledale. The modification of water rights and sources would result in the delivery and use of surface water from Bear Creek, which is in contract to the groundwater sources currently used by the District. Surface water is generally considered to be a more sustainable option in Colorado than groundwater, which can become overtaxed and depleted if pumping withdrawals exceed long-term recharge. Consolidation would therefore be considered the more environmentally sustainable option compared to extracting greater volumes of groundwater.

Unfortunately, the financial implications associated with consolidation are a critical factor for determining feasibility. Genesee has stated, "Any water not stored, but diverted, treated, and supplied by Genesee to Idledale would be predicated upon the successful transfer of related water rights by Idledale, in the amount necessary and when in priority, for Genesee to divert at its' Genesee Mountain Pipeline ("point of diversion") for subsequent treatment, pumping and distribution to a separately metered Master Tap."

Consolidation would require Idledale to first acquire the necessary water rights through related engineering and the Colorado water courts. Only then would Genesee move forward with a realistic service agreement. Conversations with Genesee indicate they recently acquired an option to purchase nine shares of Hodgson Ditch water. This was done primarily with Idledale's interests in mind, believing this may provide for a possible but uncertain solution to the water rights issue. The Hodson Ditch is the third most senior water right on Bear Creek, meaning it is a very senior right on the stream system and, historically not called out very often. The water right (nine shares) would require the necessary engineering and legal work to quantify usable amounts and ability to move the water from the ditch upstream to Genesee's point of diversion. Genesee expressed the opinion that this water rights work and all associated costs should be the full responsibility of Idledale as Idledale would be the beneficiary and owner of the right, should it ultimately provide a solution to the matter.

While the sustainability benefits associated with consolidation are plentiful, the costs associated with the interconnection and water rights make this alternative cost prohibitive compared to the recommended alternative.

4.6.7 Cost Estimates

Discussions and negotiations with the Genesee Water and Sanitation District have recently occurred. This was required to determine the rate at which the District would be charged for water access and use. Genesee expressed the requirement that Idledale would need to provide adequate surface water rights to support the requested demand and that required water rights work and all associated costs would be born solely by Idledale. Associated costs to move through this process have been estimated at $2,230,000, which includes costs to augment existing water rights owned by the District and connect the two systems with a pipeline and associated appurtenances. Finally, Genesee would also plan to charge Idledale $18.00 per 1,000 gallons of metered flow as an ongoing direct service charge. With current rates of water usage, an additional $199,000 service charge would be assessed per year. This cost could increase or range up to $286,000 per year at the highest demand scenario used for the 20-year planning cycle. Service charges could be further increased if Genesee increases their service rates, which would be expected during the 20-year planning cycle.

4.7 Grouped Alternative

As part of the initial design process of this project, certain alternatives were grouped to meet District objectives. Alternatives 1, 2, 3, 4, and 4.1 would not be able to provide the required increase to firm raw water supply capacity if implemented individually. Instead, a grouping of several of these alternatives are being considered in order to reliably meet the necessary raw water supply requirements. The grouped alternative consists of the following alternatives:

- Alternative 2 – Transmission Line Installation
- Alternative 3 – New Well Development
- Alternative 4.1 – Zoned Service Meter Installation

This alternative grouping is considered to be able to meet all of the District's project objectives. The transmission line or new well development alone would not be able to increase the District's firm water supply sufficient to reliably meet current demand and either alternative alone would not be sufficient to meet the demand requirements for the 20-year planning period. Including both the transmission line to fully utilize flow from the Ridgeway Well and the new groundwater well, the current demand can be sufficiently met while also providing additional redundancy. In situations where one well is temporarily non-functional, due to maintenance, reduced recharge, or equipment malfunction, other water sources could be relied upon to provide adequate raw water supply.

The zoned service meter installation would provide improved operational response to system losses. While unquantified, the inclusion of the zoned service meters would greatly improve District understanding of water usage and would provide unquantified improvements to supply through reductions in system losses. The addition of the zoned service meter installation will also improve system sustainability through improved response times to leaks. Alternative 4.1, rather than Alternative 4 – Installation of Service Meters, is including within this grouping due to the reduced cost, ease of installation, and anticipated negative community perception of a modified rate structure.

Individual alternatives, as well as the grouped alternative, are included in the life cycle cost analysis. Improvements to the Upper Treatment Building, described in Section 4.8.2, would be necessary to consider for the Grouped Alternative. Costs associated with the Upper Treatment Building Improvements are included in the life cycle cost analysis for the Grouped Alternative. Costs associated with the Grouped Alternative include capital costs and operation and maintenance costs for each alternative included, as well as the cost to improve the Upper Treatment Building. Capital costs for the Grouped Alternative are currently estimated at $2,044,000 and annual operating expenses at $115,000. Capital costs are inclusive of design contingency, contractor overhead and profit, and general contract requirement fees.

4.8 Other Improvements

Other system improvements are planned to be included in this project but do not fall into individual alternative categories. This section describes the need for additional improvements that are planned to be incorporated into the project.

4.8.1 Replace Broken Infrastructure

During leak testing and fire hydrant testing events in 2021, six fire hydrants and six isolation gate valves were identified as non-functional or as having operational issues. Operational issues included difficulty in opening valves, including several hydrants that would require two personnel to open a single fire hydrant, and leaks in hose connection points. These pieces of broken infrastructure are planned to be replaced as part of this project to improve system operations and fire response.

Costs associated with replacing the six fire hydrants and six isolation gates valves are estimated at $99,000. Only nominal increases to ongoing operation and maintenance costs are anticipated if these replaces were to occur.

4.8.2 Upper Treatment Building Improvements

Improvements to the Upper Treatment Building are necessary to incorporate Alternative 2 – Transmission Line Installation, Alternative 3 – New Well Development, and the Grouped Alternative

into the existing treatment system. Upper Treatment Building Improvements would include the following:

- Influent flow control and monitoring equipment
- Upgraded GWUDI filtration system to accommodate the new groundwater well (which is anticipated to require GWUDI compliant treatment for planning purposes)
- Treatment modifications to accommodate the consolidation of the Ridgeway Well and new groundwater well
  - For planning purposes, a greensand media filtration unit is included to remove secondary drinking water contaminants such as iron and manganese. Additional information will be provided during borehole sampling of the new groundwater well. Water quality information from the borehole will then inform treatment design.
  - The Forks Treatment Building, which previously blended water from the Ridgeway Well with treated water from the storage tank, must be consolidated to the Upper Treatment Building due to the inclusion of the transmission line. Additional flow control and metering equipment is included in the capital costs for the Upper Treatment Building Improvements to consolidate the blending system.
- Electrical improvements to accommodate the treatment equipment
- Instrumentation and control improvements to accommodate the output from the new treatment and monitoring equipment
- Building improvements to accommodate the new treatment and flow control equipment

The exact treatment modifications will be determined based on input from CDPHE's engineering review process and water quality data from the proposed new well. Water quality samples will be collected from the new well location once the borehole is drilled and that information will inform treatment design. The cost estimate assumes that a backwashing filter will be required to meet requirements on secondary MCLs for iron and manganese but the need for such equipment must be confirmed with water quality sampling.

The Upper Treatment Building Improvements would be necessary if incorporating both Alternative 2 and Alternative 3, or the Grouped Alternative. The cost of these improvements is estimated at $285,000, with annual operation and maintenance costs of $10,000. Costs associated with the Upper Treatment Building Improvements are included in the life cycle cost analysis for the Grouped Alternative.

5 Selection of an Alternative

5.1 Life Cycle Cost Analysis

The alternatives discussed in Section 4 were processed through a life cycle cost analysis per USDA guidelines. Costs included in the analysis include the capital costs discussed for each alternative, as well as estimated annual operation and maintenance costs, salvage costs, and a calculation for Net Present Value (NPV). This life cycle cost analysis provides a financial metric to describe the present day costs of each alternative. All individual alternatives, as well as the Grouped Alternative, were processed in the life cycle cost analysis. This analysis is summarized in Table 3, shown below.

Table 3
Summary of Life Cycle Costs on Alternatives

Alt.	Description	Capital Cost	Annual O&M	Salvage (SPPWS)	Net Present Value (NPV[1])
1	No Action	--	$212,000	--	$4,411,409
2	Transmission Line Installation	$391,000	$20,000	$50,000	$757,171
3	New Well Development	$330,000	$10,000	$15,000	$523,085
4	Installation of Water Meters	$804,000	$30,000	$80,400	$1,347,856
4.1	Zoned Service Meter Installation	$80,000	$2,500	$8,000	$124,021
5	Consolidation with Genesee Water and Sanitation District	$2,230,000	$199,000	$220,000	$7,053,049
-	Grouped Alternative[2]	$2,044,000	$115,000	$146,000	$4,290,981

Notes:
1. The discount rate used for the NPV calculation was 2.0%, which is the 20-year real interest rate from OMB Circular No. A-94, Appendix C (Young 2023).
2. The Grouped Alternative includes Alternatives 2, 3, and 4.1, as well as improvements to the Upper Treatment Building to accommodate the additional treatment infrastructure and flow consolidation and replacement of broken infrastructure.

Alternative 1 and Alternative 5 have the highest NPV of any single alternative. The no action alternative (Alternative 1) illustrates the expense of water augmentation to meet existing demand and is not sustainable in the long-term based on the District's financial structure. The costs to install water meters (Alternative 4) is considerable and would likely necessitate contracting additional staff to perform water meter readings and O&M, as well as the potential for additional water augmentation as no new sources of supply are added to the system. The costs for system consolidation with the Genesee Water and Sanitation District was more expensive than any alternative considered, including the Grouped Alternative. Due to limited financial resources, the District is unable to proceed with Alternative 5 – Consolidation with Genesee Water and Sanitation District.

The Grouped Alternative provides a NPV that is slightly less expensive than the No Action alternative but provides a situation that meets the District's objectives of being self-sustaining on water supply.

The Grouped Alternative is the only alternative that provides redundancy, additional sources of raw water, and allows the District to be sustainable from both a water supply perspective and a financial perspective.

5.2 Non-Monetary Factors

Non-monetary factors that influence alternative selection are predominantly driven by the Districts objective of selecting a solution that can provide a sustainable supply of water for the 20-year planning period. While financial sustainability is a significant consideration, the District wants to be self-reliant on their water supply to protect the interests of their customers. Alternatives 1, 4, and 5 do not meet the objectives of providing a sustainable raw water supply sufficient that is in direct control of the District. Alternative 4, Installation of Water Meters, would provide an unquantified improvement to raw water supply through loss reduction but if incorporated alone it would not provide sufficient flow to meet supply deficits.

Consolidation with the Genesee Water and Sanitation District would have the significant benefit of reducing operation and maintenance requirements of IWSD. Additional sustainability considerations would include decreased use of groundwater for raw water supply, which can be an unsustainable process if not conducted responsibly. Apart from the considerable financial implications of substantial annual service charges, the District would significantly lose operational autonomy. The District would decommission wells and treatment facilities and would be beholden to the Genesee Water and Sanitation District for water supply. The pass-off of water rights would reduce the ability of the District to return to supplying their own water to their service area. For these reasons, consolidation would not be viewed as favorable by community members located within the service area of the District and approval would be very difficult, if not entirely impossible.

The Grouped Alternative has a greater likelihood of meeting the District's project objectives than any single alternative and would do so at a much reduced cost compared to Alternative 5 - Consolidation with Genesee Water and Sanitation District.

6 Proposed Project

6.1 Preliminary Project Design

The alternatives analysis and life cycle cost analysis provided in Sections 4 and 5 provided adequate means to assess the preferred project configuration. The Grouped Alternative provides the greatest benefits for meeting the District's project objectives of self-reliance on water supply. The lifecycle cost analysis indicates that the Grouped Alternative is significantly less expensive than consolidation with the Genesee Water and Sanitation District and would not lead to eminent rate increases for the service area.

The recommended approach will include construction of a new groundwater supply well near the Upper Treatment Building, installation of a new transmission line between the Ridgeway Well and the Upper Treatment Building, and required treatment upgrades to accommodate these new features. To reduce the risk associated with a single supply improvement, a combination approach is recommended to ensure supply deficits are reduced for the entirety of the 20-year planning period. The transmission line or new groundwater well alone would not be sufficient to eliminate supply deficits throughout the 20-year planning period.

The transmission line between the Ridgeway Well and Upper treatment building will allow the District to fully utilize the full production of the well, which currently does not connect to the storage tank. That improvement will improve supply significantly but mainly offers improved operational capabilities to operators. The new well construction will improve supply but could experience the same reduced output that Wells 1A and 1B are experiencing. By using both the new well and transmission line to connect the Ridgeway Well, raw water supply will become more robust and less susceptible to seasonal recharge fluctuations.

6.1.1 Water Supply

Water supply improvement is the focus of the recommended improvements. The new groundwater well will increase the raw supply of the system to the demand requirements of the 20-year planning period. The planned location of the new groundwater well is shown on Figure 6.

The raw water quality for the new groundwater well has not yet been determined. It is anticipated that the raw water quality will be comparable to the other existing wells and will be evaluated during borehole testing in early 2024. CDPHE requires two months of water quality data to be collected for new groundwater wells to serve as the basis for treatment design. There is the potential that the well will be classified as a GWUDI well, as the location and configuration will closely match Wells 1A and 1B, both of which are classified as GWUDI. Water treatment will be provided for the new well based on the required water quality sampling for CDPHE compliance. Raw water quality from Wells 1A and

1B are generally good and only disinfection to GWUDI standards is required for compliance with drinking water regulations.

With the addition of a new groundwater well, and the transmission line to connect the Ridgeway Well, an increase of 16 to 35 gallons per minute of raw water supply is anticipated. This increase would sufficiently cover the current supply deficits experienced during seasonal decreased well production and provide sufficient supply capacity to cover demands projected over the 20-year planning period.

6.1.2 Treatment

The recommended configuration using the Grouped Alternative will require several modifications to the existing treatment system. Treatment modifications are summarized as follows:

- Consolidate blending of raw water from the Ridgeway Well, which is currently performed in the Forks Treatment Building, to the Upper Treatment Building.
  - This will require additional flow metering, control, and monitoring to maintain proper blending ratios with raw water from the Ridgeway Well and other well sources.
  - Flow from the Ridgeway Well is anticipated to be a maximum of 10 gallons per minute, which will drive the sizing of hydraulic components associated with treatment consolidation.
- Modify water treatment equipment to accommodate flow from the new groundwater, as well as the flow from the Ridgeway Well.
  - Media filtration may be required to remove high levels of secondary maximum contaminant levels (MCLs), including iron and manganese, pending testing of the new groundwater well borehole.
  - Media filtration would also benefit treatment of the Ridgeway Well, which produces water with elevated levels of secondary MCLs.
  - A GWUDI-compliant filtration system, if required based on discussions with CDPHE, will include a Harmsco HC/40-LT2 cartridge filtration unit and differential pressure sensors sized appropriately to manage the flow from all GWUDI classified wells.
  - The cost estimate for the recommended project configuration includes both the GWUDI filtration system and media filtration system.
- Modify treatment system piping configuration to accommodate flow from the Ridgeway Well transmission line and new groundwater well.
  - Additional sampling ports, flow monitoring, and disinfection injection system will be required to accommodate these changes.
- Improve system controls and SCADA system to accommodate new componentry.
  - Additional pump controls and monitoring will be required for the new well construction.

- Increase existing footprint of the existing Upper Treatment Building to accommodate treatment modifications.
  - The existing building is very small and will be unable to house the additional piping, treatment, and controls required by this project.
  - A building expansion is planned as part of this project to accommodate the new equipment and segregate treatment and chemical storage from staff operations areas with computers and SCADA instrumentation. Additional improvements for the Upper Treatment Building will also include bringing the building into compliance with current building standards, including heating and ventilation improvements.

6.1.3 Pumping Stations

No additional pumping stations will be required with the change in system configuration. New well pumps, motors and variable frequency drives for the new groundwater well, and the Ridgeway Well, will be sized to accommodate the head conditions in the piping system. No electrical service improvements are anticipated to be required for the well pump upgrades.

6.1.4 Distribution

The existing layout and extents of the distribution system will not be modified during this project. The transmission line is discussed in Section 4.2 and will include a new transmission line to connect the Ridgeway Well to the Upper Treatment Building.

6.2 Project Schedule

This project is currently in the pre-design phase, which will involve the completion of several investigations to collect information to inform the design. Dates of project milestones are listed below:

- Well Development Permits: May 1, 2024
- Bid Ready Design Documents: August 15, 2024
- Advertisement for Bid: September 23, 2024
- Contract Award: January 12, 2025
- Initiation of Construction: March 21, 2025
- Project Substantial Completion: February 15, 2026
- Project Final Completion: May 4, 2026
- Self-Certification for Operation: June 1, 2026

6.3 Permit Requirements

Stamped plans and specifications will be submitted to the CDPHE to earn a certificate of compliance for the treatment modifications. There will be a permit required by the Colorado DWR for the new

well. Additional coordination with DWR will be required to register the new groundwater well and apply water rights currently held by the District. There will also be a building permit required of the contractor by Jefferson County for the building expansion of the Upper Treatment Building. A state construction dewatering permit may also be required of the contractor to perform excavations in several areas. No permitting or additional coordination is anticipated from floodplain impacts, as all work will be conducted outside of the mapped 100-year floodplain.

6.4 Sustainability Considerations

Sustainability considerations for this design have primarily focused on maintaining system resiliency during changing precipitation and groundwater recharge conditions. The focus of this project is to improve the sustainability of the raw water supply of the system and allow the District to be self-reliant with water resources. Incorporating both the new groundwater well and transmission line, provides redundancy in the system to meet the District's water demands. Additional elements of sustainability will be included in the design, including use of energy efficient technologies, such as pump motor VFDs, and improved building conditions to save on heating and ventilation costs.

6.5 Total Project Cost Estimate

A cost estimate has been prepared for the recommended alternative, which is summarized below in Table 5. This cost estimate reflects a preliminary design, which may require alterations pending pre-design investigations. Areas of uncertainty that may impact the total project costs include treatment requirements for the new groundwater well, confirmation of installation methodology for the transmission line, and the footprint of the Upper Treatment Building expansion. These areas of uncertainty will be further refined through pre-design investigations, which include an exploratory borehole to water quality for the new groundwater well, video survey of the existing decommissioned water line, and early design efforts on required treatment processes.

Table 4
Summary of Project Costs

Item	Description	Qty	Units	Unit Cost	Total Cost
1.0	General Contract Requirements	1	LS	$274,200	$274,200
2.0	**Transmission Line Installation (Alternative 2)**				
2.1	New Well Pump & Motor Downhole	1	LS	$40,000	$40,000
2.2	New VFD & Control Upgrade	1	LS	$3,500	$3,500
2.3	2" PE Transmission Main - Pipe-in-Pipe	2,530	LF	$85	$215,050
2.4	2" PE Transmission Main - Trenched Installation	900	LF	$115	$103,500
2.5	2" Buried Isolation Valves	3	EA	$3,000	$9,000

Item	Description	Qty	Units	Unit Cost	Total Cost
2.6	2" ARV Vault	1	EA	$19,500	$19,500
2.7				**Transmission Line Subtotal**	**$391,000**
3.0	**New Well Development (Alternative 3)**				
3.1	Drill and Develop Well (6" bore, 700 ft deep)	1	LS	$85,000	$85,000
3.2	Complete Outfitting of Well	1	LS	$50,000	$50,000
3.3	Electrical Power Service & Meter for New Well	1	LS	$14,000	$14,000
3.4	2" PE Transmission Main - Trenched Installation	1,000	LF	$115	$115,000
3.5	Buried Pump Control Wiring	1,000	LF	$16	$16,000
3.6	New VFD & Controls	1	LS	$3,000	$3,000
3.7	2" Buried Isolation Valves	2	EA	$3,500	$7,000
3.8	2" ARV Vault	1	EA	$19,500	$19,500
3.9	Legal & Easement Costs	1	EA	$20,000	$20,000
3.10				**New Well Development Subtotal**	**$330,000**
4.0	**Upper Treatment Building Improvements**				
4.1	Influent Flow Control Modifications	1	LS	$30,000	$30,000
4.2	GWUDI Filtration System	1	LS	$25,000	$25,000
4.3	Treatment Modifications	1	LS	$115,000	$115,000
4.4	Electrical Improvements	1	LS	$19,500	$19,500
4.5	Instrumentation & Control Improvements	1	LS	$12,000	$12,000
4.6	Building Improvements	1	LS	$83,500	$83,500
4.7				**Upper Treatment Building Improvements Subtotal**	**$285,000**
5.0	**Limited Service Meter Installation (Alternative 4.1)**				
5.1	Water Meter Installation	4	EA	$20,000	$80,000
5.2				**Limited Service Meter Installation Subtotal**	**$80,000**
6.0	**Replace Broken Infrastructure**				
6.1	Fire Hydrant Assembly	6	EA	$12,000	$72,000
6.2	6" Isolation Valve and Box	6	EA	$4,500	$27,000
6.3				**Replace Broken Infrastructure Subtotal**	**$99,000**
7.0				**Construction Subtotal**	**$1,460,000**
8.0	Design Contingency	20%	--	$292,000	$292,000
9.0	Contractor Overhead	10%	--	$146,000	$146,000
10.0	Contractor Profit	10%	--	$146,000	$146,000
11.0				**Project Total**	$2,044,000

Notes: General Contract Requirements includes mobilization, demobilization management, contracting, insurance, permitting, shop drawings, staging, survey, and traffic control.

7 Conclusions and Recommendations

The IWSD Water System Improvements Project is intended to improve the raw water supply of the District to augment existing sources and reduce current supply deficits. The purpose of this project is to reduce the application of water use restrictions and meet the current demand of the service area. Water deficits in recent years have caused financial strain on the District due to required water importation from other water districts. This project is intended to meet the District's objectives of reducing supply deficits during periods of reduced groundwater recharge, promote sustainability in available water supply, and become self-reliant on water resources. In order to meet these objectives, the following improvements are recommended:

- New groundwater well development
- New transmission line to utilize the full capacity of the Ridgeway Well
- Improvements to the Upper Treatment Building to accommodate the new infrastructure associated with this project
- New zone service meters to cost effectively monitor water usage and provide early leak detection
- Replacement of existing broken infrastructure, including isolation valves and fire hydrants

These improvements will provide additional resiliency during periods of drought. The proposed system configuration allows for a new supply well, as well as the ability to store water from an existing well. Improvements to the Upper Treatment Building will allow treatment to be consolidated to a single building, while providing additional space to house required treatment equipment.

Next steps in this project include the following pre-design and design phases:

- Finalize funding coordination with state and federal agencies
- Complete a video survey of the existing decommissioned water line that is intended to serve as a conduit for the new transmission line to reduce construction costs and land disturbance during construction.
- Drill an exploratory borehole to collect water quality samples, as required to determine required treatment and comply with CDPHE permitting and funding requirements.
- Finalize land surveys around areas planned for improvements.
- Process well applications and submit for approval from DWR.
- Complete the engineering design and prepare bid-ready plans and specifications for the construction.

Many of these next steps are currently in progress and are intended to meet the milestones outlined in Section 6.2.

8 References

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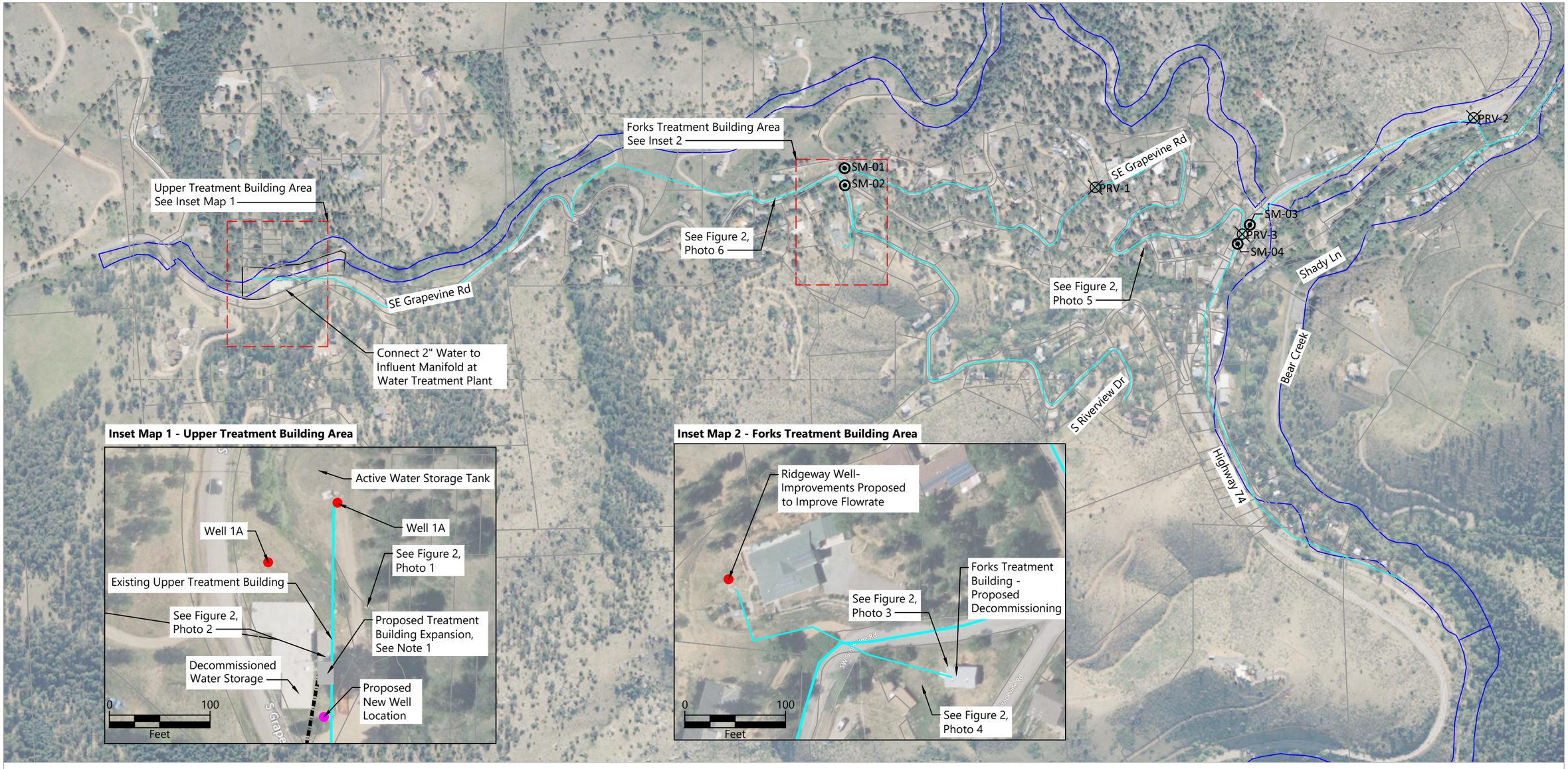
Figures



SOURCE: Aerial ©2020 Microsoft Corporation ©2020 DigitalGlobe ©CNES (2020) Distribution Airbus DS
Elevation data: USGS National Map
HORIZONTAL DATUM: Colorado State Plane Central Zone, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD88)

LEGEND:

- PRV Locations
- Existing Water Main & Laterals
- FEMA 100-YR Floodplain Boundary
- Parcel Lines
- Insets
- Existing Groundwater Supply Well
- Proposed Zone Service Meters

0 500 Feet

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Filepath: K:\Projects\2684-Idledale WSD USDA Search Grant\PER Preparation\2684-Ideldale-RP-007 Preliminary Engineering Report.dwg Figure 1

ANCHOR QEA

Figure 1
Location and Existing Facilities

Ideldale Water and Sanitation District
USDA Preliminary Engineering Report

Photo 1 - Upper Treatment Building Area Looking South
Figure 1

Photo 2 - Upper Treatment Building Interior
Figure 1

Photo 3 - Forks Treatment Building Interior
Figure 1

Photo 4 - Forks Treatment Building Exterior
Figure 1

Photo 5 - Highway 74 Looking West
Figure 1

Photo 6 - Overview of Forks Building Area Looking South
Figure 1

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Filepath: K:\Projects\2684-Idledale WSD USDA Search Grant\PER Preparation\2684-Idledale-RP-007 Preliminary Engineering Report.dwg Figure 2

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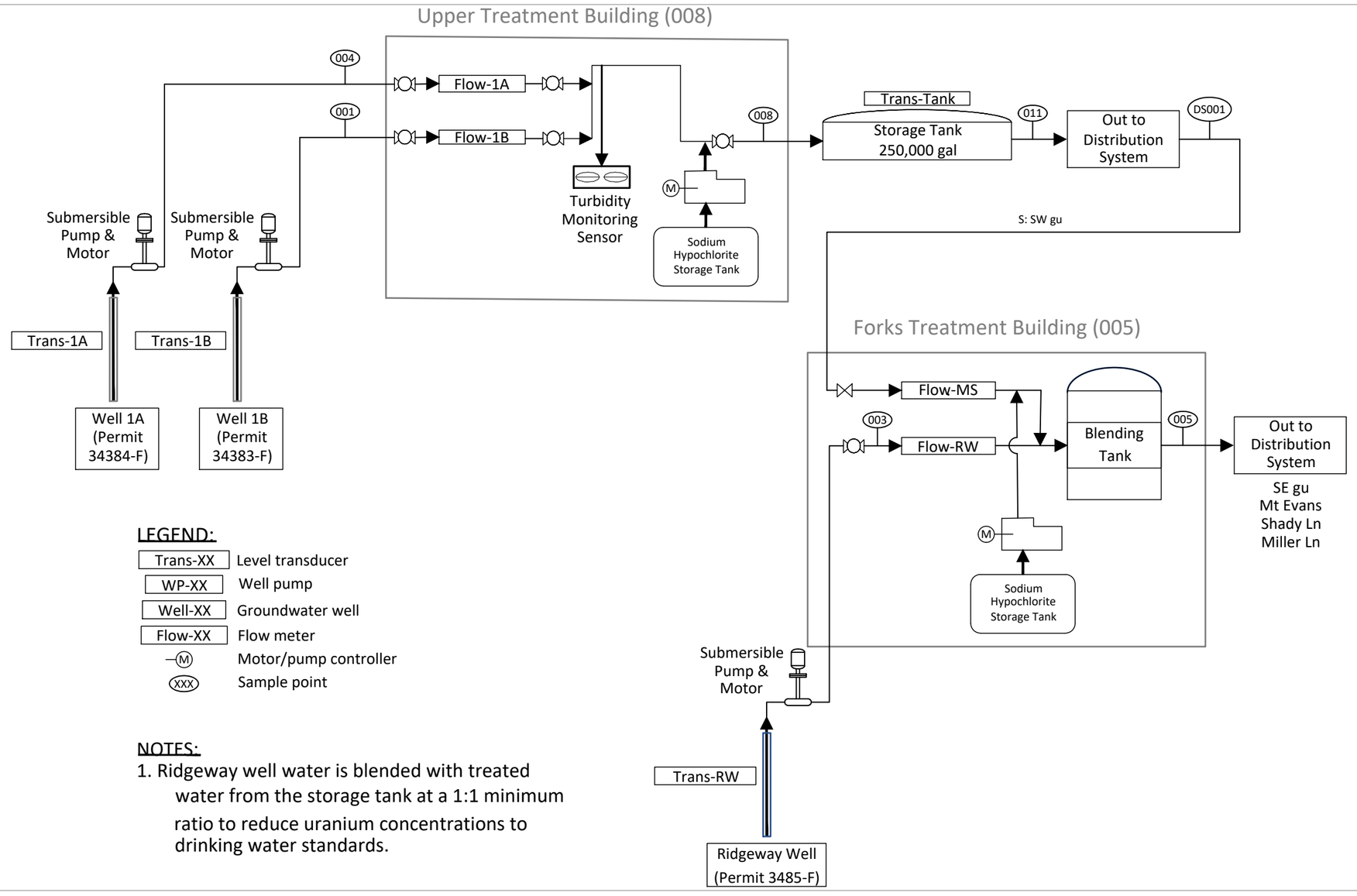
Figure 2
Site Photos

Idledale Water and Sanitation District
USDA Preliminary Engineering Report



LEGEND:

Trans-XX	Level transducer
WP-XX	Well pump
Well-XX	Groundwater well
Flow-XX	Flow meter
M	Motor/pump controller
XXX	Sample point

NOTES:

1. Ridgeway well water is blended with treated water from the storage tank at a 1:1 minimum ratio to reduce uranium concentrations to drinking water standards.

0 0.649
Feet

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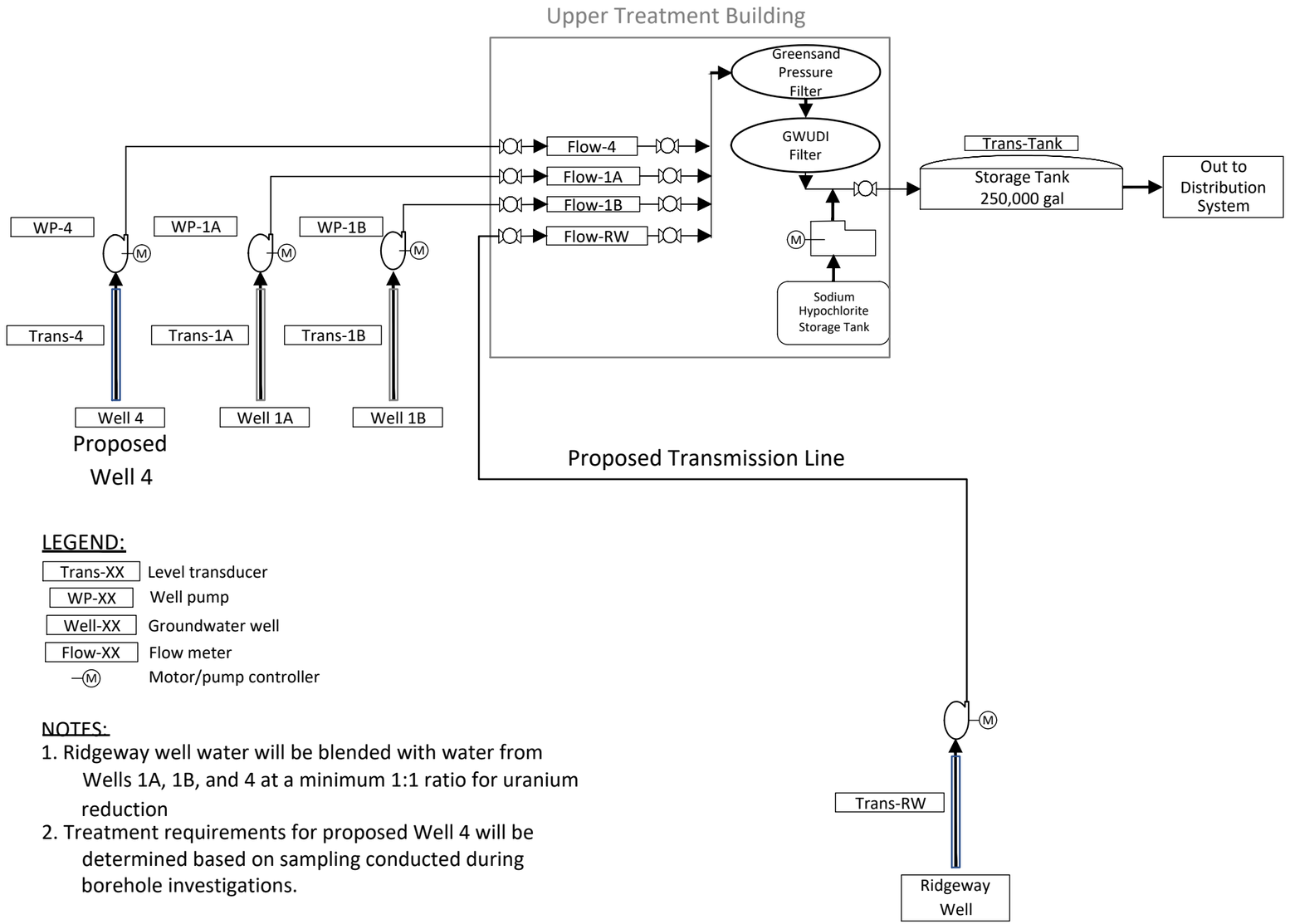
Figure 3
Existing Process Flow Diagram
Ideldale Water and Sanitation District
USDA Preliminary Engineering Report

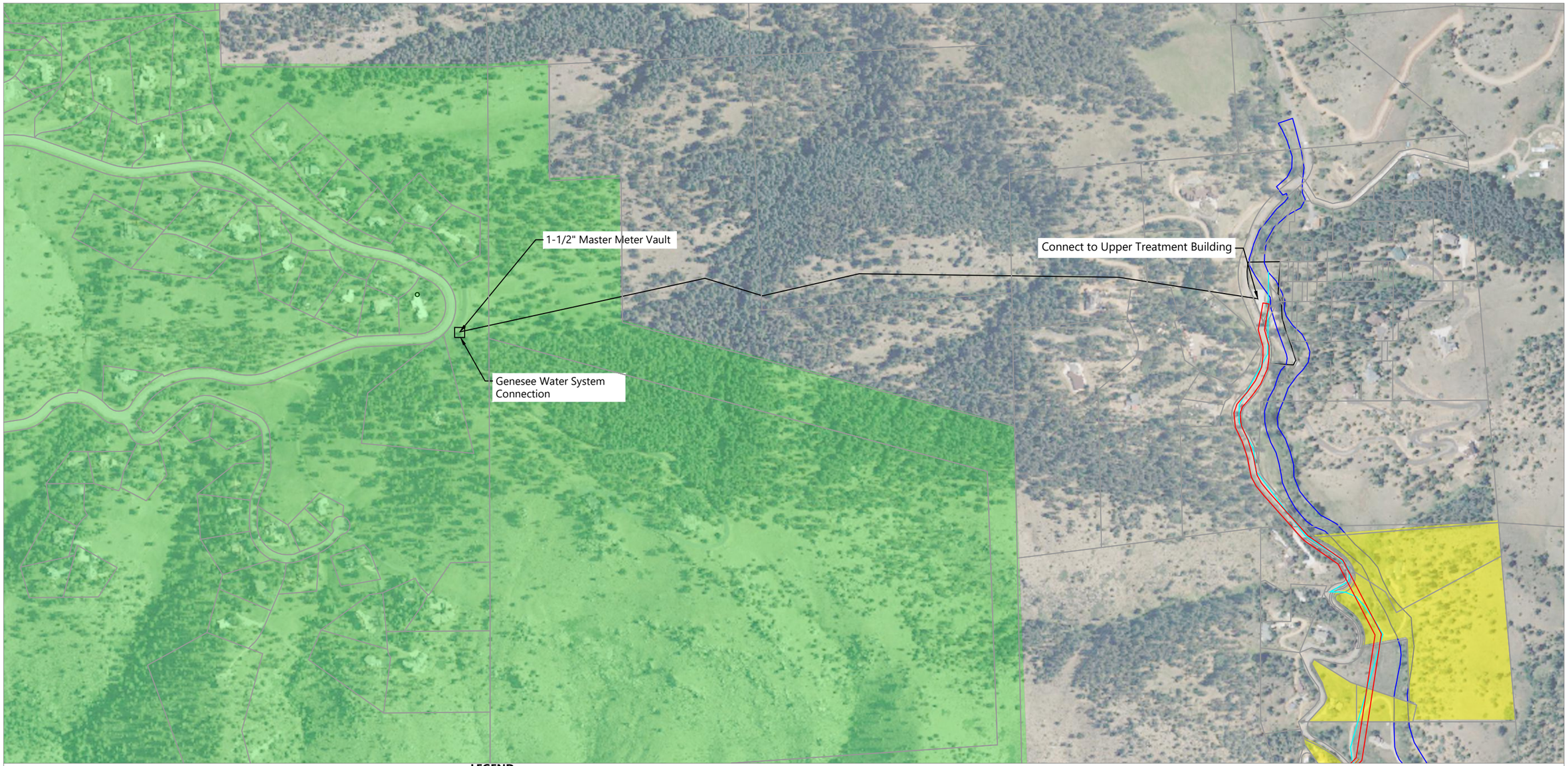


Publish Date: 2024/04/01 7:33 AM | User: jfoster
Filepath: K:\Projects\2684-Idledale WSD USDA Search Grant\PER Preparation\2684-Ideldale-RP-007 Preliminary Engineering Report.dwg Figure 4

ANCHOR QEA

Figure 4
Proposed Process Flow Diagram

Ideldale Water and Sanitation District
USDA Preliminary Engineering Report



SOURCE: Aerial ©2020 Microsoft Corporation ©2020 DigitalGlobe ©CNES (2020) Distribution Airbus DS
Elevation data: USGS National Map
HORIZONTAL DATUM: Colorado State Plane Central Zone, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD88)

LEGEND:

- Parcel boundary (approximate)
- Ideldale Water & Sanitation District Service Area Boundary
- Genesee Water & Sanitation District Service Area Boundary
- Existing Water Main & Laterals

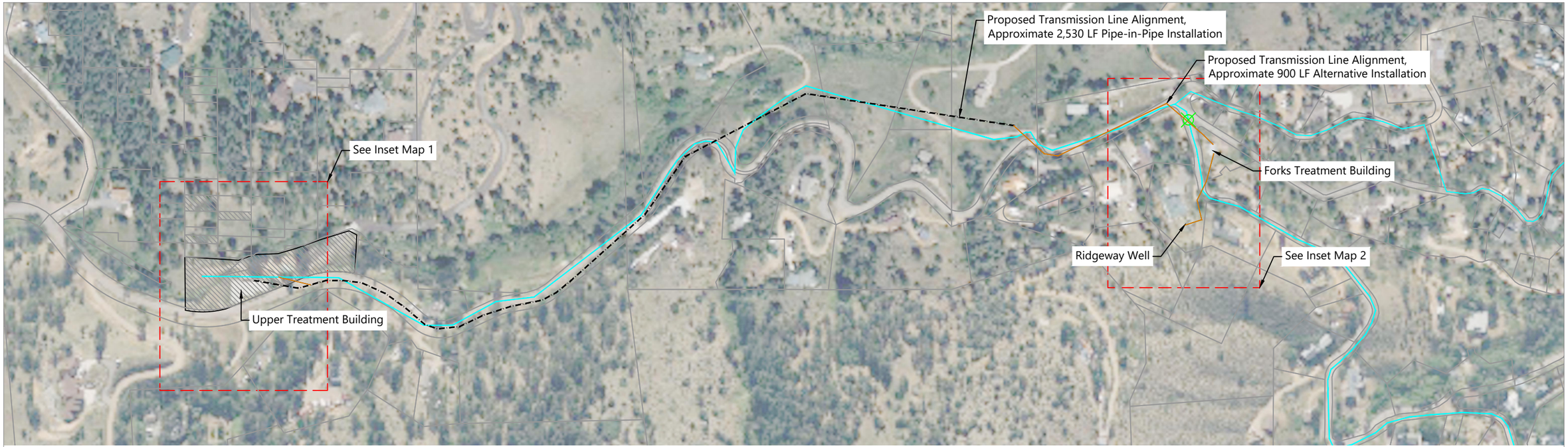
0 500
Feet

Publish Date: 2024/04/01 7:33 AM | User: jfoster
Filepath: K:\Projects\2684-Idledale WSD USDA Search Grant\PER Preparation\2684-Ideldale-RP-007 Preliminary Engineering Report.dwg Figure 5

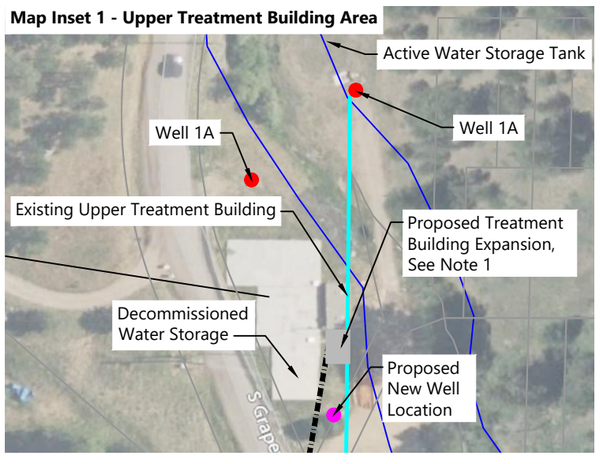
ANCHOR QEA

Figure 5
Genesee Connection Alternative

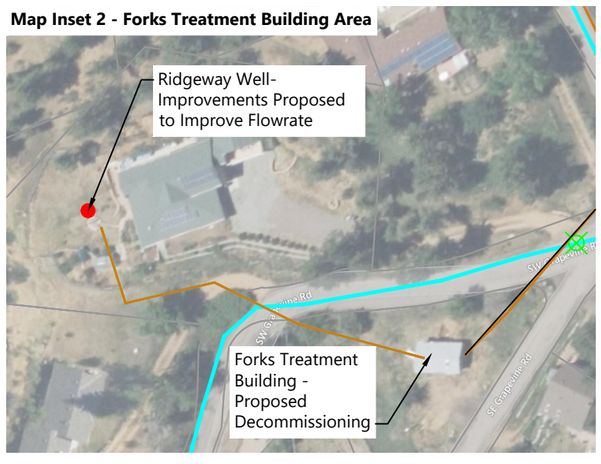
Ideldale Water and Sanitation District
USDA Preliminary Engineering Report



Map Inset 1 - Upper Treatment Building Area



Map Inset 2 - Forks Treatment Building Area



SOURCE: Aerial ©2020 Microsoft Corporation ©2020 DigitalGlobe ©CNES (2020) Distribution Airbus DS
Elevation data: USGS National Map
HORIZONTAL DATUM: Colorado State Plane Central Zone, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD88)

LEGEND:

- Existing Water Main & Laterals
- Proposed Transmission Line - Pipe-in-Pipe Installation
- Proposed Transmission Line - Trench Installation
- Existing Groundwater Supply Well
- Proposed Groundwater Supply Well
- Property Boundaries
- District-Owned Parcels
- Area of Potential Effect

0 300
Feet

Publish Date: 2024/04/01 7:33 AM | User: jfoster
Filepath: K:\Projects\2684-Idledale WSD USDA Search Grant\PER Preparation\2684-Ideldale-RP-007 Preliminary Engineering Report.dwg Figure 6

ANCHOR QEA

Figure 6
Proposed System Improvements
Ideldale Water and Sanitation District
USDA Preliminary Engineering Report

Appendix A
CDPHE Project Needs Assessment

3821 Union Ct.
Wheat Ridge, CO 80033
(303) 881-1337

Orsatti Water Consultants

Memorandum

February 11, 2022

To: AJ Beckman, Idledale Water and Sanitation District

From: Bob Orsatti, Kyle Gustafson, Orsatti Water Consultants

cc:

Re: Idledale Water and Sanitation District – Project Needs Assessment Application

CDPHE utilizes a web-based portal to deliver the Project Needs Assessment (PNA) for State Revolving Fund grant consideration. This is accomplished through the completion of an application where specific questions are asked by CDPHE and answered by the District. We have utilized all the work accomplished with the recently approved Water System Engineering Study to provide this information. The following list outlines CDPHE's requirements for the PNA to apply for financial aid through the Colorado Water State Revolving Fund Program. The required information was collected from CDPHE's CEOS system for drinking water improvements projects.

1. Application Information

a. System Facility Name

Idledale Water and Sanitation District, Drinking Water Distribution System

b. Facility/Property Address

Address of upper treatment building/storage tank battery: 2144 S Grapevine Road, Golden, CO 80401 (39.678615, -105.243278)

c. Program Facility ID and Address

Idledale Water & Sanitation District (Michael Richardson)
02018D-Q-Idledale Water and Sanitation District 020181D-Q

Facility/Property Address and Mailing Address:
C/O Public Alliance
13131 W. Alameda Parkway
Lakewood, CO 80226

d. Name of Project

Idledale Water System Improvements Project

e. Type of Project

Treatment, Distribution/Transmission, Water Supply, Water Storage (select 1 or more):

Treatment, Distribution/Transmission, Water Supply

f. Applicant Information

Name, Address, Phone, Email:

Kyle Gustafson, 12596 W. Bayaud Ave, Suite 450, Lakewood, CO 80228
kgustafson@anchorqea.com

g. Consulting Engineer Information

Name, Address, Phone, Email:

Bob Orsatti, 3821 Union Ct, Wheat Ridge, CO, 80033, US; 720-458-0092; bob@orsattiwaterconsultants.com

h. Engineer Seal

Include the Engineer's Seal as Attachment 1.

i. Self-Certification

Does the system intend to self-certify all or a portion of the project? Yes/No

Yes

If yes, please identify the portions of the project that the system will self-certify (Select: "Distribution system piping", "Pump Station (without integral treatment)", "Valves, hydrants, and/or meters")

Checked: "Distribution system piping", and "Valves, hydrants, and/or meters"

Provide additional explanation, if necessary: (No more than 2,000 Characters)

No additional explanation provided.

2. Executive Summary

Provide a narrative that summarizes the system needs, selected alternative, and the public health benefits of the proposed project. (No more than 2,000 Characters)

The District has recently experienced compounding negative impacts that have included equipment failures, unchecked system leaks, multiple years of historic drought, and water quality compliance advisories from CDPHE. These issues have caused repeated water shortages on a nearly annual basis, which has led to use restrictions to customers. The District has even resorted to purchasing bulk water and hauling it from other nearby water districts. Faced with these mounting operational, regulatory, and financial challenges, the District has evaluated the potable water system facilities to identify and prioritize supply deficiencies. A Water System Engineering Study was performed where different alternatives were assessed that would alleviate or reduce water supply deficits before final recommendations were prepared. The recommended improvements, intended to be implemented in this project, include the following:

- Improve Ridgeway Well delivery using a new transmission pipeline to connect the well with the Upper Treatment Building. At that location, it would be added for blending and treatment with water from Wells 1A, 1B, This approach essentially doubles the well's hydraulic impact to the raw water supply.
- Construct a new raw groundwater well (Well No. 4) adjacent to the Upper Treatment Building to provide additional firm capacity of the raw water supply.
- Construct new treatment facilities at the Upper Treatment Building to provide GWUDI treatment of Well Nos. 1A & 1B and provide additional iron & manganese treatment for the Ridgeway Well. Treatment will be modified and/or expanded to meet new water quality constraints associated with the new Well No. 4 water supply.
- Replace broken distribution system main isolation valves and fire hydrants to improve fire protection, reduce system leakage, and improve distribution operation & maintenance functions.

- Install individual water service meters on all water services in the District, to be located below grade in meter pits at the property line curb stop if possible. This would dramatically improve operational response to system leaks and losses and allow the District to move to a use-based revenue model for customer fee development.

Implementing these improvements will achieve compliance with current CDPHE treatment regulations, provide the District with year-round firm capacity of their raw water supply system, improve finished water quality to the District customers, and reduce system water loss including ongoing operations and maintenance costs and efforts.

3. System Structure and Operation

3.1 Legal Ownership of System

Name, Address, Phone

Idledale Water and Sanitation District; C/O Public Alliance, 13131 W. Alameda Parkway, Lakewood, CO 80226

3.2 Ownership Organization Chart

Include an Organizational Chart as Attachment 2

Organizational chart created based on info from AJ Beckman and used for Attachment 2.

3.3 Plans (TMF: Managerial-2)

A copy of the Monitoring Plan is included as Attachment 3.

A copy of the Cross Connection Control Plan will be included as Attachment 4.

3.4 Current Operator in Responsible Charge (ORC) (TMF: Technical-14)

Name, Certification Number, Expiration Date

Richard Pintor; CWP-WC-00245-0713; Exp Date 7/30/2022

Operator Certification Level

Treatment: Class C

Distribution: Class 2

Combined Treatment/Distribution: NA

3.5 Operator Certification (TMF: Technical-15)

Do the system operators have adequate operator certification levels for the proposed project as defined by Regulation 100 Water and Wastewater Facility Operators Certification Requirements? (Yes/No)

Yes

Explain the impact of the proposed project on the required operator in responsible charge (ORC) certification level and other predicted staffing changes. (No more than 2,000 Characters)

It is not planned that the proposed improvements will affect the certification level for the designated ORC and will not require any predicted staffing changes. Proposed improvements are anticipated to add new treatment features that can be operated and maintained by the existing Class C certification. With that understanding, the final raw water quality for the new Well No. 4 has not yet been determined. It is anticipated that the Well No. 4 raw water quality will be comparable to the other existing wells. However, should water quality testing indicate more advanced treatment needs, it may be necessary to require an increase in the Operations Certification level from Class C to Class B. The total treatment volume of the water treatment facility will remain less than 350 GPM and will not affect certification levels of operators.

3.6 Record Keeping (TMF: Managerial-3)

Describe the system's record retention policy that meets the requirements of the Colorado Primary Drinking Water Regulations (Regulation 11) including: record type, retention period, and record location. (No more than 2,000 Characters)

The Idledale Water and Sanitation District has formally adopted the record retention policy established in Part 1, Article 80, Title 24, C.R.S., the Colorado State Archives, Division of the Department of Personnel, which created a records retention schedule for Colorado special districts and sets a timeline for records retention. Documents not explicitly covered under Part 1, Article 80, records retention policy follows those of 11.36 Recordkeeping Requirements Rule of Regulation No. 11: Colorado Primary Drinking Water Regulations (5 CCR 1002-11).

3.7 Annual Budget (TMF: Financial-1)

Does the system prepare an annual budget? (Yes/No)

Yes

Does the system prepare and maintain a Capital Improvement Plan? (Yes/No)

No

Please provide a narrative of the process for annual budgeting and financial planning. (No more than 2,000 Characters)

Each year the District Board for the Idledale Water and Sanitation District authorizes its designated accountant to prepare and submit a proposed budget. The proposed budget accounts for all general operating expenses, debt service obligations, contractual obligation expenses, and capital improvement project expenses.

Currently, the District acquires its revenues though a mil levy which is certified to the Jefferson County Assessor by December 15th of each calendar year for Collection by the County Treasurer in the following tax year. Property within the District is subject to the District's mill levy and must pay the resulting property tax. After the expenses are determined for the year, adjustments to mill levies are determined to ensure adequate funding is available.

The District's Account prepares and circulates a draft budget to the Board by October 15th of each year. Adoption of the budget is considered by the Board at a public meeting at which a public hearing is conducted, and members of the public may comment on the budget prior to adoption by the Board. Notice of the date, time and place where the Board will receive comment from the pubic prior to adopting its budget for the ensuing budget year is published in a newspaper having general circulation within the District.

Provide a copy of the annual budget as Attachment 7.

Current budget added as Attachment 7.

3.8 Financial Status (TMF: Financial-2)

Describe the current financial status and multi-year financial planning for the system including O&M costs, existing debt, required reserve accounts, rate structure, other capital improvement programs, and the system's reserve policies. (No more than 2,000 Characters)

Multi-year financial planning and capital improvements planning for the District are currently reactive and no long-term financial plan is currently established. Annual budgeting efforts account for general operating expenses, debt service obligations, contractual obligation expenses, and capital improvement project expenses. Annual O&M costs include equipment repair and rental fees, payroll and salaries of operators, treatment and testing costs, and contingency costs for water purchases and augmentation, a cost that will ideally be eliminated by implementing this improvements project. Existing loans include a General Obligation Refunding and Improvement Loan (Series 2017 Loan), which was used for the

purpose of advanced refunding of the District's 2009 Water Activity Enterprise Revenue Bond. The District has no outstanding operating or capital leases.

The District receives all revenue via property taxes collected by the Jefferson County Treasurer and remitted to the District. The tax paid by each property owner is derived by the property's assessed value (as determined by the Jefferson County Assessor) multiplied by the District's mill levy.

As part of this project, the District will install individual residential water meters and set up a traditional usage-based fee system. The transition to a use-based system will increase the revenue stream to the District to allow for improved long-term financial planning, capital improvements planning, and should increase the system's available financial reserves. Fees from the use-base system will more accurately reflect the costs of O&M and capital improvements, which is occasionally difficult with the mill levy tax-based system.

Include a copy of the 20-year cash flow projection as Attachment 8. 20-year cash flow projection must include at least 3 months O&M reserve and capital and O&M costs for the selected project alternative as described in Section 7.

The 20-year cash flow model is provided as Attachment 8.

3.9 Audits (TMF: Financial-5)

Has the system submitted audits to the Department of Local Affairs or the State has granted exemption of the statutory audit requirement? (If Yes - Provide a copy of the most recent audited financial statement or exemption from State as Attachment 9.)

Financial audit for 2020 provided by District and used as Attachment 9.

3.10 Insurance (TMF: Financial-6)

Does the system maintain general liability insurance? (Yes - Include documentation of general liability insurance as Attachment 10.)

Provided by the District and included as Attachment 10.

4. Project Purpose and Need

4.1 Health and Compliance

Summarize the system's compliance status that necessitates the proposed project. (No more than 2,000 Characters)

From a compliance perspective, the primary objective of this project is to directly address the CDPHE mandated GWUDI filtration requirements for Well Nos. 1A and 1B. In addition to

that, other treatment improvements will further assure continued compliance with all other applicable requirements and water quality standards.

Additionally, this project will include installation of a new groundwater well (No. 4) to increase supply. In order for the project to remain cost-effective, the location of the new well will be in close proximity to the existing wells 1A and 1B. As mentioned previously, Well 1A was determined to be influenced by surface water and there is the chance that the newly constructed well will be as well. This could result in the new well requiring GWUDI treatment as a means of state compliance. As currently planned, this project will not specifically address any existing compliance deficiencies, but the planned improvements will have all required compliance features accounted for and included in the design during the design phase. Design contingencies for additional treatment methodology will be determined on water quality testing from test boreholes near the proposed new groundwater well. Treatment design will ensure the new well is compliant with applicable and relevant drinking water regulations.

4.2 Existing facility limitations

Summarize existing water system facility(ies) limitations that necessitate the proposed project. (No more than 2,000 Characters)

The District has suffered from supply deficits typically starting in early May and continuing through the fall months, approximately from late-April to September for the past 3-4 years. During this time, Wells 1A and 1B and the Ridgeway Well have been unable to meet the water demand even with restrictions on outdoor water use. This deficit required the District to truck in additional water from Fredrick, Golden, and Genesee and set up an emergency treatment system last summer to provide an additional 500,000 gallons to meet the demand. While these emergency steps kept the water flowing to residents, both were expensive and unsustainable practice for long-term system operation. Leak testing and repairs have been implemented but supply deficits remain a major issue during summer and fall months.

The District in a precarious situation where demand outweighs supply during periods of high temperature and low precipitation. The aquifer supplying these wells is predominantly replenished by precipitation. During periods of low rainfall, the water table becomes depleted, limiting the available drawdown and volume available for pumping. Once the water table drops below a certain depth, well pumping will produce reduced flow until the aquifer is replenished through precipitation. This operating condition will continue to create supply shortfalls during periods of drought in the summer and fall months unless additional sources of water are brought into the system. Based on water supply and demand data from 2018-2020, a 320-2,620 GPD supply deficit occurred between April and September, which necessitated the import of additional water.

Given the seasonal variability of the current water source and the observed shrinking availability, this project is intended to provide additional water supply to improve year-round firm water capacity for the system. Failure to respond will result in water shortages, continued water hauling and the associated financial repercussions.

4.3 Operations and Maintenance Issues

Summarize operational and maintenance (O&M) issues with the existing water facilities. (No more than 2,000 Characters)

The Idledale Water and Sanitation District water distribution system was assessed for condition, functionality, and flow as a part of the recent Engineering Study. Only four of nine existing fire hydrants were found to be in acceptable working condition and provide low but adequate flow rates for fire protection. Five of nine hydrants were found to have substantial leaks and/or have hydrant valves that are either not functioning or inadequately functioning for use in fire suppression activities. During the assessment, it was also determined that a total of six existing isolation gate valves were broken, would not close, or were not properly functioning. Operating isolation valves are key to properly maintaining a distribution system and all six valves are recommended to be replaced. The recommendation also includes replacing all five non-functioning hydrants and bringing them up to NFPA and Foothills Fire Protection District standards. In addition, it is recommended to implement a bi-annual operations and maintenance program oriented to test and exercise all isolation valves and fire hydrants in the distribution system.

System wide water loss continues to represent the biggest long-term risk for the District. The existing age and condition of the buried infrastructure has created a continuous demand on operations and maintenance to identify, locate and repair leaks as quickly as possible.

5. Existing Facilities Analysis

5.1 Existing Source Water

5.1.1 Raw Water Supply (TMF: Technical-2)

Explain the system's existing raw water source(s), seasonal variability, and availability. Explain the system's raw water quality including primary water quality parameters of concern, variability and potential sources of contamination in the watershed or source aquifer. Identify whether sources are classified as surface water, groundwater, or groundwater under direct influence of surface water (GWUDI). Explain water usage including multiple sources of differing qualities. – Breakdown by source

Source Name	Source Class (surface/well/gwudi)	Description (see above)
Well 1A	GWUDI	Well 1A has a total depth of 708 feet with two screened intervals. Well 1A is the most consistently producing well in the system and typically produces between 4-10 GPM, depending on the time of year. Well production is highest during spring months and lowest during late summer to early winter. The decrease in production during the late summer and fall strains the total supply of the system. Raw water quality from Well 1A is generally good, with no elevated primary or secondary MCLs of measured contaminants. CDPHE has determined through water quality testing that Well 1A is classified as GWUDI. As such, the District has been mandated to provide GWUDI treatment of both wells and has also been directed to increase the disinfection dosage to confirm 4-log removal of pathogens until the improvements have been implemented. The plan moving forward as discussed earlier is to install GWUDI treatment in the Upper Treatment Building at the existing Well Influent Manifold, upstream of the existing disinfection injection point and flow meters.
Well 1B	GWUDI	Well 1B has a total depth of 451 feet. Well 1B typically produces between 5-6 GPM, depending on the time of year. Raw water quality from Well 1A is generally good, with no elevated primary or secondary MCLs of measured contaminants. CDPHE has determined through water quality testing that Well 1B is classified as GWUDI. As such, the District has been mandated to provide GWUDI treatment of both wells and has also been directed to increase the disinfection dosage to confirm 4-log removal of pathogens until the improvements have been implemented. The plan moving forward as discussed earlier is to install GWUDI treatment in the Upper Treatment Building at the existing Well Influent Manifold, upstream of the existing disinfection injection point and flow meters.
Ridgeway Well	Well	The Ridgeway Well has a total depth of 502 feet with two screened intervals and is located near the center of the distribution system. This well currently produces 3-4 GPM, which is restricted by an apparent obstruction in the flowline connecting the well to the Fork Treatment Building. If this line were repaired, an additional 5-6 GPM (10-15 GPM total) of flow could be provided to the system. The Ridgeway Well became operational again after the electrical system and well pump were improved in 2020. Due to these recent improvements and modifications, the seasonal variability of production is not adequately characterized. Raw water quality from the Ridgeway Well include exceedances of total and dissolved manganese, which is currently reduced to recommended drinking water limits using dilution and filtration in the Forks Treatment Building.

5.1.2 Water Rights (TMF: Technical-3)

Describe the system's existing water rights and if the water rights are sufficient to meet existing water demands. (No more than 2,000 Characters). Include copies of supporting documentation for water rights or other supply agreements as Attachment 12

The District holds adjudicated water rights for several sources as well as water rights to be used for augmentation. Held water rights include Ridgeway Well (5431-F, 12gpm), Ridgeway #3 (34385-F, 40 gpm), Well 1A (34384-F, 20gpm), Well 1B (34383-F, 10gpm), Sawmill Creek Spring (25gpm), Braun Spring (25gpm), West Gulch Spring (25gpm). Additional rights are held by the District on historic pipelines and surface water sources that required augmentation to be of use, including: Braun's Ditch Pipeline (0.70 cfs), Sawmill Creek Pipeline (0.95 cfs), West Gulch Pipeline (0.54 cfs), and the Devil's Gulch Pipeline (0.47 cfs). Those rights were augmented through the purchase of shares from the Mountain Mutual Reservoir Company.

Currently held water rights and augmentation covers the District for approximately 157 gpm of surface or groundwater supply. Current usage has been in the range of 10-25 gpm, with an estimated peak usage of approximately 30 gpm after the Ridgeway Well underwent improvements in the summer of 2021. With current usage, the District holds adequate water rights, with additional available rights to implement water supply improvements.

5.2 Existing treatment

5.2.1 Overall treatment description (TMF: Technical-5)

Provide a current treatment description including: treatment processes used, major design parameters (e.g., process capacities, detention times, unit loading rates, disinfection log inactivation). (No more than 2,000 Characters)

Drinking water treatment for Idledale's system occurs at two locations. The main treatment facility, referred to as the Upper Treatment Building, treats raw water from wells 1A and 1B. Treatment and monitoring at the Upper Treatment Building consists of flow measurement of water from Wells 1A and 1B and disinfection through flow-paced injection of sodium hypochlorite at 3.0-3.5 mg/L to maintain a minimum 2.0 mg/L residual throughout the system. After sodium hypochlorite injection, residual chlorine levels are monitored before the water is stored in the 250,000-gallon storage tank. Additional monitoring includes well water level and tank water level transducers for assessing available supply.

A secondary blending facility, referred to as the Forks Treatment/Blending Building, is used to treat raw water from the Ridgeway well that has exceedances for radionuclides. The Forks Treatment/Blending Building consists of water metering equipment which blends raw water from the Ridgeway Well with treated water from the Upper Treatment Building to reduce contaminant levels to below acceptable MCL limits of 0.030 mg/l. Background concentrations of uranium in the Ridgeway Well raw water supply exceed the USEPA maximum contaminant level. Water sampling conducted on August 12, 2020 indicated uranium concentrations of 0.046 mg/L, which is 0.016 mg/L above the USEPA MCL. As

mandated by CDPHE, blending is required to reduce uranium concentrations and conform with drinking water regulations. The blending system designed and approved by CDPHE at the Forks Treatment Building currently provides for 50% dilution by volume with the District's existing potable water supply.

5.2.2 Existing Process Flow Diagram (TMF: Technical-8)

Include an existing treatment facility process flow diagram as Attachment 13.

The existing treatment process flow diagram is included as Attachment 13.

5.2.3 Current Compliance Status (TMF: Technical-1)

Discuss the system's current compliance status with Regulation 11, as well as violations and significant deficiencies documented during sanitary surveys. (No more than 2,000 Characters)

The outstanding compliance issue for the District is to bring system up to Regulation 11 standards for GWUDI treatment. Well 1A and Well 1B were both reclassified by CDPHE from groundwater to groundwater under the direct influence of surface water (GWUDI) on February 13, 2020, which necessitates additional treatment per Regulation 11 standards. Currently, the system is operating under interim disinfection procedures that involves disinfecting using sodium hypochlorite on a flow-paced injection to maintain a 2.0 mg/L chlorine residual and submit monthly monitoring reports of the residual levels.

To bring the system up to compliance, plans have been submitted to the state for approval of additional treatment methods. The District is working towards implementing the approved treatment modifications, which will include the addition of GWUDI-compliant filtration units. The additional equipment will be housed in the Upper Treatment Building and will be sized to treat additional flow from the proposed new groundwater well, which has the potential of being classified as GWUDI.

5.2.4 Appropriateness of Treatment Technologies (TMF: Technical-6)

Discuss if the existing treatment process(es) are appropriate to meet Regulation 11 considering existing source water quality and potential sources of contamination. (No more than 2,000 Characters)

The proposed new groundwater well has the potential to be classified as GWUDI, due to its proximity to Wells 1A and 1B, which were reclassified as GWUDI by CDPHE in 2020. Additional treatment equipment is planned to be designed and constructed to ensure the GWUDI-classified wells undergo the treatment required in Regulation 11.

Water supply from the Ridgeway Well is currently being blended at a 1:1 volumetric ratio with treated water from the Upper Treatment Building to reduce concentrations of uranium.

This methodology has been approved by CDPHE and currently satisfies the requirements of Regulation 11.

5.2.5 Capacity of Treatment Technologies (TMF: Technical-7)

Is the capacity of the existing water treatment system appropriate to meet water demands through the next 20 years? Yes/No: Please Explain (No more than 2,000 Characters)

No.

The District has suffered from supply deficits typically starting in early May and continuing through the fall months, approximately from late-April to September for the past 3-4 years. During this time, Wells 1A and 1B and the Ridgeway Well have been unable to meet the water demand even with restrictions on outdoor water use. This deficit required the District to truck in additional water from Fredrick, Golden, and Genesee and set up an emergency treatment system last summer to provide an additional 500,000 gallons to meet the demand. While these emergency steps kept the water flowing to residents, both were expensive and unsustainable practice for long-term system operation. Leak testing and repairs have been implemented but supply deficits remain a major issue during summer and fall months.

Recently reported population of Idledale is 274 individuals (US Census Bureau, 2020) residing in 137 residential properties. Based on recent calculations of water consumption, average maximum monthly demand is 30,240 GPD, when no outdoor water restrictions are implemented. This figure equates to a per capita water demand of 120 GPCD. While the current population can be supplied with an average annual rate of approximately 15-21 gpm, all wells must be functioning at full output (with no available reserve capacity) using the current system configuration, while still needing to impose occasional outdoor water restrictions.

If the population were to increase by 1% for the next 20 years, the average maximum monthly demand would increase to 41,445 GPD, equivalent to 29 gpm or an additional 8-14 gpm of additional supply than is currently available. One of the project objectives is to increase firm supply capacity to reduce seasonal supply deficiencies. This will also provide the additional benefit of securing supply for future population growth.

5.2.6 Operational Controls (TMF: Technical-10)

Describe if the existing treatment process(es) has appropriate operational controls. (No more than 2,000 Characters)

Existing treatment processes have adequate operational controls for basic function and maintenance. Currently, well pumps are manually cycled to maintain well water levels and to prevent significant groundwater drawdown and to reduce pump cycling. As part of the

design process for these proposed improvements, additional process controls may be implemented to improve the consistency of flow and pressure for optimizing treatment performance and efficiency of filtration and chemical feed systems.

5.2.7 Residuals Management (TMF: Technical-9)

If the treatment process produces waste residuals, please discuss the water system's residuals management strategy. (No more than 2,000 Characters)

The current treatment process does not produce any waste residuals.

List documentation for all existing discharge permits and/or residuals for the water treatment plant including residuals for disposal or beneficial use (e.g., NPDES discharge permits, EPA UIC Permit, HMWMD radioactive materials license, HMWMD Solid Waste licenses). (No more than 2,000 Characters)

Include a copy of discharge permits and/or residual documentation as Attachment 14

Not Applicable

5.3 Distribution

5.3.1 Overall Distribution System Description (TMF: Technical-11 and -12)

Discuss the existing finished water distribution system including: gravity vs. pumped pressurization, facility age, material type, condition of materials, amount of AC pipe, number of pressure zones, pump stations, and storage tanks. (No more than 2,000 Characters)

The current drinking water distribution system consists entirely of pressurized pipelines that maintain five pressure zones. Three pressure reducing valves maintain pressure in the pressure zones and provide adequate pressure throughout the system. The Upper Treatment Building was constructed in the 1950's, with periodic updates and improvements for compliance purposes. The Forks Treatment Facility, that is currently being used for blending of water from the Ridgeway Well to reduce radionuclide concentrations, was constructed in the early 2000's. Installation of the distribution system was piece meal and dependent on development but the current layout was established in the 1960's, with additional laterals added as needed to supply development. The distribution system is composed of iron and PVC pipe and diameters range from 2 to 8 inches. System losses that have been identified recently are predominantly along service tap connections and the condition of distribution mains appear to be in fair condition. The system contains a single 250,000 gallon storage tank, constructed in 2010, at the top of the system that provides buffering capabilities for periods of high demand. A decommissioned storage tank exists near the Upper Treatment Building but is not currently being used for storage due to deteriorating structural condition.

Discuss the estimated distribution system losses (i.e., the percent of water lost in the distribution system and not delivered/billed to customers). (No more than 2,000 Characters)

The current configuration of the distribution system does not contain individual service meters and system losses are estimated through leak detection surveys. Supply to the system is currently monitored using flow meters on the three in-service wells and leak quantification is difficult to estimate. Part of this proposed project it to install a system of water meters to improve the Districts ability to quantify and respond to leaks and system losses.

A total of 33 isolation valves, 126 curb-stops, and 8 hydrants were tested for leaks in the summer of 2020. That represented all known curb-stops and all isolation valves that could accessed without requiring significant excavation and utility line conflicts. A total of five leaks were identified: two in hydrants and three in residential service lines. A conservative total of 11 GPM was estimated at the time as being lost through leaks in the system, which represents a significant percentage of the total raw water supply to the system. The average annual combined pumping rates from Wells 1A and 1B are 14.6 GPM. Water losses through leaks could then be calculated at 75% of the total water supply.

All the identified leaks have been addressed through the replacement of the leaking fire hydrants and coordination with homeowners to fix leaks on service lines. As of writing, there are no apparent major system losses or identified leaks that have not been addressed. It would be conservative to assume that existing system losses are approximately 15%, the average losses anticipated for a system of this size. As discussed above, an objective of this project is to better protect system supply by improving the response time to leaks and losses. This will be accomplished using a system of water meters install on individual service lines. It has also been recommended to perform a system wide leak testing survey once every 6 months to provide continuing feedback to the District to better manage water loss.

5.3.2 Pressure (TMF: Technical-13)

Discuss if the existing distribution system is designed to maintain a minimum pressure of 20 psi at all ground level points in the distribution system under all conditions of flow as required in the CDPHE Design Criteria for Potable Water Systems (Design Criteria). The Design Criteria also recommends a normal working pressure in the distribution system of approximately 60 psi, and not less than 35 psi. Discuss how the distribution system meets the required and recommended distribution system pressures. (No more than 2,000 Characters)

According to recent discussions with District operators, the system does not suffer from pressure deficiencies at any point in the distribution system. System pressure is sufficiently maintained due to the relatively high altitude of the pumping wells and storage tanks in relation to the service area. Idledale is a mountainous community with significant

topography, which aids in pressure retention. The service connections closest to the Upper Treatment Building, storage tanks, and well pumps, maintain an excess of 22 psi, which is the lowest pressure observed in the system. Remaining service pressures are maintained by three PRVs that are monitored regularly by District operators.

Include a map illustrating any locations where a minimum pressure of 20 psi cannot be provided under all conditions of flow as Attachment 15.

Not Applicable

5.3.3 Meters (TMF: Financial-4)

Discuss if the existing distribution system includes water meters. (No more than 2,000 Characters)

The current configuration of the District's distribution system provides for water quantity measurement coming from individual groundwater well pumps. Additionally, the District monitors water storage tank level to identify the total amount of water that is delivered to the distribution system. On the consumption side of the distribution system, only two individual residential water meters have been recently installed. No other service side metering currently exists within the District. This prevents the District from being able to monitor water consumption versus water production, providing an ongoing indication of system wide water loss. This situation also limits available information about trends in consumption.

Given how closely the District is forced to maintain the daily water balance in the system, it is essential to increase operational awareness by installing water meters on all service lines. This will promote more effective system operation, reduce system losses, and will provide sorely needed information about water demand within the District's system. Currently, only two domestic water meters has been installed at individual point-of-use locations within the distribution system. These installations came out of an awareness of leaking service lines that were negatively impacting the operation of the entire water system.

A significant component of the proposed project involves installing an automatic meter reading (AMR) water meter on each individual service line, a total of 143 water meters. Additionally, if funding permits, a parallel recommendation is to install flow meters in the three pressure relief valves (PRVs) that are planned to be refurbished. These water meters, which can also be connected to the AMR system, would provide additional regional data for demand in the different pressure zones of the distribution system. Individual service line water consumption could then be compared to the PRV water meters to provide a more comprehensive understanding of water consumption. This will greatly improve the District's leak detection and response capabilities, reducing annual system wide water loss.

6. Facility Planning Analysis

6.1 Planning Area Description

6.1.1 Project Area Map

Provide a map showing a minimum of a 3-mile radius around the project area that includes environmental features (lakes, streams, wetlands, floodplains). Map must include current and proposed service area, existing drinking water facilities (plants, major distribution lines, water sources, storage facilities), existing wastewater outfalls/permitted discharge points, and any new or affected sources with regard to the pertinent watershed. Include the map as Attachment 16.

A 3-mile radius map has been generated and included as Attachment 16.

6.1.2 Urban Growth Boundary

Is the project within or near an urban growth boundary? (Yes/No)

No

6.1.3 Local and Regional Issues

Were local and regional planning efforts considered? (Yes/No)

Yes

Please describe. (No more than 2,000 Characters)

Regional planning efforts were considered in evaluating a regional solution increasing water supply by joining the adjacent Genesee Water & Sanitation District. That evaluation showed that connecting to Genesee would cost the Idledale Water & Sanitation District approximately $840k more in initial capital expenditures. It also presented a 30% increase in the price per gallon of delivered water. For those basic reasons, the Genesee regional solution was dismissed.

The District represents the local planning body as related to water supply and potable water delivery. While no formal water supply plan has previously existed, it has been openly discussed that an additional well would need to be developed as system demand increases and/or existing wells fail to produce.

Were local and regional water quality and/or quantity efforts considered? (Yes/No) Please describe. (No more than 2,000 Characters)

Yes. The District has suffered from supply deficits typically starting in early May and continuing through the fall months, approximately from late-April to September for the past

3-4 years. During this time, Wells 1A and 1B and the Ridgeway Well have been unable to meet the water demand even with restrictions on outdoor water use. This deficit required the District to truck in additional water from Fredrick, Golden, and Genesee and set up an emergency treatment system last summer to provide an additional 500,000 gallons to meet the demand. While these emergency steps kept the water flowing to residents, both were expensive and unsustainable practice for long-term system operation. Leak testing and repairs have been implemented but supply deficits remain a major issue during summer and fall months.

Was consolidation with another water system / treatment facility considered? (Yes/No) If yes, describe the consolidation considerations. If no, please indicate why consolidation was not considered. (No more than 2,000 Characters)

Yes.

As an alternative to the recommended improvements, consolidation with the Genesee Water and Sanitation District was considered. Discussions occurred between the Idledale Water and Sanitation District and the Genesee Water and Sanitation District to assess a potential connection to increase supply to Idledale.

Genesee expressed the opinion that this water rights work and all associated costs should be the full responsibility of Idledale as Idledale would be the beneficiary and owner of the right, should it ultimately provide a solution to the matter. Associated costs to move through this process have been estimated for comparison purposes and total costs for the Genesee Connection alternative have been estimated at $2.23 M. Finally, Genesee would also plan to charge Idledale $18.00 per 1,000 gallons of metered flow as an ongoing direct service charge. With a future annual District-wide demand of approximately 8M gallons, this would add $144,000/year in additional District operations costs. There would also be over $140K in additional service charges levied every year vs. directly improving Idledale Water & Sanitation District infrastructure. This financial difference likely becomes too large for the District to afford and justify the long-term benefits. Also, this alternative requires the capital investment to occur more at once, with limited opportunity to pursue a stepped financial approach.

6.2 Population and Water Demand Projections (TMF: Technical-2)

For a 20-year planning period, forecast the population growth, projected increase in Equivalent Residential Taps (ERT), and projected drinking water demands.

Current ERT - As Calculated in the Prequalification Form: Provide value

274

Population and Demand Projections - The department generally accepts two methodologies for projecting water flows over the 20-year planning period. Other methodologies are acceptable with a clear explanation and all assumptions and parameters listed:

Method 1: Population based projections. Recommended for primarily residential systems and/or for systems without water meter data.

Select Method 1 due to high number of residential systems and no water meter data

Method 2: Equivalent Residential Taps (ERT) Analysis. Recommended for systems with a high multifamily, commercial, industrial, irrigation demands. Method 1 and 2 templates can be found at the end of this form. Attach the population projection as Attachment 17.

Please refer to the Table that includes these calculations, located at the end of this document

Discuss supporting data and reasons for projected future growth during the 20-year planning period. Note: Projects designed solely to serve future development or population growth are not eligible for State Revolving Fund financing. (No more than 2,000 Characters)

Data sources for population and water consumption increase within the service area include US Census data for the Town of Idledale, population increase rate from a report by CDM (2011) titled Upper Mountain Counties Aquifer Sustainability Project that included extensive discussions and data regarding population increases and water consumption rates for Jefferson, Gilpin, Clear Creek, and Park Counties, Idledale and Jefferson County land use and parcel data that provided estimates of potential service increase based on undeveloped parcels, and average and maximum water consumption data from a water balance assessment conducted in 2020.

These data sources, as well as the estimated population increase, show a reasonable increase in population and corresponding increase in water consumption for the System. While this project will provide adequate supply for the next 20 years, the project's primary objective is ensuring continuous firm capacity of the raw water supply for current and future customers. It is not focused on providing additional supply for future consumers. As it exists, the system does not currently supply sufficient water to existing customers due to decreasing recharge and lower groundwater tables than have historically been observed at the permitted well sites.

6.3 Source Water Planning

6.3.1 Overall Water Resource Management Description (TMF: Technical-2)

For a 20-year planning period, describe the system's water resource management plan. (No more than 2,000 Characters)

This project has been formulated to address decreasing available groundwater supply related to an extended ongoing seasonal drought condition. The District's informal Water Resource Management Plan is to meet the system demand with supply from existing well supply with the addition of new groundwater wells as actual supply and demand requires. In the recent past, climatological drought conditions have decreased the output of existing groundwater wells, resulting in supply deficits during dry summer and fall months. The District has imposed outdoor water restrictions during depressed groundwater conditions, to reduce system-wide consumption but the effect of these restrictions have not been enough to balance reduced seasonal supply deficits. The District has also increased the frequency of leak detection efforts to reduce system losses for supply conservation but again the deficits have still necessitated additional augmentation with outside water sources. In this situation, where well output is reduced due to lowered recharge, existing wells must be reconditioned or constructed new to provide additional supply.

Regionally, aquifer materials are generally hard rock fissure aquifers that are not as directly connected hydrologically, and regional drawdown is less of a concern than in other aquifer materials. Groundwater wells in these areas are susceptible to decreased recharge if or when rock fractures become impregnated with sediment or chemical precipitates. The District has performed well inspections to assess if operational conditions could be modified to improve supply, but the results of these improvements have not greatly reduced the supply deficit. Considering these conditions, new well construction becomes the most cost effective design alternative to confidently improve raw water supply.

6.3.2 Water Rights (TMF: Technical-3)

For the 20-year planning period, discuss how the system will be able to meet the projected population and increased industrial/commercial water demands. (No more than 2,000 Characters). Provide documentation supporting the system's water rights, if not provided in section 5.1.2 above, as Attachment 18.

The District holds adjudicated water rights for several sources as well as water rights to be used for augmentation. Held water rights include Ridgeway Well (5431-F, 12gpm), Ridgeway #3 (34385-F, 40 gpm), Well 1A (34384-F, 20gpm), Well 1B (34383-F, 10gpm), Sawmill Creek Spring (25gpm), Braun Spring (25gpm), West Gulch Spring (25gpm). Additional rights are held by the District on historic pipelines and surface water sources that required

augmentation to be used, including: Braun's Ditch Pipeline (0.70 cfs), Sawmill Creek Pipeline (0.95 cfs), West Gulch Pipeline (0.54 cfs), and the Devil's Gulch Pipeline (0.47 cfs). Those rights were augmented through the purchase of shares from the Mountain Mutual Reservoir Company, among others. The District will be perusing modifications to their augmentation plan to accommodate the drilling of a new supply well to cover any additional withdrawals not covered under their existing water rights.

Currently held water rights and augmentation covers the District for approximately 157 gpm of surface or groundwater supply. Current total groundwater usage from the 3 existing wells has been in the range of 10-25 gpm, with an estimated peak usage of approximately 30 gpm after the Ridgeway Well underwent improvements in the summer of 2021. With current usage, the District holds adequate water rights, with additional available rights to implement water supply improvements by drilling a new well with an anticipated yield of 5-15 gpm.

6.3.3 Source Water Supply Capacity (TMF: Technical-4)

For the 20-year planning period, discuss if the source water supply infrastructure is capable of delivering adequate source water to meet projected needs. (No more than 2,000 Characters)

The District has suffered from supply deficits typically starting in early May and continuing through the fall months, approximately from late-April to September for the past 3-4 years. During this time, Wells 1A and 1B and the Ridgeway Well have been unable to meet the water demand even with restrictions on outdoor water use. This deficit required the District to truck in additional water from Fredrick, Golden, and Genesee and set up an emergency treatment system last summer to provide an additional 500,000 gallons to meet the demand. While these emergency steps kept the water flowing to residents, both were expensive and unsustainable practice for long-term system operation. Leak testing and repairs have been implemented but water supply deficits remain a major issue during summer and fall months.

Recently reported population of Idledale is 252 individuals (US Census Bureau, 2010) residing in 137 residential properties. Based on recent calculations of water consumption, average maximum monthly demand is 30,240 GPD, when no outdoor water restrictions are implemented. This figure equates to a per capita water demand of 120 GPCD. The current population can be adequately supplied with an average annual rate of approximately 15-21 gpm, using the current system configuration, occasional outdoor water restrictions, and existing storage tanks. If the population were to increase by 1% for the next 20 years, the average maximum monthly demand would increase to 41,445 GPD, equivalent to 29 gpm or an additional 8-14 gpm of additional supply than is currently available. The purpose of this project is increase supply to reduce seasonal supply deficiencies but will have the additional benefit of securing supply for modest future population growth.

7. Assessment of Alternatives

7.1 Alternatives

For each alternative, minimum of three, please provide:

- *A description of the alternative addressing the issues identified in Section 4: Project Purpose and Need. (TMF: Technical-7) (2000 character limit).*
- *Capital cost estimates and annual operation and maintenance costs (2000 character limit).*
- *Advantages and Disadvantages of each alternative (2000 character limit).*
- *Provide discussions of additional alternatives as Attachment 19.*

GWUDI Compliance and Other Treatment Improvements

- Description:

Based on CDPHE designation, Well Nos. 1A and 1B are under the influence of surface waters and as such require the application of GWUDI compliant filtration. Just recently, the District received notification from the Enforcement Division of CDPHE that the previous deadline to install GWUDI filtration of August 13, 2021, had passed. Following that notification, a conference call was conducted between the District and CDPHE Compliance Section on September 221, 2021. During that call CDPHE was appraised of the multiple emergencies faced by the District during the last year. Those conditions prevented the District from meeting the compliance deadline, however the District did complete the Water System Engineering Study. This allows the District to move forward with applying for state and federal grants and loans to build the required GWUDI compliance improvements and others as defined herein. Anticipated improvements include a Harmsco Pressure Filter with the GWUDI compliant filter membrane, sized to accommodate Well Nos. 1A and 1B and additional flow from the new well if required.

With the addition of the Ridgeway Well to the Upper Treatment Building, with its associated lower water quality, it is further recommended to provide pressurized activated media filtration for Ridgeway to reduce high background levels of iron and manganese. While these species are non-regulated secondary MCLs, it is recommended to treat the Ridgeway Well and the new well if required prior to blending to enhance the overall potable system water quality. All treatment facilities for all three existing and one new well are planned to be housed in an expanded Upper Treatment Building, centrally located for efficient operations, maintenance and management.

- Cost Estimates:

  Construction includes existing building expansion and rehabilitation, installation of new GWUDI treatment for Well Nos. 1A & 1B, pressure filtration for Ridgeway Well with the ability to add treatment capacity for the new well if needed, modifications to the well flow control system, an EPA Class V discharge injection well and instrumentation & control additions.

  Modifications to the Upper Treatment Building, including improving monitoring and treatment equipment to manage the additional water from the new well are estimated at $205,500.

- Pros/Cons:

  Compliance with the GWUDI treatment requirement is a mandated requirement and has the highest individual project priority. The recommended approach to treatment is low maintenance, well proven and cost effective. Improvements at the Upper Treatment Building are warranted to improve occupational and operational safety and these recommendations continue to follow the existing operational philosophy employed by the District and represents the simplest and most cost-effective option.

Replace Broken Infrastructure

- Description:

  The Idledale Water and Sanitation District water distribution system was assessed for condition, functionality, and flow. Only four of nine existing fire hydrants were found to be in acceptable working condition and provide low but adequate flow rates for fire protection. Five of nine hydrants were found to have substantial leaks and/or have hydrant valves that are either not functioning or inadequately functioning for use in fire suppression activities. During the assessment, it was also determined that a total of six existing isolation gate valves were broken, would not close, or were not properly functioning. Operating isolation valves are key to properly maintaining a distribution system and all six valves are recommended to be replaced. The recommendation also includes replacing all five non-functioning hydrants and bringing them up to NFPA and Foothills Fire Protection District standards. In addition, it is recommended to implement a bi-annual operations and maintenance program oriented to test and exercise all isolation valves and fire hydrants in the distribution system.

- Cost Estimates:

  Cost estimates for the replacement of the identified nonfunctioning hydrants and valves including installation is $112,400.

New Well Development

- Description:

  Additional water supply is recommended to be provided to the District by constructing a new groundwater extraction well. A new well could be placed to extract water from a different zone in the groundwater table, providing additional supply and increasing system-wide reliability and redundancy.

  Three potential locations for the new well have been identified using aquifer maps, locations of municipal and residential groundwater wells and production rates, topography, and parcel ownership maps. Each of these locations are near the Upper Treatment Building and storage tank, which provides close access to existing system piping and tie-in locations. Additional hydrologic analysis and borehole assessments would be required to determine which of these potential well locations would be the most cost-effective location for new well construction.

  All these sites are located within the Piney Creek Alluvium, which is the same geologic layer that all existing District wells are currently located (Scott, 1972). Identified well locations are near the Junction Ranch Fault, which likely contains zones of fractured bedrock that could promote well production and funnel water to well capture zones. The identified areas are all within a zone of known water-bearing geologic formations, which reduces production risks by extracting within a proven formation. All feasible well locations are substantially upgradient from the historic Grapevine Uranium mine, reducing potential radionuclide contamination.

  All three potential well locations have been located relatively close to the Upper Treatment Building and have naturally occurring favorable access for construction and maintenance access. Of these three sites, only one is located on land currently owned by the District. This eastern hillside site is also physically closest and adjacent to the Upper Treatment Building. The reduced legal and construction costs lead to the recommendation and selection of the eastern hillside site for test boring and development. The new well would also require a new well pump, associated piping, electrical power, and level controls to connect the new well to the Upper Treatment Building. Required flow meters, and potential treatment and/or filtration, piping and system modifications would also occur at the centralized Upper Treatment Building to connect the treated effluent to the storage tank, and associated valves and sample ports.

- Cost Estimates:

  Cost estimates for a new hard rock water well include costs for well drilling and installation, costs to connect the well to the Upper Treatment Building, and costs to modify the Upper Treatment Building to accept an additional water source.

  Well Drilling, completion, and associated electrical connections are estimated at $314,500. That is assuming a 6-inch borehole, 700-feet deep well, with 2-inch connection line to the treatment building, and isolation valves, electrical power service, and complete electrical outfitting of the well and well pump controls.

- Pros/Cons:

  The recommended approach continues to follow the existing operational philosophy employed by the District and represents the simplest and most cost-effective option. It allows for the continued operation of the existing system while minimizing potential secondary impacts. It also further consolidates the treatment, blending and monitoring of all wells at one location for efficient operation and maintenance.

  This approach also represents the most efficient approach to achieving the necessary firm capacity of the water supply system (actual system capacity with the single largest well out of service).

  However, there are risks associated with continuing to construct new wells that the District should consider. These risks include uncertainty in production quality and quantity, and groundwater recharge potential. Even with extensive investigation into subsurface characteristics, it is impossible to guarantee that a well will consistently produce the amount of water the system requires and there is the possibility a newly constructed well does not end up justifying its development costs.

  An appropriate strategy to mitigate these risks is to perform a hydrogeological investigation of the area to assess long-term performance of the new well, determine if the pumping rates are adequate for the system's needs, and determine the best available location for construction. Even with an appropriate feasibility study, increased uncertainty exists with well construction in the mountainous Idledale areas. Mountainous regions experience significantly increased risks for slope erosion and movement, recharge rate uncertainty, and fluctuating supply rates through hard-rock fractures.

Ridgeway Transmission Line

- Description:

  The Ridgeway Well is located near the Forks Treatment/Blending Building near the center of the distribution system. This well does not have a connection to the Upper Treatment Building or storage tank and instead is treated at the Forks Treatment Building before discharging to the distribution system. As currently configured, this approach only permits about 30% utilization of the well's hydraulic capacity. This project alternative includes installing a new transmission line to connect the Ridgeway Well to the Upper Treatment Building. This alternative would double the current hydraulic utilization of the Ridgeway Well, consolidate system treatment into a single building, and significantly improve the District's ability to respond to peak water demand conditions.

  Various alternatives were evaluated for a pipeline including constructing a new pipeline by conventional methods, construction of a pipeline utilizing horizontal directional drilling methods, and constructing a new pipeline by slip lining a new smaller pipe within an existing pipeline that has been permanently taken out of service. According to operator knowledge, an abandoned water line runs between the two treatment buildings. Following confirmation, this presents the most cost-effective means of constructing a new 2" transmission main. By utilizing the existing pipe, surface construction disturbance is significantly reduced also reducing construction costs. This pipeline is already owned and protected by existing District utility easements, eliminating any needs for additional property acquisitions or easements.

  The existing water line is approximately 2,530-feet long. An additional 900-feet of water line would be required to connect the Ridgeway Well with the existing waterline conduit, for a total piping length of 3,430-linear feet. This 2" waterline would connect to the Ridgeway Well and would add approximately 100 ft of additional head to the pump hydraulic requirements. This will also increase the pump motor horsepower requirements and necessitate a new replacement pump, motor, and variable frequency drive. No additional electrical improvements are anticipated.

- Cost Estimates:

  The cost estimate for installing a new transmission line, connections, valves and associated electrical componentry comes to $376,600. This includes a new well pump, new variable frequency drive and control updates at the Forks Treatment Building, 2,530 LF of 2" pipe installed using pipe-bursting or sliplining methods through the abandoned water line, 900 LF of 2" pipe installed using conventional trenching techniques, isolation valves, and 2" altitude relief valve.

- Pros/Cons:

  Improving the Ridgeway Well hydraulic delivery represents the single most cost-effective means of increasing available water supply capacity for the District. This maximizes the use and impact of existing infrastructure, consolidates required treatment and blending into a single treatment building, allows Ridgeway well water to be stored for enhanced fire protection and increased on-demand total raw supply. The transmission line would also contribute to overall system redundancy to be used during periods of reduced output from Wells 1A and 1B.

  Potential downsides to this alternative involve additional treatment requirements and waste residuals management. Water from the Ridgeway Well contains secondary MCL exceedances of uranium, iron, and manganese, which are currently reduced to drinking water standards through blending with treated water from the Upper Treatment Building. This blending protocol would continue in the new configuration, creating a further need to develop a new well to allow full hydraulic output of Ridgeway well.

Genesee Connection

- Description:

  In evaluating different alternatives to provide year-round reliable water supply to its customer base, it is essential to assess the opportunity to regionalize or become part of an adjacent, larger system rather than provide the capital required to significantly improve the existing water system.

  The Genesee Water and Sanitation District is contiguous to and immediately west of Idledale's service area. They have been contacted by the District to discuss and determine the viability of Idledale becoming a service customer of the Genesee District. Through numerous discussions, it has been determined that the best technical solution includes the construction of a 1.5-inch master service meter station located in Genesee, just adjacent to 2136 Montane Drive East where an existing 8" watermain would be tapped. The Master Meter installation would also require approximately 4,025 lineal feet of 2" potable transmission main, crossing private property to ultimately connect to the Upper Treatment Building for delivery to the 250,000-gallon storage tank. Construction of the pipeline is anticipated to incorporate Horizontal Directional Drilling (HDD) to reduce construction costs and minimize surface disturbance.

- Cost Estimates:

  Genesee expressed the opinion that this water rights work and all associated costs should be the full responsibility of Idledale as Idledale would be the beneficiary and owner of the right,

should it ultimately provide a solution to the matter. Associated costs to move through this process have been estimated at $2.23 M. Finally, Genesee would also plan to charge Idledale $18.00 per 1,000 gallons of metered flow as an ongoing direct service charge. With a future annual District-wide demand of approximately 8M gallons, this adds $144,000/year in additional District operations costs.

- Pros/Cons:

  The Genesee Connection concept has significant benefits when compared to the alternative to improve and expand Idledale's groundwater well system infrastructure. By connecting to Genesee, the District would be connecting to a source that comes from surface water rights of supply which are inherently more reliable over the life of the District. There would be no further concerns about existing well facilities operation & maintenance or seasonal problems with groundwater recharge. The District functioning and associated day to day responsibilities would become far simpler, focusing on the continued operation and maintenance of the water storage tank and distribution system.

  The Genesee Water & Sanitation District has placed additional financial constraints on a master meter service connection require Idledale to include successfully acquiring and purchasing appropriate surface water rights to support the requested service, estimated more than $50,000. In addition, the construction cost for connection to Genesee is approximately $840,000 more than the recommended alternative. Finally, Genesee would charge Idledale approximately $144,000 per year in user fees in addition to the user fees Idledale would still require to charge supporting O & M of the distribution system.

Water Meter System Installation

- Description:

  The current configuration of the District's distribution system only provides for water quantity measurement coming from groundwater well pumping, and two new residential service locations. No other service customers have service meters installed. This prevents the District from monitoring water consumption and potential system water loss. This situation also limits available information about trends in consumption. Given how dramatically close the District is forced to maintain the daily water balance in the system, it is essential to increase operational awareness by installing water meters on all service lines. This will promote more effective system operation, reduce system losses, and will provide sorely needed information about water demand within the District's system.

  If possible, each water meter installation will occur on the service line near the property line service corporation stop. The water meters will then record the water delivered along the

service line, prior to any withdrawals. Complete meter pit assemblies including yokes or meter setters, and ball valves to isolate the water meter from the service line are anticipated. Water meter reading is proposed to use automatic meter reading (AMR) systems. AMR systems require specific water meters that are connected to an electronic transmission device, which transmits water meter data to a mobile collection device over radio frequency. This would require District personnel to drive or walk near the water meter locations and get within range of the water meter transmitter. Once within range, a mobile collection device will record the water meter reading into a digital database.

Approximately 137 service lines would be eligible for water meter installation, which would likely be rolled up in a phased approach dependent on funding and installation scheduling. Additional water meters would be installed around PRV's for broader system flow monitoring, increasing the total water meters to be installed to 143.

- Cost Estimates:

  Total costs for installation of 143 water meters in pits at the individual property line is estimated at $804,000, which includes the meters with AMR connection, data collection equipment and software, meter pit installation, surface restoration, one-year service contract with data storage, contractor overhead and engineering.

- Pros/Cons:

  Benefits of water meter installation include connecting system O&M and capital improvements costs to actual water usage, which will increase the revenue stream for the District. More importantly, the use of water meters will provide additional data to assess and address system losses. Currently, leak testing is the predominant method of identifying system losses and occurs every year to every other year. With water meters installed on individual service lines, losses on tap lines and laterals will be able to be identified based on the frequency of meter monitoring, likely once a month. This will greatly improve the response time to leaks and improve the firm water supply of the system.

  The perceived costs associated with a use-based fee structure may be viewed negatively by the customer base. Use-based fee structures are common in nearby communities. Public hearings and stakeholder meetings will serve to inform the service area of their necessity and how fees will be structured. Additionally, public hearings will include a discussion regarding the water savings associated with meter installation, which should reduce the dependence on water trucking and augmentation during periods of decreased well production.

8. Selected Alternative

8.1 Justification of Selected Alternative (TMF: Technical-6)

Please demonstrate why the selected alternative best meets system needs based on both monetary and non-monetary considerations. For treatment facility projects, if the EPA-BAT technology is not selected then the report must include a treatment rational. (No more than 2,000 Characters)

The selected project alternative includes a combination of the alternatives presented in Section 7, with the exception of the Genesee Water Connection. Selected alternatives include in order of priority:

1. Upper Treatment Building Rehabilitation (including GWUDI treatment)
2. Ridgeway Well Hydraulic Delivery Improvements
3. New Hardrock Water Well
4. Replace Broken Infrastructure
5. Individual Water Service Meter Installations

Item Nos. 1 – 3 are intended to be completed Pipeline new well construction, installation of a new transmission line between the Ridgeway Well and the Upper Treatment Building and installing a system of water meters. Supply deficits, driven by seasonally low groundwater recharge have reduced supply available to the District. To reduce the risk associated with a single supply improvement, a combination approach is being considered to ensure supply deficits are reduced for the foreseeable future.

The transmission line between the Ridgeway Well and Upper treatment building will allow the District to fully utilize that well, which currently does not connect to the storage tank. That improvement will improve supply significantly but mainly offers improved operational capabilities to operators. The new well construction will improve supply but could experience the same reduced output that Wells 1A and 1B are experiencing. By using both the new well and transmission line to connect the Ridgeway Well, raw water supply will become more robust and less susceptible to seasonal recharge fluctuations. Additionally, a system of water meters will provide specific insight to more rapidly detecting and resolving system leaks and losses.

8.2 Technical Description and Design Parameters (TMF: Technical-5)

For the selected alternative, please describe all proposed project components and assumed design parameters. (No more than 2,000 Characters)

The condition of the Ridgeway Well was assessed by Colorado Water Well in August 2020 to determine pumping rates and if any casing improvements were required. This assessment determined that the well can produce approximately 9.5 gpm but the current piping configuration will only permit 4-5 gpm to enter into the distribution system. Since there is no current connection to the storage tank, the additional pumping capacity cannot be utilized. By installing a transmission line between the well and the Upper Treatment Building, an additional 5-6 gpm of supply can be added to the system.

The new well construction would involve a 700-feet well drilling depth, which is comparable to the depth of Well 1A and would provide greater operational control to the District during periods of reduced groundwater recharge. An assumed additional 1,000 LF of transmission main to connect the new well to the Upper Treatment Building will be required, along with a well pump and associated piping, controls, and monitoring equipment. Based on input from Colorado Water Well and the average production of Wells 1A and 1B, the anticipated pumping rate is between 5-20 gpm, adding to the supply of the system. With the addition of a new groundwater well, and the transmission line to connect the Ridgeway Well, a total capacity of 20-35 gpm in continuous well water supply is anticipated. This increase would sufficiently cover the current supply deficits experienced during decreased periods of recharge. All treatment and disinfection facilities proposed for the Upper Treatment Building will be sized to accommodate that anticipated flow range.

Based on the existing configuration of Idledale's distribution system, cost considerations, and maintenance requirements, this project will include installing an AMR water meter system at outdoor locations close to the water main and residential property lines. It is estimated that a total of 143 water meters will be installed, representing meters installed along all active service lines as well as at existing PRV locations to assess regional consumption within different pressure zones.

8.3 Proposed Process Flow Diagram

Include a proposed treatment facility process flow diagram or map of the distribution system, if applicable as Attachment 20.

A process flow diagram of the proposed improvements and the configuration of the new distribution system is provided as Attachment 20.

8.4 Appropriateness of Treatment Technologies (TMF: Technical-6)

Discuss appropriateness of the proposed treatment process(es) to meet Regulation 11 considering anticipated source water quality and potential sources of contamination. (No more than 2,000 Characters)

Due to the proposed locations of the new groundwater well, which would be in approximate vicinity to Wells 1A and 1B, it is likely that it will be classified as GWUDI and require GWUDI compliant treatment. Wells 1A and 1B also currently require GWUDI treatment and as part of this project, all these sources will be treated to Regulation 11 standards in the Upper Treatment Building. Water from the Ridgeway Well contains secondary MCL exceedances of uranium, iron, and manganese, which are currently reduced to drinking water standards through blending with treated water from the Upper Treatment Building. It is recommended to remove the iron and manganese from the Ridgeway Well to improve system water quality. This will involve a pressure media filtration unit, such as a greensand filter, that has the capabilities to remove iron and manganese. The water quality of the proposed well will be unknown until additional borehole studies are undertaken. The use of a media filtration unit could also apply to the new well if deemed necessary during the design phase.

8.5 Environmental Impacts

Describe direct and indirect impacts on floodplains, wetlands, wildlife habitat, historical and archaeological properties, etc., including any projected permits and certifications. (No more than 2,000 Characters)

There are no measurable environmental impacts anticipated with the implementation of the proposed project. All work will be conducted within the public right-of-way, along existing utility corridors with pre-existing utility easements, and within District owned property, which is not in known conflict with existing floodplains, wetlands, significant wildlife habitat, or areas of historic or cultural interest. The only disturbance of previously native land that is anticipated is that required to construct a 12-foot wide and 30 ft long access drive crossing lightly grassed hillside that is required to access the proposed well drilling site. Efforts will be made in coordinating with contractors to minimize surface disturbances during construction. Post-construction surface impacts will be limited to a larger Upper treatment Building floor plan, a new well access pad, new water meter access lids, and isolation valve box lid replacements.

8.6 Land Requirements

Identify all necessary sites and easements, permits and certifications, and specify if the properties are currently owned, to be acquired, or leased by the applicant. (No more than 2,000 Characters)

An improvements and boundary survey will be conducted to confirm ownership of the identified parcel of land for access and siting the new well, which is the only new land that would be required to implement this project. A search of parcel ownership for this area of Jefferson County showed multiple small parcels of land owned by the Idledale Water and Sanitation District, in a disconnected grid-like pattern. Ideally, the placement of the new well will occur within one of these District-owned land parcels but a survey will accurately determine property boundaries and distances from the Upper Treatment Building. If land procurement is deemed necessary, the District will pursue land-swap opportunities with adjacent landowners to reduce the costs associated with land procurement.

8.7 Construction Requirements

Discuss construction concerns such as subsurface rock, high water table, limited access, or other conditions that may affect cost of construction or operation of a facility. (No more than 2,000 Characters)

Construction requirements to implement this project will include hard rock well drilling, which is commercially available for groundwater well drilling in this area. Hardrock well drilling does increase construction costs but is unavoidable in the Districts service area due to shallow underlying bedrock. All existing groundwater wells in the area are considered hard rock fissure wells. Other construction methods will include sliplining or pipe-bursting for the Ridgeway Well transmission line and traditional trenching and pipe installation. Access to construction areas will not be a construction issue due to most of the work occurring in the public right-of-way and existing utility corridors.

8.8 Operational Aspects

Discuss the operator staffing requirements, operator certification level requirements (including distribution), the expected basic operating configuration and process control complexities, and the operational controls and equipment that allows operational personnel to respond to routine and unanticipated treatment challenges, such as flow rate, chemical feed dosing, and process monitoring. (No more than 2,000 Characters)

The installation of a system of water meters will require additional training and periodic operation and maintenance of the meters by District operations staff. Additionally, a District database and data collection procedures will need to be developed to collect and interpret the new water usage data. Training is typically offered by the suppliers of water meter systems to cover the technical bases with operators.

This project includes new process controls associated with the new well pump and VFD, transmission line connection, GWUDI filtration units, and media/greensand filter for iron and manganese reduction. These new controls and treatment units are currently covered under

the certification level of the ORC's license. The operators will be involved in the construction and installation of the new equipment, and training will be provided to ensure operators have confidence in managing daily operational tasks. Additionally, only sodium hypochlorite continues to be the only chemical addition planned that would require no change in certification and the flow increases will not push certification requirements to a higher level.

Overall, the 25% increase in number of operating wells and the addition of two new treatment processes, combined with a new system of residential water service meters may require the District to re-evaluate the need for additional operations support.

8.9 Costs (TMF: Financial-2 and -3)

Summarize the capital costs associated with the selected alternative. The 20 year cash flow projection included in Attachment 7 must reflect the capital and operation and maintenance costs associated with the selected alternative. (No more than 2,000 Characters)

Please include an estimate of the projected increase in and total average monthly user charges. Does the user charge system allow for billing, collection, and enforcement? (No more than 2,000 Characters)

After the water meter system is installed, user charges will switch to use based system with base monthly charge with additional consumption charges based on use. Costumers will continue to be charged through the property-tax mill levy system in order for the District to repay an existing loan for storage tank improvements.

8.10 Environmental Checklist

Include the Environmental Checklist for the Selected Alternative as Attachment 22.

The Environmental Checklist is included as Attachment 22.

8.11 Project Implementation

8.11.1 Proposed Schedule

Schedule Item	***Schedule Date***
Loan Application	*2/28/2022*
Design Plans (60-day Review Period)	*10/18/2022*
Advertisement for Bids	*1/10/2023*
Award Contracts	*2/21/2023*
Start Construction	*7/10/2023*
Complete Construction	*11/18/2024*

8.11.2 Public Meeting

Provide documentation of a public meeting held or describe when and where the meeting will be held. The meeting notice must be published a minimum of one time, 30 calendar days prior to date of meeting. Provide the public notice, proof of publication, sign in sheet, and agenda as Attachment 23 or provide to your project manager in the Grants and Loans Unit after the meeting has taken place.

A Public Meeting is anticipated to be scheduled following feedback from the Project Needs Assessment and Funding application process. Documentation of the Public Hearing will be provided to the Grants and Loans Unit project manager after the meeting takes place.

9. Projecting Water Flow Method 1

9.1 Information needed:

Current System Population (# people)

274

Current Service Area Population (if providing water to neighboring community)

Same, 274

Population Growth Rates (% increase per year)

1%

Average Daily per Capita Flow Rate (GPD)

85.6

Maximum Daily per Capita Flow Rate (GPD)

135

Peak hourly flow multiplier (GPH)

1.5

The values above were used to calculate the values required in one of the final forms of the PNA, whose fields are shown below.

Year	System Population	Service Area Population (if different)	Average Daily Flow (GPCD)	Maximum Daily Flow (GPCD)	Peak Hour Flow (GPH)
+0	274		23454	36990	2312
+5	288		24653	38880	2430
+10	303		25937	40905	2557
+15	319		27306	43065	2692
+20	336		28762	45360	2835

Attachment 1
Signed PE Seal


COLORADO REGISTERED
ROBERT A. ORBAN
24385
2/11/22
PROFESSIONAL ENGINEER

Attachment 2
Organizational Chart

3821 Union Ct.
Wheat Ridge, CO 80033
(303) 881-1337

Orsatti Water Consultants

Memorandum

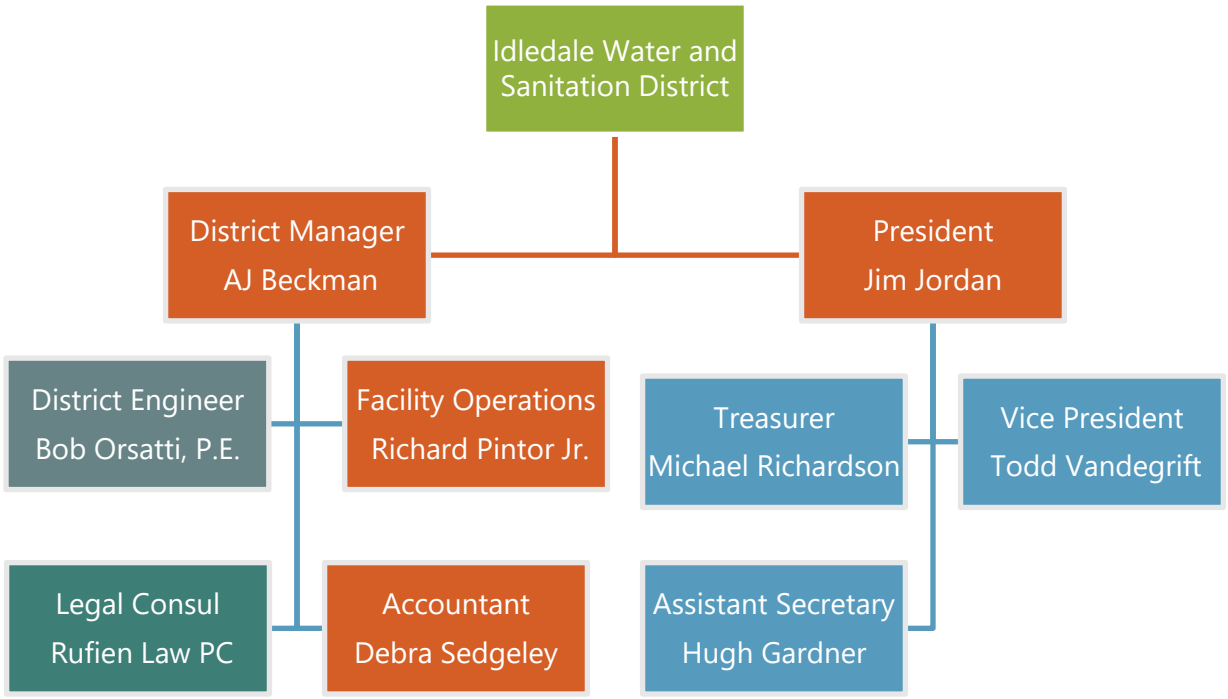
February 8, 2022

To: CDPHE, Grants and Loans

From: Bob Orsatti, Orsatti Water Consultants

cc:

Re: Idledale PNA: Attachment 2 - Organizational Chart



Attachment 3
Monitoring Plan

Public Water System Monitoring Plan

System Name	**IDLEDALE WSD**
PWSID (Assigned by Department)	**CO0130055**
County	**JEFFERSON**
School or Daycare	**No**
Describe Changes	**sample id**

Submittal to the Department
Submit Online (**Preferred**): wqcdcompliance.com/login
Fax: 303-758-1398
WQCD – B2 – Drinking Water CAS
4300 Cherry Creek Drive South
Denver, CO 80246-1530

Revisions
Water systems are required to submit any changes to the Department within thirty (30) calendar days following the effective date of the change. **If submitting revisions please only submit the individual section(s) that changed.**

Monitoring Schedules
All routine monitoring information, facilities and sample points (with state assigned IDs), system classification, and system source classification is available at wqcdcompliance.com/schedules. Schedules are updated on a weekly basis and should be checked regularly for any changes.

Immediately call **303-692-3308** (or **1-877-518-5608** if after-hours) for:

1. Positive coliform or Positive *E. coli*.
2. Nitrate greater than or equal to 10.0 mg/L.
3. Nitrite greater than or equal to 1.0 mg/L.
4. Surface water high turbidity or inadequate disinfection.
5. Chlorine dioxide greater than or equal to 0.8 mg/L.
6. Chlorite greater than or equal to 1.0 mg/L.

Contact Information

Completed by: **Richard** Signature: Richard Pintor_____

Certification of Accuracy: I hereby certify that the information is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

System Physical Address (Not Mailing)
Address: **{2144 S Grapevine & 2595 SE Grapevine}**
City: **{Idledale}** State: **{CO.}** Zip: **{80453}**
System Phone: **303-697-4319** **System** Email: **MIKE@IDLEDALEWSD.ORG &**

AJ@PUBLICALLIANCELLC.COM

Administrative Contact (AC) Name: AJ BECKMAN

(The primary contact person for all Department mail or other communications regarding drinking water compliance)
Mailing Address: **PO BOX 52**
City: **IDLEDALE** State: **CO** Zip: **80453**
Phone: **303-233-2182; (BUS) 303-697-4319** E-mail: **AJ@PUBLICALLIANCELLC.COM**

MIKE@IDLEDALEWSD.ORG;

**** If the Administrative Contact is also the Distribution or Treatment Operator and is not the owner or legal representative of the water system (e.g. contract operator), a signed delegation form must be submitted. (Form can be downloaded at: wqcdcompliance.com/forms) ****

Legally Responsible Water System Owner Name: AJ BECKMAN

(An individual, corporation, partnership, association, state or political subdivision thereof, municipality, or other legal entity)
Mailing Address: **{PO BOX 52}**
City: **{iDLEDALE}** State: **{CO}** Zip: **{80453}**
Phone: **303-233-2182; (BUS) 303-697-4319** Email: **AJ@publicalliancellc.com**

Emergency Contact Name: {Richard Pintor jr.}

(Someone the Department can contact in an emergency if the administrative contact is unavailable)
Phone: **{303-521-0910}** Email: **{rjpintor@live.com}**

Distribution System (DS) Operator Name: RICHARD PINTOR JR

(A certified operator designated by the owner to have ultimate responsibility for decisions regarding operational activities)
Operator ID#: **11064** (**not the certificate number**)
Phone: **303-521-0910** Email: **RJPINTOR@LIVE.COM**
DS Operator Signature: _____

Treatment Operator Name: RICHARD PINTOR JR **Same as DS?** Yes/No

(A certified operator designated by the owner to have ultimate responsibility for decisions regarding operational activities)
Operator ID#: **11064** (**not the certificate number**)
Phone: **303-521-0910** Email: **RJPINTOR@LIVE.COM**
Treatment Operator Signature: _____

Population Types and Seasons

Completed by: **Richard** Signature:Richard Pintor_____

Certification of Accuracy: I hereby certify that the information is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Service Connections provide water through a pipe or constructed conveyance for human consumption which includes drinking, showering, hand-washing, or cooking. Examples of service connections: single family homes, a metered multi-family dwelling unit, a business building, a mobile home trailer, or camp spigot.

Total Number of Service Connections (Residential and Commercial): 137

Resident Population is the number of people who live there.

Resident Population: 350

Non-Transient Population is the number of same people who have regular opportunity to consume the water for six months or more per calendar year, but do not reside there. These are usually students or employees. Regular opportunity is defined as four or more hours per day, for four or more days per week, for six months or more per year.

Non-Transient Population: 0 Season **{BegMonthNt}** (month) to **{EndMonthNt}** (month)

Transient Population is the daily average number of people who have an opportunity to consume the water, but are not residents or non-transients. These are customers, visitors, or seasonal employees

If your transient population varies by season you may specify multiple seasonal populations, otherwise enter January and December for the months.

Average Transients per day in the busiest month is **0** - Busy season **{BegMonth1}** (month) **to {EndMonth1}** (month)

Average Transients per day in the busiest month is **0** - Other season **{BegMonth2}** (month) **to {EndMonth2}** (month)

If you need assistance, please call (303) 692-3556 or visit wqcdcompliance.com.

Definitions of the terms used in this form may be found in 5 CCR 1002-11 (Regulation 11) available at wqcdcompliance.com.

Water haulers please follow the instructions in the operational handbook available at wqcdcompliance.com/forms.

Water Sources Definitions

Water Types

Groundwater (GW) – Any water under the surface of the ground being neither "surface water" nor "groundwater under the direct influence of surface water."

Surface water (SW) – Any water source that is open to the atmosphere and subject to surface runoff.

Groundwater under the direct influence of surface water (GWUDI or GU) – Any water beneath the surface of the ground with significant occurrence of insects or other macro-organisms, algae or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*; or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity or pH that closely correlate to climatological or surface water conditions.

Purchased water (GWP, SWP or GUP) – Water that you receive (whether or not you purchase it) from another water system or water hauler.

Integration agreement – An agreement between two or more public water systems, one of which is a wholesale/supply system, whose distribution systems are physically connected. The systems agree to operate using a common set of standards that the wholesale system establishes for the purpose of maintaining and protecting drinking water quality. Integrated systems must submit their agreement to the Department for approval.

Availability

Permanent (P) – A primary water facility.

Emergency (E) – A water facility that is used only as the result of extreme circumstances, and is otherwise kept offline. This type of facility is most likely never used. Nitrate and total coliform samples would need to be obtained within 2 days after start-up and the **Department must be notified of start-up within 24-hours**.

Interim (I) – A water facility that is either used as a result of high water demand or out of necessity to maintain water rights. The facility may be used once every few weeks or months or once every few years. Routine Sampling will be required at the Entry Point to the Distribution System.

Seasonal (S) – A water facility that is typically used every year to aid a system in meeting high water demands. While a water system may not know when it will need a seasonal source, it is most often used every year. These also may be referred to as peaking facilities. Routine sampling will be required at the Entry Point to the Distribution System.

Water Source Details

Completed by: **Richard** Signature:Richard Pintor_____

Groundwater Sources					
Facility ID (Assigned by Department)	Name	Availability (P, E, I, or S)	If seasonal, include months anticipated to be in operation	DNR Permit # - Aquifer Name	Well Depth at Completion
003	WELL NO 3 RIDGEWAY	I		- Precambrian/ Voc	400

Ground Water Under the Direct Influence of Surface Water Sources (GWUDI)					
Facility ID (Assigned by Dept)	Name	Availability (P, E, I, or S)	If seasonal, include months anticipated to be in operation	DNR Permit # - Aquifer Name	Well Depth at Completion
001	WELL NO 1A	P		- Precambrian/ Voc	702
004	WELL NO 1 B	P		- Precambrian/ Voc	275

Surface Water Sources			
Facility ID (Assigned by Dept)	Name	Availability (P, E, I, or S)	If seasonal, include months anticipated to be in operation
006	INF GAL NO 1 RIEFENBERG GULCH	E	

Purchased Water Sources							
Facility ID (Assigned by Dept)	PWSID - Name of Supplying Water System	Availability (P, E, I, or S)	If seasonal, include months anticipated to be in use	Type (GW, SW or GWUDI)	Connection Location cross-streets	Do you receive treated or raw water	Approved Integration Agreement? Yes / No
013	CO0207500 MCDONALD FARMS ENTERPRISES INC	E		SW		TREATED	

Combined Raw Source Sampling Locations Used when raw sources blend and there is a sample tap that represents multiple blended sources					
Facility ID (Assigned by Dept)	Name	Availability (P, E, I, or S)	If seasonal, include months anticipated to be in use	Combining Sources Facility IDs and Names	Treatment Plant it Flows to

Water Treatment Codes

The codes below are generated by the USEPA for the purpose of standardizing the treatment processes as they are cataloged and tracked within the federal and state database programs. Water systems should have individual process flow diagrams for treatment; from these diagrams, each process should have an associated name. If you struggle to understand the different treatment codes below, please contact the Division's Engineering Section for assistance.

DISINFECTION
GASEOUS CHLORINATION (401)
HYPOCHLORINATION BLEACH (421)
CHLORAMINES (200)
CHLORINE DIOXIDE (220)
ULTRAVIOLET RADIATION (720)
OZONATION (541)
CONTACT TIME PROVIDED (825)

FILTRATION
ANION EXCHANGE (836)
CATION EXCHANGE (835)
FILTRATION, BAG (801)
FILTRATION, BAG - ROUGHING (810)
FILTRATION, CARTRIDGE (341)
FILTRATION, CARTRIDGE - ROUGHING (865)
FILTRATION, MICROFILTRATION (895)
FILTRATION, PRESSURE SAND (344)
FILTRATION, RAPID SAND (345)
FILTRATION, ULTRAFILTRATION (347)
FILTRATION,GREENSAND (343)
NANOFILTRATION (890)
NATURAL OR RIVERBANK FILTRATION (GWUDI) (826)
REVERSE OSMOSIS (640)

PRETREATMENT, COAGULATION AND SEDIMENTATION
AERATION (820)
ACTIVATED CARBON, GRANULATED (121)
ACTIVATED CARBON, POWDERED (125)
COAGULATION (240)
DISSOLVED AIR FLOTATION (880)
FLOCCULATION (360)
HYDRAULIC JET MIXING (831)
IN LINE STATIC MIXING (830)
MICROSCREENING (520)
PERMANGANATE (560)
PRESEDIMENATION (840)
RAPID MIX (600)
SEDIMENTATION (660)
UPFLOW CLARIFIER (845)

OTHER FORMS OF TREATMENT
ACTIVATED ALUMINS (100)
ALGAE CONTROL (160)
BLENDING (896)
FLUORIDATION (380)
INHIBITOR, SILICATE (449)
INHIBITOR/SEQUESTERING AGENT, PHOSPHATE BASED (815)
PEROXIDE (580)
PH ADJUSTMENT - SUPPRESION (847)
PH ADJUSTMENT - ELEVATION (848)
REDUCING AGENT (620)

Water Treatment Plant Details

Completed by: **Richard** Signature:Richard Pintor_____

Treatment Plants				
Facility ID (Assigned by Department)	**Plant Name**	**Availability** (P, E, I, or S)	**If seasonal, include months anticipated to be in operation**	**Contributing Sources** Facility IDs and Names
005	**FORKS BLDG**	**P**		**WELL NO 3 RIDGEWAY (003);**
Treatment Codes (see previous page for codes)				
HYPOCHLORINATION (421); CONTACT TIME PROVIDED (825); BLENDING (896);				
Provide a Detailed Description of the Water Treatment System (including descriptions of tanks used for disinfection contact time)				
System is blended at 50% per CDPHE Approval and chlorinated contact time in 3 storage tanks.				

Facility ID (Assigned by Department)	**Plant Name**	**Availability** (P, E, I, or S)	**If seasonal, include months anticipated to be in operation**	**Contributing Sources** Facility IDs and Names
008	**UPPER GRAPEVINE RD WTP WELLS 1A AND 1B**	**P**		**INF GAL NO 1 RIEFENBERG GULCH (006); WELL NO 1 B (004); WELL NO 1A (001);**
Treatment Codes (see previous page for codes)				
HYPOCHLORINATION (421); CONTACT TIME PROVIDED (825);				
Provide a Detailed Description of the Water Treatment System (including descriptions of tanks used for disinfection contact time)				

Facility ID (Assigned by Department)	**Plant Name**	**Availability** (P, E, I, or S)	**If seasonal, include months anticipated to be in operation**	**Contributing Sources** Facility IDs and Names
Treatment Codes (see previous page for codes)				
Provide a Detailed Description of the Water Treatment System (including descriptions of tanks used for disinfection contact time)				

Distribution System Definitions

Entry point –A location before or at the first customer which is representative of treated (finished) water. The entry point may represent treated water from multiple treatment plants and/or multiple sources. Sometimes the water treatment plant is the first tap.

Distribution system storage facility – Any treated (finished) water storage tank at the treatment plant or in the distribution system that is not considered part of disinfection contact time (i.e. after the entry point).

Booster treatment facilities – Any chemical booster stations after the first customer (such as disinfection or corrosion control chemical booster stations in the distribution system).

Consecutive connection – A master meter connection from your water system to another water system for purposes of supplying drinking water to the other system.

Integration agreement - An agreement between two or more public water systems, one of which is a wholesale/supply system, whose distribution systems are physically connected. The systems agree to operate using a common set of standards that the wholesale system establishes for the purpose of maintaining and protecting drinking water quality. **Integrated systems must submit their agreement to the Department for approval.**

Pump station – A facility used to pump water or increase water pressure. Pump stations are not used for chemical additions or other treatment and do not need to be reported on this form.

Distribution System Details

Completed by: **Richard** Signature:Richard Pintor

Number of Distribution Systems

How many distribution systems does the system have? **3** If more than one, how are the distribution systems operated? (i.e. are they completely independent of each other or does water flow from one to another through operator-controlled valves, etc.): **flows through operator control valves**

Entry Points to Distribution System *Residual Disinfectant, Nitrate, Nitrite, Inorganics, Volatile Organics, Synthetic Organics, Radionuclides, Chlorite, Chlorine Dioxide, and Bromate Must be Collected at All Entry Points*	
Facility ID (Assigned by Department)	**Facility Name**
005	FORKS BLDG
011	2010 STORAGE TANK

Storage & Other Facilities				
Facility ID (assigned by Department)	**Facility Name**	**After Entry Point (In Distribution)**	**Contributing Treatment Plants (or Sources)**	**Tank Volume** (gallons)
011	2010 STORAGE TANK	ENTRY POINT	UPPER GRAPEVINE RD WTP WELLS 1A AND 1B (008);	250 k

Booster Treatment Facilities (Post Entry-Point Treatment)		
Facility ID (Assigned by Department)	**Facility Name**	**Treatment Description (use treatment codes)**

Consecutive Connections Serving Another Water System			
Receiving System PWS ID and Name	**Availability** (P, E, I, or S)	**Do you supply treated or raw water?**	**Integrated Agreement? Yes / No**
n/a			

Schematics and Maps

Sketch of Facility Flows

Include a schematic, diagram or sketch depicting how the flow from each source facility is connected to the combined raw source, treatment plant, storage tank, and the distribution system. Indicate all applicable entry point and raw water sample sites.

Process Schematic of Water Treatment Plants

Provide a process flow diagram for each treatment plant. Include locations (in the process) of all chemical additions, chemical storage, monitors/meters, piping and physical components of the treatment plant. Designate water flow direction throughout the schematic. All components must be clearly labeled. Indicate all applicable sample sites, and include parameters measured at each site.

Map of Distribution System

Provide a map of the distribution system showing locations of all storage facilities, booster treatment facilities, consecutive connections and entry points as well as all applicable sample sites described below. You may provide this detail all in one map or in several different maps. Clearly indicate if there are multiple distribution systems and if those distribution systems are connected to each other. If applicable, include an evaluation and description of the extent to which zones of influence from each source overlap.

Total Coliform Sample Sites

Attach a map of the distribution system showing locations of all total coliform sample sites. Hand drawn schematics or aerial maps (Google Maps) are acceptable.

Lead and Copper Sample Sites

Attach a map of the distribution system showing locations of all lead and copper sample sites. Hand drawn schematics or aerial maps (Google Maps) are acceptable.

Disinfection Byproducts (TTHM/HAA5 and Chlorite) Sample Sites

Attach a map of the distribution system showing locations of all disinfection byproduct sample sites as well as treatment plants and distribution storage tanks. Hand drawn schematics or aerial maps (Google Maps) are acceptable.

Note: The supplier may use one schematic if it includes all of the required elements.

Records Locations

Completed by: **Richard** Signature: _____

These records must be made available for inspection for Department staff during site visits.

Type of Record	Location Address	Retain no less than…
Total Coliform (TCR) and Fecal Coliform/*E. coli* results AND distribution system residual disinfection monitoring results	2144 S Grapevine Rd	5 years
Revised TCR (RTCR) assessment forms or corrective actions as a result on an assessment, or other available summary documentation of the sanitary defects and corrective actions	2144 S Grapevine Rd	5 years after completion of the assessment or corrective action
Chemical analyses results	2144 S Grapevine Rd	10 years
All lead and copper rule documents and results	2144 S Grapevine Rd	12 years
Violations of Regulation 11, including corrective action	2144 S Grapevine Rd	3 years after corrective action is completed
Sanitary surveys, including any written reports, summaries or correspondences	2144 S Grapevine Rd	10 years
Variances or exemptions granted by the Department	2144 S Grapevine Rd	5 years after expiration
Public notices and consumer confidence reports, including certification	2144 S Grapevine Rd	3 years
Individual rule sampling plans	2144 S Grapevine Rd	10 years
Turbidity monitoring results	2144 S Grapevine Rd	5 years
Recycle flows information • Copy of original recycle notification and information submitted to Department • List of all recycle flows and frequency with which they are returned • Average and maximum backwash flow rate • Average and maximum backwash duration • Typical filter run length and how it is determined • Treatment provided for the recycle flow (including chemicals and doses) • Physical dimensions of the equalization/treatment units • Typical and maximum hydraulic loading rates • Frequency of solids removal	2144 S Grapevine Rd	Indefinitely
Individual filter turbidity monitoring	2144 S Grapevine Rd	3 years

results AND entry point residual disinfection monitoring results		
Disinfection profiling results, including raw data and analysis	2144 S Grapevine Rd	Indefinitely
Disinfection benchmark, including raw data and analysis	2144 S Grapevine Rd	Indefinitely
Source water monitoring for Long Term 2 Surface Water Treatment Rule	2144 S Grapevine Rd	3 years after bin classification
Notification to the Department that system meets criteria to avoid source water monitoring for Long Term 2 Surface Water Treatment Rule	2144 S Grapevine Rd	3 years
Treatment monitoring associated with microbial toolbox options for Long Term 2 Surface Water Treatment Rule	2144 S Grapevine Rd	3 years
Initial distribution system evaluation (IDSE) report submitted for the Stage 2 Disinfectants and Disinfection Byproducts Rule	2144 S Grapevine Rd	10 years after report submitted
Corrective actions taken for the Groundwater Rule	2144 S Grapevine Rd	10 years
Invalidation of fecal indicator-positive groundwater source samples for the Groundwater Rule	2144 S Grapevine Rd	5 years
For consecutive systems, documentation of notification to the wholesale system(s) of total coliform-positive samples	2144 S Grapevine Rd	5 years
For systems conducting compliance monitoring for the Groundwater Rule ● Department-specified minimum disinfectant residual	2144 S Grapevine Rd	10 years
For systems conducting compliance monitoring for the Groundwater Rule ● Lowest daily disinfectant residual, date and any failure to maintain the Department-specified minimum disinfectant residual for a period of more than 4 hours ● Department-specified compliance requirements for membrane filtration, date and duration of any failure to meet those requirements for more than 4 hours	2144 S Grapevine Rd	5 years
Storage Tank Rule – for each completed tank inspection, the inspection summary	2144 S Grapevine Rd	10 years
Backflow Prevention and Cross-Connection Control Rule – for Community Water Systems ● Testing, inspection and maintenance	2144 S Grapevine Rd	3 years

records for backflow prevention assemblies and methods. ● Each annual BPCCC program report		
Backflow Prevention and Cross-Connection Control Rule – for Non-Community Water Systems ● Testing, inspection and maintenance records for backflow prevention assemblies and methods. ● Each annual BPCCC program report	2144 S Grapevine Rd	5 years
Water Hauler Rule ● Water Hauler Operational Guide and associated required records	2144 S Grapevine Rd	Indefinitely

Revised Total Coliform and Groundwater Rule

Completed by: **Richard** Signature:Richard Pintor

Total Coliform Site Information

Identify how the supplier will sample for total coliforms in the distribution system. The routine samples must represent the entire distribution system and should be rotated to different locations within the system if possible. This method allows for coverage of the distribution system without increasing the need for additional samples. Describe how the supplier will meet this requirement: **{ Sampling is rotated through the below sites}**

Identify how the supplier will sample for total coliforms in the distribution throughout the sampling period (if applicable). A supplier must collect samples at regular time intervals throughout the month, unless otherwise allowed by the regulations. Describe how the supplier will meet this requirement: **{Sampling are taking monthly,and should be conducted within the first two weeks of the month to allow time for repeat sampling in the event of a positive total coliform result}**

Type	SDWIS Sample Point ID (Assigned by Department)	System Sample Point ID or Name	Address, City, Zip Code
Routine Site 1	1		2622 S. Mt Evans ln
Repeat Upstream 1	1u		2565 Grapevine Rd
Repeat Downstream 1	1d		2673 S.Mt Evans Ln
Routine Site 2	2		2691 S.Grapevine Rd
Repeat Upstream 2	2u		2861 W. Grapevine Rd
Repeat Downstream 2	2d		2732 Riverview Dr.
Routine Site 3	3		21788 Miller Ln
Repeat Upstream 3	3u		21748 Miller Ln
Repeat Downstream 3	3d		21928 Miller Ln.
Routine site 4	4		21384 Miller Ln.

Repeat Upstream 4	4u		21454 Shady Ln.
Repeat downstream 4	4d		21294 Shady Ln.

*To add rows to the table right mouse click on the table and click “insert row”.

Distribution System Residual Disinfectant Monitoring The residual disinfectant must be measured at the same time and the same location as each total coliform bacteria sample. Measurements must be conducted in the field by a certified operator or under the direction of the certified operator and must be written on each total coliform chain of custody when it is submitted to the laboratory.	
Disinfectant used in the distribution system:	**Chlorine Measured as Free Chlorine**
Residual disinfectant quality assurance/quality control (QA/QC) – explain the exact procedures to be followed to ensure that the field test measurement will be accurate. This may be found in the manufacturer’s literature: **{Routine speck check of pocket chlorimeter}**	

SEASONAL SYSTEMS ONLY – STARTUP PROCEDURES AND PRE-OPENING SAMPLES Seasonal suppliers are required to use Department approved start-up procedures before serving water to the public and collect a pre-opening total coliform sample.	
Using Department-approved start-up procedures?	**Identify where and when the pre-opening sample will be collected**

FOR SYSTEMS WITH GROUNDWATER SOURCES Suppliers that use a groundwater source and have a TC+ in the distribution system must collect a raw water sample from each groundwater source that was in use at the time of the TC+ sample.		
Identify where the raw water sample(s) will be collected	**Does the raw water sampling site(s) represent more than one source? If so, describe the raw sources that combine**	**If the supplier is a consecutive system, describe how the supplier will notify its wholesaler within 24 hours of being notified of a TC+ sample:**
WELL NO 3 RIDGEWAY (003);		

TTHM/HAA5 Stage 2 Disinfection Byproduct Sample Sites

Completed by: **Richard** Signature: _____

Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) Site Information

Determining Month of Peak Disinfection Byproduct (DBP) Formation:

-Many factors should be considered when determining your month.
-The main factor is water temperature.
  -August is typically the warmest month of the year with the highest water temperature.
  -For schools August or September is a typical peak month.
-Other factors beyond water temperature should be considered such as if water age is dramatically higher in a certain month of the year due to low use or snow runoff. April or May could contribute to a large spike in total organic material in the raw water.

Choosing Sample Sites:

-Alternate choosing between high TTHM and high HAA5 sample sites in the distribution system until the required number of monitoring locations has been met.
-High TTHM sites typically are where the water is oldest and chlorine residual is lowest.
-High HAA5 sites are typically near the ends of the distribution system where the chlorine residual is low, but above 0.2 mg/L or at mixing zones.
-Most systems with the option to sample both TTHM and HAA5 at one location or separately at two locations will probably find sampling at one location is justified since high TTHM and high HAA5 levels are at the same location based on the size and configuration of their water system.

Month of Peak Disinfection Byproduct Formation:	HAA5 - August; TTHM - August

SDWIS Sample Point ID (Assigned by Department)	System Sample Point ID or Name	Status	Address, City, Zip Code	Analyte
DBP001	MIller LN	Active		TTHM/HAA5/Both

Surface Water Treatment Rule

Completed by: **Richard** Signature: _____

Turbidity Monitoring

Describe how and where the supplier will sample turbidity

Turbidity quality assurance/quality control (QA/QC) – explain the exact procedures to be followed to ensure that the test result will be accurate: **{n/a**

Describe the system's plan for turbidity monitoring that deviates from this plan due to operational issues (such as filter backwash cycles, start-ups/shut-downs, or filter to waste): **{}**

Treatment Plant Facility ID (Assigned by Department)	Treatment Plant Facility Name	Filter Type	Grab or Continuous Sampling	Describe Location for Combined Filter Effluent (CFE) Monitoring	Describe Location for Individual Filter Effluent (IFE) Monitoring

Microbial Inactivation (3-log for Giardia lamblia and 4-log for viruses) Residual Disinfectant Monitoring

Describe how and where the supplier will sample residual disinfectant

Residual disinfectant quality assurance/quality control (QA/QC) – explain the exact procedures to be followed to ensure that the field test measurement will be accurate. This may be found in the manufacturer's literature: **{Residual Disinfectant QA/QC}**

Describe any additional treatment (i.e. Ultraviolet, Ozone, or Chlorine Dioxide) used to assist in microbial inactivation: **{}**

Facility ID (Assigned by Department)	Facility Name	Grab or Continuous Sampling	Describe Location for Microbial Inactivation Monitoring
011	2010 STORAGE TANK		

Long Term 2 (LT2) Raw Water Source Monitoring Must conduct two separate rounds of sampling at each source		
Identify where the raw water sample(s) will be collected		Does the raw water sampling site(s) represent more than one source? If so, describe the raw sources that combine
WELL NO 1A (001); WELL NO 1 B (004); INF GAL NO 1 RIEFENBERG GULCH (006);		
Treatment Plant Facility ID (Assigned by Department)	Treatment Plant Facility Name	LT2 Bin Classification

Disinfection Byproduct Precursors (Total Organic Carbon (TOC) and Alkalinity) Only required for suppliers using conventional filtration		
Identify where the raw water TOC and alkalinity sample(s) will be collected		Does the raw water sampling site(s) represent more than one source? If so, describe the raw sources that combine
Treatment Plant Facility ID (Assigned by Department)	Treatment Plant Facility Name	Describe Location for Treated Water TOC Monitoring

Community Lead and Copper Materials Evaluation Summary

Completed by: **Richard** Signature: _____

Materials Evaluation Summary by Tier Level

Note: This is **not** a summary of the lead and copper sample pool. This is a summary of **all sites in the distribution system** that the supplier believes meets each of the criteria below.

Tier 1 Sites - Single family structures, currently being used as either a residence or place of business	**Number of Site Locations**
Containing copper pipe with lead solder installed after 1982 and before 1988	0
Are served by a lead service line (no year restriction)	0
Containing lead pipes, goosenecks, or pigtails (no year restriction)	0
Tier 2 Sites - Multiple-family residences and buildings	**Number of Site Locations**
Containing copper pipe with lead solder installed after 1982 and before 1988	0
Are served by a lead service line (no year restriction)	0
Containing lead pipes, goosenecks, or pigtails (no year restriction)	0
Tier 3 Sites - Single-family structures	**Number of Site Locations**
Containing copper pipes with lead solder installed before 1983	133
Representative Sample Sites - Structures	**Number of Site Locations**
With plumbing material typically found throughout the distribution system	9

Describe the representative plumbing material: **pipes throughout the distribution are ¾ copper some mixed galvanized to copper**

Additional Information

Please describe the verification process, if any, that was used to provide the information above: Based on what we have seen after 40 years and records of some new homes from the County Assessor Office there are 9 homes built between 1995 /2011

Additional Information - Tier 1

If no Tier 1 sites were indicated above, please provide an explanation: see above info

Lead and Copper Sample Sites

Completed by: **Richard** Signature: _____

Note: If you choose to update and maintain sites online at wqcdcompliance.com/login then please select the option to use the alternate section where sites are not required to be completed. For information on how to select sites please visit colorado.gov/cdphe/lcr.

Lead and Copper Definitions

Structure SFR: Single Family Residence MFR: Multi-Family Residence B: Building SFB: Single Family Residence Used as Business	**Status** A = Active - Sampling N = Active - Not Sampling	**Tier Level** 1 = Tier 1 2 = Tier 2 3 = Tier 3 R = Represents System
Lead Service Line (LSL) NA = No LSL FLSL = Utility Owned LSL PLSL = Partially Owned LSL OLSL = Customer Owned LSL U = Unknown at This Time	**Interior Plumbing** CPLS = Copper Pipes with Lead Solder CP = Copper Pipes without Lead Solder NonCP = Non-Copper Pipes LP = Lead Pipes U = Unknown at This Time	**Material Verification** R = Records Review Verification P = Physically Verified I = Interview Verification U = Unverified

Lead and Copper Site Information

SDWIS Sample Point ID (Assigned by Dept)	System Sample Point ID or Name	Address, City, Zip Code	Status	Tier Level	Material Verification Method
LCR011	1ST FLOOR KITCHEN		A-S	TIER 3	PHYSICALLY VERIFIED
	Structure Type	**Date Built**	**Lead Service Line Type**		**Interior Plumbing Type**
	SFR	1/1/1955	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	**System Sample Point ID or Name**	**Address, City, Zip Code**	**Status**	**Tier Level**	**Material Verification Method**
LCR012	1ST FLOOR KITCHEN		A-S	TIER 3	PHYSICALLY VERIFIED

	Structure Type	Date Built	Lead Service Line Type		Interior Plumbing Type
	SFR	1/1/1950	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	**System Sample Point ID or Name**	**Address, City, Zip Code**	**Status**	**Tier Level**	**Material Verification Method**
LCR013	FIRST FLOOR KITCHEN		A-S	TIER 3	PHYSICALLY VERIFIED
	Structure Type	**Date Built**	**Lead Service Line Type**		**Interior Plumbing Type**
	SFR	1/1/1964	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	**System Sample Point ID or Name**	**Address, City, Zip Code**	**Status**	**Tier Level**	**Material Verification Method**
LCR014	1ST FLOOR KITCHEN		A-S	TIER 3	PHYSICALLY VERIFIED
	Structure Type	**Date Built**	**Lead Service Line Type**		**Interior Plumbing Type**
	SFR	1/1/1973	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	**System Sample Point ID or Name**	**Address, City, Zip Code**	**Status**	**Tier Level**	**Material Verification Method**
LCR015	1ST FLOOR KITCHEN		A-S	TIER 3	PHYSICALLY VERIFIED
	Structure Type	**Date Built**	**Lead Service Line Type**		**Interior Plumbing Type**
	SFR	1/1/1955	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	**System Sample Point ID or Name**	**Address, City, Zip Code**	**Status**	**Tier Level**	**Material Verification Method**
LCR005	FIRST FLOOR		A-S	TIER 3	PHYSICALLY

	KITCHEN				VERIFIED
	Structure Type	Date Built	Lead Service Line Type		Interior Plumbing Type
	SFR	1/1/1925	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	System Sample Point ID or Name	Address, City, Zip Code	Status	Tier Level	Material Verification Method
LCR006	FIRST FLOOR KICHEN		A-S	TIER 3	PHYSICALLY VERIFIED
	Structure Type	Date Built	Lead Service Line Type		Interior Plumbing Type
	SFR	1/1/1925	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	System Sample Point ID or Name	Address, City, Zip Code	Status	Tier Level	Material Verification Method
LCR007	1ST FLOOR KICHEN		A-S	TIER 3	PHYSICALLY VERIFIED
	Structure Type	Date Built	Lead Service Line Type		Interior Plumbing Type
	SFR	1/1/1947	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	System Sample Point ID or Name	Address, City, Zip Code	Status	Tier Level	Material Verification Method
LCR002	FIRST FLOOR KITCHEN		A-S	TIER 3	PHYSICALLY VERIFIED
	Structure Type	Date Built	Lead Service Line Type		Interior Plumbing Type
	SFR	1/1/1933	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	System Sample Point ID or Name	Address, City, Zip Code	Status	Tier Level	Material Verification Method

LCR003	1ST FLOOR KITCHEN		A-S	TIER 3	PHYSICALLY VERIFIED
	Structure Type	**Date Built**	**Lead Service Line Type**		**Interior Plumbing Type**
	SFR	1/1/1955	NA		CPLS
SDWIS Sample Point ID (Assigned by Dept)	**System Sample Point ID or Name**	**Address, City, Zip Code**	**Status**	**Tier Level**	**Material Verification Method**
LCR004	FIRST FLOOR KITCHEN		INACTIVE - NO LONGER MEETS CRITERIA	NON-TIER, REPRESENTATIVE	PHYSICALLY VERIFIED
	Structure Type	**Date Built**	**Lead Service Line Type**		**Interior Plumbing Type**
	SFR	1/1/1925	NA		CP
SDWIS Sample Point ID (Assigned by Dept)	**System Sample Point ID or Name**	**Address, City, Zip Code**	**Status**	**Tier Level**	**Material Verification Method**
LCR008	1ST FLOOR KICHEN		INACTIVE - NO LONGER MEETS CRITERIA	NON-TIER, REPRESENTATIVE	PHYSICALLY VERIFIED
	Structure Type	**Date Built**	**Lead Service Line Type**		**Interior Plumbing Type**
	SFR	1/1/1925	NA		CP
SDWIS Sample Point ID (Assigned by Dept)	**System Sample Point ID or Name**	**Address, City, Zip Code**	**Status**	**Tier Level**	**Material Verification Method**
LCR009	FIRST FLOOR KITCHEN		INACTIVE - NO LONGER	NON-TIER, REPRESENTATIVE	PHYSICALLY VERIFIED

			MEETS CRITERIA		
	Structure Type	Date Built	Lead Service Line Type		Interior Plumbing Type
	SFR	1/1/1940	NA		CP
SDWIS Sample Point ID (Assigned by Dept)	System Sample Point ID or Name	Address, City, Zip Code	Status	Tier Level	Material Verification Method
LCR010	1ST LEVEL KITCHEN		INACTIVE - NO LONGER MEETS CRITERIA	NON-TIER, REPRESENTATIVE	PHYSICALLY VERIFIED
	Structure Type	Date Built	Lead Service Line Type		Interior Plumbing Type
	SFR	1/1/1925	NA		CP
SDWIS Sample Point ID (Assigned by Dept)	System Sample Point ID or Name	Address, City, Zip Code	Status	Tier Level	Material Verification Method
LCR001	1ST FLOOR KITCHEN		INACTIVE - NO LONGER MEETS CRITERIA	NON-TIER, REPRESENTATIVE	PHYSICALLY VERIFIED
	Structure Type	Date Built	Lead Service Line Type		Interior Plumbing Type
	SFR	1/1/1964	NA		CP
SDWIS Sample Point ID (Assigned by Dept)	System Sample Point ID or Name	Address, City, Zip Code	Status	Tier Level	Material Verification Method
	Structure	Date Built	Lead Service Line Type		Interior Plumbing

	Type			Type

Attachment 4
Cross Connection Control Plan

Idledale Water & Sanitation District

Cross-Connection Control Program

Prepared by:

Richard Pintor Jr.,
Operator

CROSS-CONNECTION CONTROL PROGRAM FOR IDLEDALE W & S

Introduction

This Policy addresses Article 12 of the Colorado Primary Drinking Water Regulations that states a public water system shall have no uncontrolled cross-connections to a pipe, fixture, or supply, any of which contain water not meeting provisions of the drinking water regulations.

What is a cross-connection?

A cross-connection is the point in a potable water distribution system where the potable water may come in contact with chemical, biological or radiological contaminants that may be hazardous to humans.

During a backflow event, these contaminants could be drawn or pushed back into the potable water distribution system. The pollution from a cross-connection can be non-hazardous to human health causing aesthetic problems such as taste, odor, and color; or the pollution can be toxic causing illness or death to those who unsuspectingly consume contaminated water.

The link or channel is found where a contaminant source is purposely plumbed into a water line or mistakenly enters into a water line through a break or opening. An example of a plumbed cross-connection is using a water hose to fill a chemical solution-mixing tank. Under certain conditions, the outlet end of the water hose submerged in the tank while mixing chemicals can be the entrance point or link, and potentially contaminate the water system. Once the toxic solution enters into the plumbing or public water line it can be mistakenly consumed or used by unsuspecting people. Another example of a cross-connection is a break or opening in a pipeline. When a break or open condition occurs, the owner or operator must make quick repairs to stop the potential entrance of contamination into the potable water system. Only two solutions exist when a cross-connection is found: eliminate the cross-connection or prevent a backflow condition with an approved backflow prevention device.

The Colorado Hazardous Cross-Connection Control Program was developed to implement Article 12 of the Colorado Primary Drinking Water Regulations.

The regulation states:

"A public water system or consecutive water distribution system of a public water system will have no uncontrolled cross-connections to a pipe, fixture, or supply, any of which contain water not meeting provisions of the drinking water regulations."

The Colorado Department of Public Health and Environment, Water Quality Control Division (CDPHE, WQCD) asks for compliance from all public water systems to protect public health by developing an effective individual cross-connection control program. The individual program

should include protective local ordinances, and must survey and prioritize cross-connections according to degree of hazard, eliminate cross-connections by disconnecting, or control cross-connections with an approved backflow prevention assembly. Backflow prevention assemblies must be tested on a yearly basis by a certified tester, and adequate records must be maintained.

Any hazardous cross-connection discovered to be uncontrolled will be corrected within 10 days or the water service will shut off. The Colorado Department of Public Health and Environment will be informed of the hazardous connection and the corrective action being taken.

Identification of Potential Cross-Connections

Per Article 12, the **IDLEDALE W & S** operator has performed a survey of the public water system and identified a list of potentially hazardous cross-connections, prioritized by degree of hazard. This list is included in this manual. From this date forward, any new water service installation will be inspected for compliance with these requirements for backflow prevention.

Public Education

The IDLEDALE W & S will educate system users about the potential health risk that cross-connections pose, with an emphasis on cross-connections at or within homes and other residences.

Installation of Devices

The IDLEDALE W & S will require system users to install and maintain backflow prevention devices on potentially hazardous service connections, as stated in Article 12. All service connections within the water system must comply with Article 12 and the *Colorado Cross-Connection Control Manual.*

Each cross-connection may require a different type of backflow prevention device, commensurate with the degree of hazard posed by the cross-connection. Approval for the devices needs to be given by the water system operator or, water system engineer.

Annual Testing

Article 12 requires that backflow prevention devices be tested annually by a certified backflow prevention technician. The Colorado Plant Operators Certification Board will supply a list of certified technicians in our area, their certification numbers, and contact information.

Record Keeping

Testing and maintenance records will be kept for three years, per the requirements of Article 12.

List of Backflow Prevention Devices

The following approved devices can be used for backflow prevention:

- Vacuum breaker
- Double-check valve assembly
- Reduced pressure principal backflow assembly
- Air gap

The Colorado Department of Public Health and Environment accepts the use of backflow preventers that have received approval by either University of Southern California Foundation of Cross-Connection Control and Hydraulic Research or the American Society of Sanitary Engineers (ASSE).

The following is a list of common cross-connections and devices that may be used to prevent backflow:

Type of Cross-Connection	Backflow Prevention Device
Hose bib	Vacuum breaker
Fire sprinkler system; Solar house using potable water as heat source	Double check valve assembly on water only line. Approved reduced pressure principal backflow assembly on branch lines carrying chemicals.
Photographic processors and developers	Reduced pressure principal backflow assembly
Hot water boilers	Reduced pressure principal backflow assembly
Water hauler tank filling station	Air gap

POTENTIAL CROSS-CONNECTIONS LIST

System Survey Conducted By: Richard Pintor Jr.

Potential Cross-Connection	Street Address of Potential Cross-Connection	Degree of Hazard: Contamination or health hazard = **High**, Pollution hazard = **Low**
Faucets on outside & inside of the residential houses	Outside residential houses	Low

Cross-Connection Regulations

GENERAL-

The IDLEDALE W & S requires Cross Connection Control (C.C.C.) Devices according to *The Colorado Cross Connection Control Manual* published by the Colorado Department of Public Health and Environment. These devices will be installed on all commercial water services, irrigation systems and fire suppression lines where the Town has determined that a hazardous or aesthetically objectionable condition does or could exist. All service lines will be equipped with a check valve on the meter yoke for minimum protection from back siphoning.

Backflow Prevention Devices: No water service connection will be installed or maintained by the IDLEDALE W & S unless the water supply is protected as required by the IDLEDALE W & S Water Operator Engineering Standards. Water service to any premise will be discontinued if a required backflow prevention device is not installed, tested and maintained, or if a backflow prevention device has been removed, or bypassed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

The customer's system will be open for inspection at all times to authorized representatives of the IDLEDALE W & S to determine whether cross-connections or other structural or sanitary hazards exist. If an inspection determines that a condition may create a danger to the health and well-being of a water consumer, the IDLEDALE W & S will deny or immediately discontinue service to the premises without further notice by providing for the physical break in the service line until the customer has corrected the condition in conformance to the IDLEDALE W & S requirements.

Program Description

The WQCD has authority to force a water supplier to disconnect or control any cross-connection within ten (10) calendar days of notification that a cross-connection exists. In most cases the water supplier is able to quickly facilitate the elimination or control of a cross-connection found in their system without assistance from the WQCD. Generally cross-connections are quickly eliminated or controlled once an owner of a cross-connection is notified and educated to the potential hazards. In rare cases, the WQCD is notified by water suppliers of cross-connection owners who do not wish to cooperate with elimination or control. Upon the WQCD receiving written notice from the water supplier about a cross-connection, an official letter is sent from the WQCD to the supplier requiring appropriate action to protect public health. A copy of the official letter is sent to the owner of the cross-connection to show that proper notification exists. If necessary, the proper notification procedure allows the supplier to shut-off or disconnect the cross-connection owner from the public water supply.

Responsibilities

The Public Water Supplier

"Under Article 12 of the Colorado Primary Drinking Water Regulations, IDLEDALE W & S has primary responsibility to develop and maintain a program to prevent or control contamination from water sources of lesser quality or other contamination sources from entering into the public water system."

The Water Consumer

"Has the responsibility to prevent contaminants from entering into the public water system by way of their individual plumbing system, and retain the expenses of installation, maintenance, and testing of the approved backflow prevention assemblies installed on their individual water service line."

The Certified Cross-Connection Control Technician

"Has the responsibility to test, maintain, inspect, repair, and report/notify on approved backflow prevention assemblies as authorized by the persons that have jurisdiction over those assemblies."

Colorado Revised Statutes authorizes the Colorado Department of Public Health and Environment, Water Quality Control Division (CDPHE, WQCD)

"To promulgate and enforce rules, regulations, and policies ensuring that public water suppliers have implemented an effective cross-connection control program. The WQCD is responsible to develop and maintain the examination to certify cross-connection control technician, or the WQCD may delegate the development and maintenance of the examination to others."

The Plumbing Official

"Has the responsibility to prevent cross-connections through review of plumbing design plans and building inspections. The plumbing officials' responsibility begins at the downstream point

BACKFLOW PREVENTION TESTING COMPANIES

NOTE: Manitou Springs Water Treatment Plant distributes this list of companies as a courtesy to our customers. Please do not consider these listings a recommendation, endorsement or guarantee of service. Companies on this list employ personnel who are certified pursuant to State Regulations. **Manitou Springs Water Treatment Plant is not responsible for any work performed by any tester nor is Manitou Springs Water Treatment Plant responsible for any act or omission of any tester whatsoever.** As a community owned utility, customers have a voice in the decisions we make. Please call with suggestions for improving this list or any process of the Cross-Connection Program. **NOTICE: Out of town companies may charge additional fees for travel.**

Company Name	Phone No.	Company Location
A&A BACKFLOW TESTING & REPAIR, INC.	(719) 686-7683	FRANKTOWN
A&B BACKFLOW	(719) 310-7746	COLORADO SPRINGS
A-1 BACKFLOW TESTING	(719) 636-0073	COLORADO SPRINGS
A-1 SPRINKLER SERVICE	(719) 636-2223	COLORADO SPRINGS
ALL AMERICAN MAINTENANCE INC.	(719) 637-0313	COLORADO SPRINGS
ALPINE CO, LLC.	(719) 291-5347	PALMER LAKE
ALSON MECHANICAL CONTRACTORS, INC.	(719) 337-4366	COLORADO SPRINGS
AMERICAN BACKFLOW, LLC.	(303) 904-4404	LITTLETON
AMERICAN MECHANICAL SERVICES	(719) 633-1322	COLORADO SPRINGS
ASPEN LEAF	(719) 591-9972	COLORADO SPRINGS
BACK FLOW TESTERS R/USS	(719) 544-1171	PUEBLO
BACKFLOW CONSULTING -TESTING & REPAIR	(303) 537-0126	AURORA
BACKFLOW TECH	(303) 986-4601	LAKEWOOD
BACKFLOW TESTING 4 LESS	(719) 392-1122	COLORADO SPRINGS
BLUE RIBBON	(719) 534-0086	COLORADO SPRINGS
BOB'S PLUMBING	(719) 633-2894	COLORADO SPRINGS
BROOKS PLUMBING & HEATING, INC.	(719) 488-3101	PALMER LAKE
CCS INC.	(877) 456-5447	DENVER
CHEYENNE PLUMBING & HEATING, INC.	(719) 265-1719	COLORADO SPRINGS
CINTAS FIRE PROTECTION/ABBOTT	(719) 590-9191	COLORADO SPRINGS
COBB MECHANICAL	(719) 471-8958	COLORADO SPRINGS
COMMERCIAL DESIGN ENGINEERING	(719) 201-2682	COLORADO SPRINGS
COMPLETE FIRE PROTECTION, INC.	(303) 922-1055	DENVER
DAVID ALVAREZ	(719) 659-2307	COLORADO SPRINGS
DENNIS SHIPLEY	(719) 393-8001	WIDEFIELD
DUTCHMAN BACKFLOW TESTERS, INC.	(719) 948-3139	PUEBLO
FIRE ALARM SERVICES	(303) 466-8800	ARVADA
FIRE SYSTEM WEST	(719) 268-0446	COLORADO SPRINGS
FIRETROL	(303) 366-5875	AURORA
FRONTIER FIRE PROTECTION, INC.	(303) 629-0221	DENVER
GLOBAL FIRE & SAFETY	(303) 367-1959	AURORA
HEATING & PLUMBING ENGINEERING, INC.	(719) 633-5571	COLORADO SPRINGS
HEMPHILL PLUMBING & HEATING	(719) 471-4203	COLORADO SPRINGS
JOHNSON PLUMBING & HEATING	(719) 471-4916	COLORADO SPRINGS
KASTEN PLUMBING & HEATING	(719) 244-5835	COLORADO SPRINGS
LES HILDEBRAND	(719) 392-2257	SECURITY
MASTER MAINTENANCE MENDERS	(719) 520-5033	COLORADO SPRINGS
OLSON PLUMBING & HEATING COMPANY, INC.	(719) 635-3563	COLORADO SPRINGS
PARKEY REFRIGERATION COMPANY INC.	(719) 491-5254	COLORADO SPRINGS
PERFORMANCE BUILDING SERVICES	(303) 785-6914	DENVER
RALPH TRUJILLO	(719) 651-1076	COLORADO SPRINGS
RAWSON PLUMBING LLC.	(719) 576-3886	COLORADO SPRINGS
ROBERTSON LAWN	(719) 635-8585	COLORADO SPRINGS
ROSCO FIRE & SECURITY SYSTEMS, INC.	(720) 272-8380	COLORADO SPRINGS
S&S SERVICES	(719) 338-6861	CALHAN
SCOTT WHITE SPRINKLER CO.	(719) 574-0912	COLORADO SPRINGS
SIMPLEX GRINNELL	(719) 574-4215	COLORADO SPRINGS
STELLICK & STODDEN BACK-FLOW SERVICES IN	(719) 329-1028	COLORADO SPRINGS
STEVE EASTBURN'S PLUMBING & BACKFLOW	(719) 391-0072	COLORADO SPRINGS
TIMBERLINE LANDSCAPING INC.	(719) 638-1000	COLORADO SPRINGS
WATER MASTER, INC	(303) 795-6066	LITTLETON
WESTERN STATES FIRE PROTECTION CO.	(719) 578-1822	COLORADO SPRINGS
WRIGHT - JONES PLUMBING AND HEATING	(719) 543-0055	PUEBLO

COLORADO
Department of Public Health & Environment

APPENDIX A: Backflow Prevention and Cross-connection Control

Idledale Water and Sanitation BPCCC Program

Purpose

This Backflow Prevention and Cross-connection Control Program outlines how the supplier of water specified below will implement its written BPCCC program and achieve compliance with Regulation 11.

Other potentially applicable backflow prevention and cross-connection control requirements are specified in Article 1-114 and Article 1-114.1 of Title 25 of the Colorado Revised Statutes and in the Colorado Plumbing Code. The department has developed to assist public water systems achieve compliance with Regulation 11.

Public Water System Name & PWSID:	Idledale Water and Sanitation
Public Water System Owner:	Town of Idledale
BPCCC Administrative Contact:	AJ Beckman
Address:	Po Box 52
Email:	Aj@publicalliancellc.com
Phone:	3036974319

Signatures of Owner or Administrative Contact:

Effective Date	Name	Signature
12/2000	AJ	AJ Beckman

This BPCCC program will include and specify information regarding how this supplier identifies cross connections, performs surveys, and controls identified cross connections. This BPCCC program also address how this supplier will require that backflow prevention assemblies and methods be tested and inspected annually, how this supplier will track the installation, maintenance, and testing of assemblies and methods and how this supplier will ensure that assemblies are tested by a *Certified Cross-Connection control Technician(Regulation 11.37(1)(b).*

****This program must be kept on file for review by the department. It can be revised by the department as necessary.

Water Quality Control Division
4300 Cherry Creek Drive South Denver, Colorado 80246

Backflow Prevention and Cross-connection Control Program

(i) Process for conducting surveys.

Inspect of homes and building orc

(ii) Legal authority to perform a survey of a customer's property to determine whether a cross connection is present unless the supplier controls all non-single-family residential connections to the public water system with the most protective backflow prevention assembly or backflow prevention method.

{ } Ordinance (attach copy) { } User Agreements (attach copy) { } Other - explain below

orc

(iii) Process to select a backflow prevention assembly or backflow prevention method to control a cross connection.

Engineer to recommend

(iv) Legal authorities to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods and/or require customers to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods.

{ } Ordinance (attach copy) { } User Agreements (attach copy) { } Other - explain below

Testing co that are licenced

(v) Process to track the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections.

As per survey

(vi) The process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control Technician.

See certificate of testing and or licence

Sample Backflow Prevention and Cross-connection Control Program

Department Notification

If we become aware of a suspected or confirmed backflow contamination event, the supplier must notify and consult with the department on any appropriate corrective measures no later than 24 hours after learning of the backflow contamination event. The notification should be made to the **24-hour Environmental Release and Incident Report Hotline at 1-877-518-5608.**
When reporting the event, please have available the as much of the following information as possible:

- Date and time of event;
- Location of event;
- Type of threat or event;
- Public Water System Name and Identification Number;
- Water supplier contact name and phone number;
- Method of discovery (consumer complaint, witness, perpetrator, employee report);
- Response actions taken (water quality parameter testing, isolation of affected water);
- Recovery actions taken;
- Notifications made (customers, law enforcement, news media, etc.);
- Assessment of threat, if possible.

Regulation 11.39(7) requires that we notify the department within 48 hours in any instance the supplier becomes aware of any backflow prevention and cross-connection control violation and any backflow prevention and cross-connection control treatment technique violation specified in Regulation 11.39(6).

Such notifications to the department can be written, verbal, or made by other means. The department can be notified via telephone at 303.692.2000 and contacting the department's Water Quality Control Division's backflow prevention and cross connection control specialist. The department can also be notified via the Drinking Water Portal sent to the attention of the backflow prevention and cross-connection control specialist. The Drinking Water Porta can be found online at:

Public Notice Requirements

Regulation 11.39(7) requires that suppliers distribute Tier 2 public notice as specified in Regulation 11.33 in any instance the supplier becomes aware of any backflow prevention and cross-connection control treatment technique violation.

Regulation 11.39(7) requires that suppliers distribute Tier 3 public notice as specified in Regulation 11.33 a in any instance the supplier becomes aware of any backflow prevention and cross-connection control violation.

Please contact your department assigned compliance officer with any questions regarding public notice.

Sample Backflow Prevention and Cross-connection Control Program

(i) Survey Process and Documentation

Suppliers must survey all non-single-family-residential connections to the public water system to determine if the connection is a cross connection. The supplier must also survey all connections within the supplier's waterworks to determine if there are any cross connections present which could contaminate the public water systems or the facilities water supply system.
The supplier must identify the total number of non-single-family-residential connections to the public water system and connections within the supplier's waterworks. This number is the total number of connections to the public water distribution system that are not considered single - family connections.
Acceptable survey process documentation includes the following: How the supplier will select service connections that need a survey; For example: Usage type - commercial, industrial, or multi-family; new or newly acquired connections; and/or questionnaire results.
Single-family means:

- A single dwelling which is occupied by a single family and is supplied by a separate service line;
- A single dwelling comprised of multiple living units where each living unit is supplied by a separate service line.
- If a water supplier has ownership and maintenance responsibilities of a service line up to a point of single-connections such connections may be considered a single-family-residential-connection even if this connection is to a multi-family dwelling unit. It is important to be aware that all other applicable parts of Regulation 11 will also apply to those new acquired waterworks (i.e. distribution system) and that any irrigation or other cross connections that are directly connected to the newly acquired service line would have to be controlled in accordance with Regulation 11.39.

Once the supplier has identified the total number of non-single family residential connections, the supplier must survey the connections to identify cross connections. The supplier must document the process for conducting surveys. Surveys can be performed onsite by a person designated by public water system or can be of a questionnaire type. The supplier's survey process should identify potential service connections and uses that when identified may trigger cross-connection control requirements. The supplier's process should address how the supplier will select individuals to perform the survey including experience and/or training or certification qualifications to perform a survey. Additionally the supplier must survey any waterworks and water supply systems associated with those facilities for cross connections.
If the supplier uses questionnaires, various methods may be used to distribute the questionnaires: email surveys, web-based surveys, written surveys, or telephone surveys. Questionnaires should provide examples of common cross connections to the customer who completes the survey. Questionnaires should ask that the property-owner indicate that the information is accurate to the best of their knowledge. If the supplier does not receive a response to a questionnaire or the results are inconclusive, the supplier is required to perform an onsite survey for cross connections or control the connection with the most protective backflow prevention assembly or method.
The results of surveys should be kept in a manner that allows the supplier to demonstrate that a survey has been performed and if any action was required based on the results of the survey.
It is important that newly constructed and renovated buildings are constructed in accordance with the local plumbing code. The code is intended to protect the internal potable water system and its occupants from contamination that can be introduced via restrooms, kitchens, boilers, irrigation, HVAC systems, etc. It is equally important that the water supplier protect their distribution system from contamination that can be introduced via car washes, auxiliary water sources, fire suppression systems, irrigation and many other sources. Water suppliers need to perform cross connection identification surveys to identify potential cross connections within their distribution system.
***Note to supplier. Describe in this section how the supplier complies with the regulation and its survey requirements

(ii & iv) Legal Authority

The supplier must have a legally-enforceable mechanism that implements its written backflow prevention and cross connection control program as described in 11.39(2). The department recommends that the legally-enforceable mechanisms include specific provisions identifying customer requirements under 11.39(2)(a)(ii, iv) and the associated remedies that the supplier may utilize for failure of customer(s) to comply. If the supplier does not have a legally-enforceable mechanism in

place, the department expects the supplier to perform the actions necessary to complete the indicated requirements in the regulation.

***Note to supplier. Provide a copy of the ordinance or user agreement in this section or discuss how the supplier implements the actions necessary to complete the indicated requirements in the regulation. As a reminder suppliers are prohibited from installing or permitting any uncontrolled cross connection to the distribution system or within the supplier's waterworks.

- Installing an uncontrolled cross connection means modifications or additions to waterworks or water supply systems that create a cross connection. The supplier is prohibited from intentionally performing any actions which would result in the creation of a cross connection.

- Permitting an uncontrolled cross connection in the context of Regulation 11.39 means the supplier has allowed their users or customers to continue to have an uncontrolled cross connection past the regulatory-defined timelines. If the regulatory-defined timelines have elapsed and the supplier has not taken any of the following actions; control the cross connection, remove the cross connection or suspends service to the identified connection***, then the supplier is allowing, or permitting, the cross connection to exist and is in violation of Regulation 11.

  *** Note to supplier. Before suspension of service can be considered appropriate action the department expects that the supplier will confirm the following:

- The connection downstream of the valve used to suspend the service does not remain pressurized because the customer has access to an alternative source of water or a storage tank onsite

- If the cross connection is to a fire suppression system; suspension of service would not result in the building being inadequately protected from loss of life through fire. If there are service connections at the property separate from the fire suppression system causing the cross connection, a supplier may suspend service to one or all of those other service lines (e.g. domestic or irrigation) as an appropriate action.

- The supplier may receive a department approved alternative compliance schedule for identified cross connections that have not been controlled within 120 days. Department-approval of an alternative compliance schedule means either an email or other written communication from the department. The department has provided in
  for such request.

- Suppliers must specify the process that the water system will use to require the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections. Generally, this is specified in one of the following: local government ordinances, user agreements or the public water system assumes full responsibility.

(iii) Identification of Cross Connections and Backflow Prevention Assembly or Backflow Prevention Method Selection

If the supplier discovers an uncontrolled cross connection and believes that a backflow contamination event has not occurred, the supplier must: first determine the type of backflow prevention assembly or backflow prevention method needed to control the cross connection and second install and maintain or require the customer to install and maintain a backflow prevention assembly or backflow prevention method at the uncontrolled cross connection, suspend service to the customer, or remove the cross connection, no later than 120 days after its discovery.

***Note to supplier. Suppliers should include in the written BPCCC program guidelines and criteria used to select the type of backflow prevention assembly or method used to control an identified cross connection. Guidelines and criteria should address examples of cross connections throughout the water systems distribution system along with the corresponding appropriate backflow prevention assembly and or backflow prevention method used to control the identified cross connection. Part 4.3 of SDWP

provides various examples of backflow prevention assemblies and methods and when the use of such assemblies and methods may be appropriate.

(v & vi) ***Tracking & Certified Tester Verification***

Suppliers must specify the tracking mechanism it will use to verify the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections. This section may include the process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control Technician

***Note to supplier. Please provide a tracking spreadsheet or description of program or other method which the supplier is using to verify performance and compliance with Regulation 11.

i. To be considered adequate, test reports used to document compliance with Regulation 11 must include all of the following:

Assembly or method information:

a. Assembly or method type; RPZ double ck
b. Assembly or method location; 2595 SE Grapevine rd
c. Assembly make, model and serial number; Watts 1 ¼ LfOO7M2QT
d. Assembly size; 1/1/4
e. Test date; and,
f. Test result (pass/fail).

Certified Cross-Connection Control Technician information:

a. Certified Cross-Connection Control Technician certification agency;
b. Certification number;
c. Certification expiration date or statement that certification is current;
d. As an alternative to a-c, suppliers may provide documentation of an alternative validation process such as electronic login to reporting software where only current, certified cross-connection control technicians (or their companies) are given a login.

APPENDIX D: Backflow Prevention and Cross-Connection Control Rule

Idledale Water and Sanitation Dist.

Annual Report

Purpose

Section 11.39 of the Colorado Department of Public Health & Environment Water Quality Control Commission's Colorado Primary Drinking Water Regulation 5 CCR 1002-11 (Regulation 11), requires that suppliers create a report to demonstrate compliance with the Backflow Prevention and Cross-Connection Control (BPCCC) Rule. This BPCCC Report summarizes the performance of the public water system's program. Beginning in 2017, the supplier must develop a written BPCCC program report for the previous calendar year (2016) and for each calendar year thereafter. The supplier must complete the report by May 1 of the following year and keep a record of the report for department review.

Submittal Requirements

The BPCCC annual report is due May 1 each year, however, it is not required to be submitted to the department unless a violation is identified. The department will review the BPCCC annual report during sanitary surveys but reserves the ability to request it at any time.

If a BPCCC violation occurs, Regulation 11.39(7) requires that the violation(s) must be reported to the department no later than 48 hours after the violation(s) occurs. In accordance with Regulation 11.36(2)(b) the department will request that the supplier submit a copy of the BPCCC annual report documenting the identified violation. Please submit a copy of the BPCCC annual report via the department's Drinking Water Portal which can be found at and send to the attention of the department's Backflow Prevention and Cross-Connection Control Specialist.

Public Water System Name and PWSID:	Idledale Water and Sanitation District CO0130055
Public Water System Owner:	Town of Idledale
BPCCC Administrative Contact:	AJ Beckman
Address:	PO Box 52 Idledale, CO 80453
Compliance Year	2016
Email:	Abeckman@SDMS.com
Phone:	303-987-0835

Signatures of Owner or Administrative Contact:

Effective Date	Name	Signature
12/2/2000	Aj Beckman	AJ

Attachment 7
2022 Annual Budget

IDLEDALE WATER AND SANITATION DISTRICT

ANNUAL BUDGET

FOR THE YEAR ENDING DECEMBER 31, 2022

IDLEDALE WATER AND SANITATION DISTRICT
SUMMARY
2022 BUDGET
WITH 2019 ACTUAL AND 2020 ESTIMATED
For the Years Ended and Ending December 31,

10/14/21

	ACTUAL 2020	BUDGET 2021	ACTUAL 8/31/21	ESTIMATED 2021	BUDGET 2022
BEGINNING FUND BALANCES	$ 167,831	$ 62,036	$ 68,947	$ 68,947	$ 83,918
REVENUE					
Property taxes	288,107	328,960	318,161	328,000	322,335
Specific ownership tax	21,600	23,030	16,824	25,200	16,460
Water service fees	2,682	5,000	-	-	3,900
Grant revenue	11,315	20,000	9,819	15,000	25,000
Bank loan	-	2,000	-	-	265,000
Net investment income	1,720	500	268	320	80
Total revenue	325,424	379,490	345,072	368,520	632,775
TRANSFERS IN	-	-	-	-	26,000
Total funds available	493,255	441,526	414,019	437,467	742,693
EXPENDITURES					
General and administrative	89,600	85,853	46,068	85,137	92,960
Operations and maintenance	152,984	116,208	59,544	97,300	118,208
Debt Service	88,552	88,549	15,453	88,549	113,556
Capital Projects	93,172	85,000	44,645	80,000	295,000
Contingency	-	4,390	-	2,563	5,833
Total expenditures	424,308	380,000	165,710	353,549	625,556
TRANSFERS OUT	-	-	-	-	26,000
Total expenditures and transfers out requiring appropriation	424,308	380,000	165,710	353,549	651,556
ENDING FUND BALANCES	$ 68,947	$ 61,526	$ 248,309	$ 83,918	$ 91,137

No assurance provided. See summary of significant assumptions.

IDLEDALE WATER AND SANITATION DISTRICT
PROPERTY TAX SUMMARY INFORMATION
2022 BUDGET
WITH 2019 ACTUAL AND 2020 ESTIMATED
For the Years Ended and Ending December 31,

10/14/21

	ACTUAL 2020	BUDGET 2021	ACTUAL 8/31/21	ESTIMATED 2021	BUDGET 2022
ASSESSED VALUATION					
Jefferson County					
Residential	$ 3,564,073	$ 3,569,627	$ 3,569,627	$ 3,569,627	$ 3,468,294
Commercial	90,412	90,412	90,412	90,412	93,453
State assessed	150,104	161,312	161,312	161,312	199,119
Vacant land	48,759	48,759	48,759	48,759	31,308
	3,853,348	3,870,110	3,870,110	3,870,110	3,792,174
Adjustments	-	-	-	-	-
Certified Assessed Value	$ 3,853,348	$ 3,870,110	$ 3,870,110	$ 3,870,110	$ 3,792,174
MILL LEVY					
General	52.000	62.000	62.000	62.000	62.000
Debt Service	23.000	23.000	23.000	23.000	23.000
Total mill levy	75.000	85.000	85.000	85.000	85.000
PROPERTY TAXES					
General	$ 200,374	$ 239,947	$ 239,947	$ 239,947	$ 235,115
Debt Service - 2006	88,627	89,013	89,013	89,013	87,220
Levied property taxes	289,001	328,960	328,959	328,959	322,335
Adjustments to actual/rounding	(894)	-	(10,798)	(959)	-
Budgeted property taxes	$ 288,107	$ 328,960	$ 318,161	$ 328,000	$ 322,335
BUDGETED PROPERTY TAXES					
General	$ 199,754	$ 239,947	$ 234,258	$ 239,000	$ 235,115
Debt Service	88,353	89,013	83,903	89,000	87,220
	$ 288,107	$ 328,960	$ 318,161	$ 328,000	$ 322,335

No assurance provided. See summary of significant assumptions.

IDLEDALE WATER AND SANITATION DISTRICT
GENERAL FUND
2022 BUDGET
WITH 2019 ACTUAL AND 2020 ESTIMATED
For the Years Ended and Ending December 31,

10/14/21

	ACTUAL 2020	BUDGET 2021	ACTUAL 8/31/21	ESTIMATED 2021	BUDGET 2022
BEGINNING FUND BALANCE	$ 167,831	$ 62,031	$ 68,934	$ 68,934	$ 83,384
REVENUE					
Property taxes	199,754	239,947	234,258	239,000	235,115
Specific ownership tax	21,600	23,030	16,824	25,200	16,460
Water service fees	2,682	5,000	-	-	3,900
Grant revenue	11,315	20,000	9,819	15,000	25,000
Bank loan	-	-	-	-	263,000
Net investment income	1,508	300	201	250	80
Total revenue	236,859	288,277	261,102	279,450	543,555
Total funds available	404,690	350,308	330,036	348,384	626,939
EXPENDITURES					
General and administrative					
Accounting	30,704	30,000	17,681	28,000	30,000
Audit	8,000	4,000	-	4,000	4,000
Cost of issuance	-	-	-	-	3,000
County Treasurer's fees	2,999	3,600	3,495	3,590	3,530
Director fees	3,700	2,000	-	1,800	3,000
District management	22,818	20,000	12,701	20,000	21,000
Dues and licenses	485	500	597	600	600
Insurance	8,463	9,000	10,009	10,009	11,000
Legal	10,890	15,000	-	15,000	15,000
Miscellaneous	286	500	497	700	500
Office supplies/postage	992	1,000	1,088	1,200	1,000
Payroll taxes	207	153	-	138	230
Publications	56	100	-	100	100
Operations and maintenance					
Equipment rental	2,832	1,000	-	-	1,000
Payroll taxes - plant operator salary	3,460	4,208	11,024	12,300	4,208
Plant operator salary	53,443	55,000	23,676	45,000	55,000
Repairs and maintenance	36,061	10,000	11,977	20,000	15,000
Supplies	140	500	-	-	500
Training	-	500	-	-	500
Treatment and testing	11,222	12,000	5,991	10,000	15,000
Utilities	5,867	8,000	6,876	10,000	12,000
Water purchases/Augmentation/Hauling	39,959	25,000	-	-	15,000
Capital					
Engineering	45,241	25,000	21,044	35,000	40,000
Legal	-	5,000	-	-	-
Management	1,781	5,000	2,964	5,000	5,000
Furniture and equipment	7,807	-	-	-	-
Water distribution system	38,343	50,000	20,637	40,000	250,000
Contingeny	-	2,939	-	2,563	3,833
Total expenditures	335,756	290,000	150,257	265,000	510,000
TRANSFERS OUT					
Debt Service Fund	-	-	-	-	26,000
Total transfers out	-	-	-	-	26,000
Total expenditures and transfers out requiring appropriation	335,756	290,000	150,257	265,000	536,000
ENDING FUND BALANCE	$ 68,934	$ 60,308	$ 179,779	$ 83,384	$ 90,939
EMERGENCY RESERVE	$ 7,200	$ 8,600	$ 7,800	$ 8,400	$ 8,400

No assurance provided. See summary of significant assumptions.

IDLEDALE WATER AND SANITATION DISTRICT
DEBT SERVICE FUND
2022 BUDGET
WITH 2019 ACTUAL AND 2020 ESTIMATED
For the Years Ended and Ending December 31,

10/14/21

	ACTUAL 2020	BUDGET 2021	ACTUAL 8/31/21	ESTIMATED 2021	BUDGET 2022
BEGINNING FUND BALANCE	$ -	5	$ 13	$ 13	$ 534
REVENUE					
Property taxes	88,353	89,013	83,903	89,000	87,220
Other revenue	-	2,000	-	-	2,000
Net investment income	212	200	67	70	-
Total revenue	88,565	91,213	83,970	89,070	89,220
TRANSFERS IN					
General Fund	-	-	-	-	26,000
Total transfers in	-	-	-	-	26,000
Total funds available	88,565	91,218	83,983	89,083	115,754
EXPENDITURES					
County Treasurer's fees	1,327	1,335	1,240	1,335	1,308
Loan interest	28,425	26,614	14,213	26,614	24,748
Loan principal	58,800	60,600	-	60,600	62,500
Debt service on new loan	-	-	-	-	25,000
Contingency	-	1,451	-	-	2,000
Total expenditures	88,552	90,000	15,453	88,549	115,556
Total expenditures and transfers out requiring appropriation	88,552	90,000	15,453	88,549	115,556
ENDING FUND BALANCE	$ 13	$ 1,218	$ 68,530	$ 534	$ 198

No assurance provided. See summary of significant assumptions.

IDLEDALE WATER AND SANITATION DISTRICT
2022 BUDGET
SUMMARY OF SIGNIFICANT ASSUMPTIONS

Services Provided

Idledale Water and Sanitation District (the District), a quasi-municipal corporation and political subdivision of the state of Colorado, was organized by order and decree of the District Court for Jefferson County, and is governed pursuant to provisions of the Colorado Special District Act (Title 32, Article 1, Colorado Revised Statutes). The District's service area is located in the Town of Idledale, Jefferson County, Colorado. The District was established in 1947 provide for the orderly and uniform administration of water and sewer operation within the jurisdictional boundaries of the District. The district currently serves approximately 133 connected water taps. The District does not currently provide any sewer services. The District's primary revenues are property taxes and water service fees. The District is governed by an elected Board of Directors.

The District currently has two employees. All other administrative functions are contracted.

The District prepares its budget on the modified accrual basis of accounting in accordance with the requirements of Colorado Revised Statutes C.R.S. 29-1-105 using its best estimates as of the date of the budget hearing. These estimates are based on expected conditions and its expected course of actions. The assumptions disclosed herein are those that the District believes are significant to the budget. There will usually be differences between the budget and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material.

Revenues

Property Taxes

Property taxes are levied by the District's Board of Directors. The levy is based on assessed valuations determined by the County Assessor generally as of January 1 of each year. The levy is normally set by December 15 by certification to the County Commissioners to put the tax lien on the individual properties as of January 1 of the following year. The County Treasurer collects the determined taxes during the ensuing calendar year. The taxes are payable by April or, if in equal installments, at the taxpayer's election, in February and June. Delinquent taxpayers are notified in August, and generally, sale of the tax liens on delinquent properties are held in November or December. The County Treasurer remits the taxes collected monthly to the District.

The calculation of the taxes levied is displayed on the Property Tax Summary page of the budget using the mill levy adopted by the District.

Specific Ownership Taxes

Specific ownership taxes are set by the State and collected by the County Treasurer, primarily on vehicle licensing within the County as a whole. The specific ownership taxes are allocated by the County Treasurer to all taxing entities within the County. The budget assumes that the District's share will be equal to approximately 7% of the property taxes collected.

Revenues (continued)

Interest Income

Interest to be earned on the District's debt service funds has been estimated based on an average interest rate of approximately 0.10%.

Service Fees

The District charges customers residing outside the District for water, sewer and storm water services.

Grant Revenue

The District has budgeted receiving grant funds from the Department of Local Affairs or other applicable agencies.

Bank Loan

It is anticipated that the District will secure a bank loan for the additional authorized but unissued debt to fund engineering and capital improvements for the District's water system.

Expenditures

General, Administrative and Operating Expenditures

General, administrative and operating expenditures have been provided based on estimates of the District's Board of Directors and consultants and include the estimated costs of operating water and sewer facilities, maintaining streets and retaining walls, and the services necessary to maintain the District's administrative viability such as legal, accounting, managerial, insurance, meeting, and other administrative expenditures.

Debt Service

Principal and interest payments in 2022 are provided based on the debt amortization schedule from the Series 2017 Refunding and Improvement Loan (discussed under Debt and Leases).

Capital Expenditures

The District has budgeted expenditures for the repairs and improvements to the Districts water system in accordance with a water system engineering study done in 2021.

IDLEDALE WATER AND SANITATION DISTRICT
2022 BUDGET
SUMMARY OF SIGNIFICANT ASSUMPTIONS

Debt and Leases

General Obligation Refunding and Improvement Loan – Series 2017

On December 21, 2017, the District obtained from NBH Bank a $1,037,000 General Obligation Refunding and Improvement Loan, Series 2017 (Series 2017 Loan) for the purpose of advance refunding the District's Series 2009 Water Activity Enterprise Revenue Bond (Series 2009 Bond), funding a Loan Project Fund, and paying the cost of issuance of the Series 2017 Loan. Interest on the Series 2017 Loan is 3.08% per annum, payable semiannually on each June 1 and December 1, commencing on June 1, 2018. Principal payments are due annually on December 1, commencing on December 1, 2018. The Series 2017 Loan matures on December 1, 2032.

With the issuance of the Series 2017 Loan, sufficient funds were placed in escrow to advance refund the principal and interest on the Series 2009 Bond, which will mature on April 1, 2019. The Series 2009 Bond is considered to be defeased and is not considered to be a liability of the District. The reacquisition price of the Series 2009 Bond exceeded the net carrying amount by $30,955. This amount was recorded as a deferred outflow and is being amortized over the original remaining life of the Series 2009 Bond. The refunding resulted in an economic gain of $110,214 and a cash flow savings of $3,609 due to the average interest rate of the Series 2007 Loan being lower than the Series 2009 Bond.

The District has no outstanding operating or capital leases.

Reserves

Emergency Reserve

The District has provided for an Emergency Reserve equal to at least 3% of fiscal year spending for 2022 as defined under TABOR.

This information is an integral part of the accompanying budget.

IDLEDALE WATER AND SANITATION DISTRICT
SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY

$1,037,000 General Obligation
Refunding and Improvement Loan
Series 2017
Dated December 21, 2017
Interest Rate of 3.08%
Payable June 1 and December 1
Principal due December 1

	Principal	Interest	Total
2022	$ 62,500	24,748	87,248
2023	64,400	22,823	87,223
2024	66,400	20,839	87,239
2025	68,400	18,794	87,194
2026	70,500	16,688	87,188
2027	72,700	14,516	87,216
2028	75,000	12,277	87,277
2029	77,300	9,967	87,267
2030	79,600	7,586	87,186
2031	82,100	5,134	87,234
2032	84,600	2,606	87,206
	$ 803,500	$ 155,978	$ 959,478

No assurance provided. See summary of significant assumptions.

Attachment 8
20-Year Cash Flow Projection

Beginning Fund Balance	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**
Service Taps	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153
Revenue - Summary																					
Property Taxes	$ 322,335	$ 325,558	$ 328,814	$ 332,102	$ 335,423	$ 338,777	$ 342,165	$ 345,587	$ 349,043	$ 352,533	$ 356,058	$ 359,619	$ 363,215	$ 366,847	$ 370,516	$ 374,221	$ 377,963	$ 381,743	$ 385,560	$ 389,416	$ 393,310
Specific Ownership Tax	$ 16,460	$ 22,789	$ 23,017	$ 23,247	$ 23,480	$ 23,714	$ 23,952	$ 24,191	$ 24,433	$ 24,677	$ 24,924	$ 25,173	$ 25,425	$ 25,679	$ 25,936	$ 26,195	$ 26,457	$ 26,722	$ 26,989	$ 27,259	$ 27,532
Water Service Fees	$ 3,900	$ 4,020	$ 59,940	$ 60,384	$ 60,828	$ 61,272	$ 61,716	$ 62,160	$ 62,604	$ 63,048	$ 63,492	$ 63,936	$ 64,380	$ 64,824	$ 65,268	$ 65,712	$ 66,156	$ 66,600	$ 67,044	$ 67,488	$ 67,932
Grant Revenue	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
Bank Loan	$ 265,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Investment Income	$ 80	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenue	$ 632,775	$ 377,367	$ 436,771	$ 440,733	$ 444,731	$ 448,764	$ 452,833	$ 456,938	$ 461,080	$ 465,258	$ 469,474	$ 473,728	$ 478,020	$ 482,351	$ 486,720	$ 491,128	$ 495,577	$ 500,065	$ 504,593	$ 509,163	$ 513,774
Expenditures - Summary																					
General and Administrative	$ (92,960)	$ (93,890)	$ (94,828)	$ (95,777)	$ (96,735)	$ (97,702)	$ (98,679)	$ (99,666)	$ (100,662)	$ (101,669)	$ (102,686)	$ (103,713)	$ (104,750)	$ (105,797)	$ (106,855)	$ (107,924)	$ (109,003)	$ (110,093)	$ (111,194)	$ (112,306)	$ (113,429)
Operations and Maintenance	$ (118,208)	$ (119,390)	$ (120,584)	$ (121,790)	$ (123,008)	$ (124,238)	$ (125,480)	$ (126,735)	$ (128,002)	$ (129,282)	$ (130,575)	$ (131,881)	$ (133,200)	$ (134,532)	$ (135,877)	$ (137,236)	$ (138,608)	$ (139,994)	$ (141,394)	$ (142,808)	$ (144,236)
Debt Service	$ (113,556)	$ (113,556)	$ (113,556)	$ (113,556)	$ (113,556)	$ (113,556)	$ (113,556)	$ (113,556)	$ (113,556)	$ (113,556)	$ (113,556)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Projects	$ (295,000)	$ (2,401,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)	$ (50,000)
Contingency	$ (5,833)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenditures	$ (625,557)	$ (2,727,836)	$ (378,968)	$ (381,123)	$ (383,298)	$ (385,496)	$ (387,715)	$ (389,957)	$ (392,221)	$ (394,507)	$ (396,817)	$ (285,593)	$ (287,949)	$ (290,329)	$ (292,732)	$ (295,159)	$ (297,611)	$ (300,087)	$ (302,588)	$ (305,114)	$ (307,665)
Debt Service Fund																					
SRF Grant - Revenue	$ -	$ 2,401,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
SRF Grant - Expenditure (30yr, 0%)	$ -	$ -	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)
Debt Service Fund Revenue	$ -	$ 2,726,558	$ 328,814	$ 332,102	$ 335,423	$ 338,777	$ 342,165	$ 345,587	$ 349,043	$ 352,533	$ 356,058	$ 359,619	$ 363,215	$ 366,847	$ 370,516	$ 374,221	$ 377,963	$ 381,743	$ 385,560	$ 389,416	$ 393,310
Debt Service Fund Expenditures	$ -	$ -	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)	$ (80,033)
TOTAL REVENUE	$ 632,775	$ 3,103,926	$ 436,771	$ 440,733	$ 444,731	$ 448,764	$ 452,833	$ 456,938	$ 461,080	$ 465,258	$ 469,474	$ 473,728	$ 478,020	$ 482,351	$ 486,720	$ 491,128	$ 495,577	$ 500,065	$ 504,593	$ 509,163	$ 513,774
TOTAL EXPENDITURES	$ (625,557)	$ (2,727,836)	$ (459,002)	$ (461,156)	$ (463,332)	$ (465,529)	$ (467,748)	$ (469,990)	$ (472,254)	$ (474,541)	$ (476,850)	$ (365,627)	$ (367,983)	$ (370,362)	$ (372,766)	$ (375,193)	$ (377,644)	$ (380,121)	$ (382,621)	$ (385,147)	$ (387,698)
BEGINNING FUND TOTALS	$ 83,918	$ 91,136	$ 467,226	$ 444,995	$ 424,572	$ 405,972	$ 389,206	$ 374,291	$ 361,238	$ 350,064	$ 340,782	$ 333,406	$ 441,507	$ 551,545	$ 663,533	$ 777,488	$ 893,423	$ 1,011,355	$ 1,131,300	$ 1,253,272	$ 1,377,287
ENDING FUND TOTALS	$ 91,136	$ 467,226	$ 444,995	$ 424,572	$ 405,972	$ 389,206	$ 374,291	$ 361,238	$ 350,064	$ 340,782	$ 333,406	$ 441,507	$ 551,545	$ 663,533	$ 777,488	$ 893,423	$ 1,011,355	$ 1,131,300	$ 1,253,272	$ 1,377,287	$ 1,503,362
3 MONTH OPERATING RESERVE	$ 29,552	$ 29,848	$ 30,146	$ 30,447	$ 30,752	$ 31,059	$ 31,370	$ 31,684	$ 32,001	$ 32,321	$ 32,644	$ 32,970	$ 33,300	$ 33,633	$ 33,969	$ 34,309	$ 34,652	$ 34,999	$ 35,349	$ 35,702	$ 36,059
SRF Grant Balance	0	$ 2,401,000	$ 2,320,967	$ 2,240,933	$ 2,160,900	$ 2,080,867	$ 2,000,833	$ 1,920,800	$ 1,840,767	$ 1,760,733	$ 1,680,700	$ 1,600,667	$ 1,520,633	$ 1,440,600	$ 1,360,567	$ 1,280,533	$ 1,200,500	$ 1,120,467	$ 1,040,433	$ 960,400	$ 880,367

Attachment 9
Financial Audit Documentation

IDLEDALE WATER AND SANITATION DISTRICT
Jefferson County, Colorado

FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION

YEAR ENDED DECEMBER 31, 2020

IDLEDALE WATER AND SANITATION DISTRICT
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SIMMONS & WHEELER, P.C. Certified Public Accountants
304 Inverness Way South, Suite 490, Englewood, CO 80112 (303) 689-0833

Board of Directors
Idledale Water and Sanitation District
Jefferson County, Colorado

Independent Auditors' Report

We have audited the accompanying financial statements of the governmental activities and each major fund of the Idledale Water and Sanitation District, as of and for the year ended December 31, 2020, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the District's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting principles used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of the Idledale Water and Sanitation District as of December 31, 2020, and the respective changes in financial position and the respective budgetary comparison for the General Fund for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other-Matters

Required Supplementary Information
Management has omitted the management's discussion and analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

Other Information
Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise Idledale Water and Sanitation District's basic financial statements. The supplementary information as listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Simmons & Wheeler P.C.

Englewood, CO
August 25, 2021

BASIC FINANCIAL STATEMENTS

IDLEDALE WATER AND SANITATION DISTRICT
STATEMENT OF NET POSITION
DECEMBER 31, 2020

ASSETS		
Cash and Investments	$	2,951
Cash and Investments - Restricted		109,147
Accounts Receivable		2,599
Receivable from County Treasurer		1,796
Property Taxes Receivable		328,960
Capital Assets Not Being Depreciated		127,932
Capital Assets, Net of Accumulated Depreciation		1,005,394
Total Assets		1,578,779
LIABILITIES		
Accounts Payable		35,053
Payroll Liabilities		12,438
Due to County Treasurer		55
Accrued Loan Interest		2,218
Noncurrent Liabilities:		
Due Within One Year		60,600
Due in More Than One Year		803,500
Total Liabilities		913,864
DEFERRED INFLOWS OF RESOURCES		
Deferred Property Tax Revenue		328,960
Total Deferred Inflows of Resources		328,960
NET POSITION		
Net Investment in Capital Assets		371,105
Restricted		7,200
Unrestricted		(42,350)
Total Net Position	$	335,955

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2020

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net Revenues (Expenses) and Change in Net Position: Governmental Activities
Primary Government:					
Governmental Activities:					
General Government	$ 285,415	$ 2,682	$ -	$ 11,315	$ (271,418)
Interest and Related Costs on Long-Term Debt	29,601	-	-	-	(29,601)
Total Governmental Activities	$ 315,016	$ 2,682	$ -	$ 11,315	(301,019)
GENERAL REVENUES					
Property Taxes					288,107
Specific Ownership Taxes					21,600
Net Investment Income					1,720
Total General Revenues					311,427
CHANGE IN NET POSITION					10,408
Net Position - Beginning of Year					325,547
NET POSITION - END OF YEAR					$ 335,955

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
BALANCE SHEET –
GOVERNMENTAL FUNDS
DECEMBER 31, 2020

	General	Debt Service	Total Governmental Funds
ASSETS			
Cash and Investments	$ 2,951	$ -	$ 2,951
Cash and Investments - Restricted	109,079	68	109,147
Accounts Receivable	2,599	-	2,599
Accounts Receivable - County Treasurer	1,796	-	1,796
Property Taxes Receivable	239,947	89,013	328,960
Total Assets	$ 356,372	$ 89,081	$ 445,453
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES			
LIABILITIES			
Accounts Payable	$ 35,053	$ -	$ 35,053
Due to County Treasurer	-	55	55
Payroll Liabilities	12,438	-	12,438
Total Liabilities	47,491	55	47,546
DEFERRED INFLOWS OF RESOURCES			
Deferred Property Tax Revenue	239,947	89,013	328,960
Total Deferred Inflows of Resources	239,947	89,013	328,960
FUND BALANCES			
Restricted for:			
Emergency Reserves - TABOR	7,200	-	7,200
Debt Service	-	13	13
Capital Projects	101,879	-	101,879
Unassigned	(40,145)	-	(40,145)
Total Fund Balances	68,934	13	68,947
Total Liabilities, Deferred Inflows of Resources, and Fund Balances	$ 356,372	$ 89,081	
Amounts reported for governmental activities in the statement of net position are different because:			
Capital assets used in governmental activities are not financial resources and, therefore, are not reported in the funds.			1,133,326
Long-term liabilities are not due and payable in the current period and, therefore, are not reported in the funds.			
Loans Payable			(864,100)
Accrued Interest on Loans Payable			(2,218)
Net Position of Governmental Activities			$ 335,955

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
YEAR ENDED DECEMBER 31, 2020

	General	Debt Service	Total Governmental Funds
REVENUES			
Property Taxes	$ 199,754	$ 88,353	$ 288,107
Specific Ownership Taxes	21,600	-	21,600
Water Service Fees	2,682	-	2,682
Grant Revenue	11,315	-	11,315
Interest Income	1,508	212	1,720
Total Revenues	236,859	88,565	325,424
EXPENDITURES			
Administrative	89,600	1,327	90,927
Operations	152,984	-	152,984
Capital	93,172	-	93,172
Debt Service	-	87,225	87,225
Total Expenditures	335,756	88,552	424,308
NET CHANGE IN FUND BALANCES	(98,897)	13	(98,884)
Fund Balances - Beginning of Year	167,831	-	167,831
FUND BALANCES - END OF YEAR	$ 68,934	$ 13	$ 68,947

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES OF THE GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2020

Net Change in Fund Balances - Total Governmental Funds	$	(98,884)
Amounts reported for governmental activities in the statement of activities are different because:		
Governmental funds report capital outlays as expenditures. In the statement of activities, capital outlay is not reported as an expenditure. However, the statement of activities will report as depreciation expense the allocation of the cost of any depreciable assets over the estimated useful life of the asset. During the current period, this is the net amount of capital outlay.		
Capital Outlay		93,172
Depreciation Expense		(42,831)
The issuance of long-term debt provides current financial resources to governmental funds, while the repayment of principal of long-term debt consumes the current financial resources of governmental funds. Neither transaction, however, has any effect on net position. The net effect of these differences in the treatment of long-term debt is as follows:		
Loan Principal Payment		58,800
Some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in governmental funds:		
Accrued Interest on Loans Payable - Change in Liability		151
Change in Net Position of Governmental Activities	$	10,408

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
GENERAL FUND –
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
DECEMBER 31, 2020

	Budget		Actual	Variance with Final Budget Positive
	Original	Final	Amounts	(Negative)
REVENUES				
Property Taxes	$ 200,374	$ 200,374	$ 199,754	$ (620)
Specific Ownership Taxes	23,120	23,120	21,600	(1,520)
Water Service Fees	13,000	2,682	2,682	-
Grant Revenue	22,500	11,315	11,315	-
Interest Income	2,720	1,500	1,508	8
Total Revenues	261,714	238,991	236,859	(2,132)
EXPENDITURES				
Administrative:				
Director Fees	3,000	3,700	3,700	-
Dues/Licenses	-	500	485	15
Election/Publication	200	50	56	(6)
Insurance	9,000	8,500	8,463	37
Miscellaneous	2,000	300	286	14
Office Supplies/Postage	1,000	100	992	(892)
Payroll Taxes	240	240	207	33
Professional Services:				-
Audit/Accounting	15,000	39,000	38,704	296
Legal	20,000	10,000	10,890	(890)
Management	14,000	25,000	22,818	2,182
County Treasurer's Fees	3,006	3,000	2,999	1
Operations:				
Equipment Rental	1,000	3,000	2,832	168
Maintenance and Repairs	7,500	36,000	36,061	(61)
Plant Operator Salaries	56,000	54,000	53,443	557
Payroll Taxes	4,480	3,460	3,460	-
Supplies and Expenses	1,000	150	140	10
Training	500	-	-	-
Treatment and Testing	5,500	12,000	11,222	778
Utilities	9,000	6,000	5,867	133
Water Purchase/Augmentation/Hauling	65,000	46,000	39,959	6,041
Capital:				
Management	-	2,000	1,781	219
Engineering	45,000	45,000	45,241	(241)
Furniture and Equipment	-	10,000	7,807	2,193
Water Distribution System	5,000	38,000	38,343	(343)
Contingency	2,574	4,000	-	4,000
Total Expenditures	270,000	350,000	335,756	14,244
NET CHANGE IN FUND BALANCE	(8,286)	(111,009)	(98,897)	12,112
Fund Balance - Beginning of Year	272,318	167,831	167,831	-
FUND BALANCE - END OF YEAR	$ 264,032	$ 56,822	$ 68,934	$ 12,112

See accompanying Notes to Basic Financial Statements.

NOTE 1 DEFINITION OF REPORTING ENTITY

Idledale Water and Sanitation District (the District), a quasi-municipal corporation and political subdivision of the State of Colorado, was organized by order and decree of the District Court for Jefferson County, and is governed pursuant to provisions of the Colorado Special District Act (Title 32, Article 1, Colorado Revised Statutes). The District's service area is located in the Town of Idledale, Jefferson County, Colorado. The District was established in 1947 to provide for the orderly and uniform administration of water and sewer operation within the jurisdictional boundaries of the District. The district currently serves approximately 133 connected water taps. The District does not currently provide any sewer services. The District's primary revenues are property taxes, specific ownership taxes, and water service fees. The District is governed by an elected Board of Directors.

The District follows the Governmental Accounting Standards Board (GASB) accounting pronouncements which provide guidance for determining which governmental activities, organizations and functions should be included within the financial reporting entity. GASB pronouncements set forth the financial accountability of a governmental organization's elected governing body as the basic criterion for including a possible component governmental organization in a primary government's legal entity. Financial accountability includes, but is not limited to, appointment of a voting majority of the organization's governing body, ability to impose its will on the organization, a potential for the organization to provide specific financial benefits or burdens and fiscal dependency.

The District is not financially accountable for any other organization, nor is the District a component unit of any other primary governmental entity.

The District has two employees who perform plant operations functions. All administrative functions are contracted.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The more significant accounting policies of the District are described as follows:

Government-Wide and Fund Financial Statements

The government-wide financial statements include the statement of net position and the statement of activities. These financial statements include all of the activities of the District. The effect of interfund activity has been removed from these statements. Governmental activities are normally supported by property taxes and intergovernmental revenues.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Government-Wide and Fund Financial Statements (Continued)

The statement of net position reports all financial and capital resources of the District. The difference between the assets, deferred outflow of resources, liabilities, and deferred inflow of resources of the District is reported as net position.

The statement of activities demonstrates the degree to which the direct and indirect expenses of a given function or segment are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. Program revenues include 1) charges to customers or applicants who purchase, use, or directly benefit from goods, services, or privileges provided by a given function or segment, and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not properly included among program revenues are reported instead as general revenues.

Separate financial statements are provided for the governmental funds. Major individual governmental funds are reported as separate columns in the fund financial statements.

Measurement Focus, Basis of Accounting, and Financial Statement Presentation

The government-wide financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the District considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. The major sources of revenue susceptible to accrual are property and specific ownership taxes. All other revenue items are considered to be measurable and available only when cash is received by the District. Expenditures, other than interest on long-term obligations, are recorded when the liability is incurred, or the long-term obligation is due.

The District reports the following major governmental funds:

The General Fund is the District's primary operating fund. It accounts for all financial resources of the general government, except those required to be accounted for in another fund.

The Debt Service Fund accounts for the resources accumulated and payments made for principal and interest on long-term general obligation debt of the governmental funds.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Budgets

In accordance with the State Budget Law, the District's Board of Directors holds public hearings in the fall each year to approve the budget and appropriate the funds for the ensuing year. The appropriation is at the total fund expenditures level and lapses at year-end. The District's Board of Directors can modify the budget by line item within the total appropriation without notification. The appropriation can only be modified upon completion of notification and publication requirements. The District's original budget was for presentation as a propriety fund. With the change in accounting policy to governmental funds, the total budget was reallocated between the General Fund and the Debt Service Fund.

The District amended its annual budget for the year ended December 31, 2020.

Pooled Cash and Investments

The District follows the practice of pooling cash and investments of all funds to maximize investment earnings. Except when required by trust or other agreements, all cash is deposited to and disbursed from a single bank account. Cash in excess of immediate operating requirements is pooled for deposit and investment flexibility. Investment earnings are allocated periodically to the participating funds based upon each fund's average equity balance in the total cash.

Property Taxes

Property taxes are levied by the District's Board of Directors. The levy is based on assessed valuation determined by the County Assessor generally as of January 1 of each year. The levy is normally set by December 15 by certification to the County Commissioners to put the tax lien on the individual properties as of January 1 of the following year. The County Treasurer collects the determined taxes during the ensuring calendar year. The taxes are payable by April 30 or if in equal installments, at the taxpayer's election, in February and June. Delinquent taxpayers are notified in August and generally sales of the tax liens on delinquent property are held in November or December. The County Treasurer remits the taxes collected monthly to the District.

Property taxes, net of estimated uncollectible taxes, are recorded initially as deferred inflow of resources in the year they are levied and measurable. The unearned property tax revenues are recorded as revenue in the year they are available or collected.

Capital Assets

Capital assets, which include computer equipment and sewer system components, are reported by the District. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed.

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend the life of the asset are not capitalized. Improvements are capitalized and depreciated over the remaining useful lives of the related fixed assets, as applicable.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Capital Assets (Continued)

Depreciation expense has been computed using the straight-line method over the following estimated economic useful lives:

Water System	3 to 50 Years
Machine and Equipment	10 Years
Buildings	40 Years
Office Equipment	10 Years

Tap Fees and Construction Contributions

Public improvements contributed to the District by developers are recorded as capital contributions and additions to the systems at estimated fair value when received. Tap fees become collectible upon issuance of a tap permit and are classified as capital contributions at the time of collection.

Water Rights

The cost of water rights includes acquisition cost, legal, and engineering costs related to the development and augmentation of those rights. Since the rights have a perpetual life, they are not amortized. All other costs, including costs incurred for the protection of those rights, are expensed.

Deferred Inflows of Resources

In addition to liabilities, the statement of net position reports a separate section for deferred inflows of resources. This separate financial statement element, *deferred inflows of resources,* represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time. The District has one item that qualifies for reporting in this category. Accordingly, the item, *deferred property tax revenue,* is deferred and recognized as an inflow of resources in the period that the amount becomes available.

Equity

Net Position

For government-wide presentation purposes when both restricted and unrestricted resources are available for use, it is the District's practice to use restricted resources first, then unrestricted resources as they are needed.

Fund Balance

Fund balance for governmental funds should be reported in classifications that comprise a hierarchy based on the extent to which the government is bound to honor constraints on the specific purposes for which spending can occur. Governmental funds report up to five classifications of fund balance: nonspendable, restricted, committed, assigned, and unassigned. Because circumstances differ among governments, not every government or every governmental fund will present all of these components. The following classifications describe the relative strength of the spending constraints:

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Equity (Continued)

Fund Balance (Continued)

Nonspendable Fund Balance – The portion of fund balance that cannot be spent because it is either not in spendable form (such as prepaid amounts or inventory) or legally or contractually required to be maintained intact.

Restricted Fund Balance – The portion of fund balance that is constrained to being used for a specific purpose by external parties (such as bondholders), constitutional provisions, or enabling legislation.

Committed Fund Balance – The portion of fund balance that can only be used for specific purposes pursuant to constraints imposed by formal action of the government's highest level of decision-making authority, the Board of Directors. The constraint may be removed or changed only through formal action of the board of directors.

Assigned Fund Balance – The portion of fund balance that is constrained by the government's intent to be used for specific purposes but is neither restricted nor committed. Intent is expressed by the Board of Directors to be used for a specific purpose. Constraints imposed on the use of assigned amounts are more easily removed or modified than those imposed on amounts that are classified as committed.

Unassigned Fund Balance – The residual portion of fund balance that does not meet any of the criteria described above.

If more than one classification of fund balance is available for use when an expenditure is incurred, it is the District's practice to use the most restrictive classification first.

This District did not have any unused lines of credit as of December 31, 2020.

NOTE 3 CASH AND INVESTMENTS

Cash and investments as of December 31, 2020 are classified in the accompanying financial statements as follows:

Statement of Net Position:		
Cash and Investments	$	2,951
Cash and Investments - Restricted		109,147
Total Cash and Investments	$	112,098

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

Cash and investments as of December 31, 2020 consist of the following:

Deposits with Financial Institutions	$	10,950
Investments		101,148
Total Cash and Investments	$	112,098

Deposits with Financial Institutions

The Colorado Public Deposit Protection Act (PDPA) requires that all units of local government deposit cash in eligible public depositories. Eligibility is determined by state regulators. Amounts on deposit in excess of federal insurance levels must be collateralized. The eligible collateral is determined by the PDPA. PDPA allows the institution to create a single collateral pool for all public funds. The pool for all the uninsured public deposits as a group is to be maintained by another institution or held in trust. The market value of the collateral must be at least 102% of the aggregate uninsured deposits.

The state commissioners for banks and financial services are required by statute to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools.

At December 31, 2020, the District's cash deposits had a bank balance and a carrying balance of $10,950.

Investments

The District has adopted a formal investment policy which follows state statutes regarding investments.

The District generally limits its concentration of investments to those noted with an asterisk (*) below, which are believed to have minimal credit risk, minimal interest rate risk and no foreign currency risk. Additionally, the District is not subject to concentration risk or investment custodial risk disclosure requirements for investments that are in the possession of another party.

Colorado revised statutes limit investment maturities to five years or less unless formally approved by the board of directors. Such actions are generally associated with a debt service reserve or sinking fund requirements.

Colorado statutes specify investment instruments meeting defined rating and risk criteria in which local governments may invest which include:

- Obligations of the United States, certain U.S. government agency securities, and securities of the World Bank
- General obligation and revenue bonds of U.S. local government entities
- Certain certificates of participation

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

- Certain securities lending agreements
- Bankers' acceptances of certain banks
- Commercial paper
- Written repurchase agreements and certain reverse repurchase agreements collateralized by certain authorized securities
- Certain money market funds
- Guaranteed investment contracts
- Local government investment pools

As of December 31, 2020, the District had the following investments:

Investment	Maturity	Amount
Colorado Local Government Liquid Asset Trust (COLOTRUST)	Weighted-Average Under 60 Days	$ 101,148

COLOTRUST

The District invested in the Colorado Local Government Liquid Asset Trust (COLOTRUST) (the Trust), an investment vehicle established for local government entities in Colorado to pool surplus funds. The state securities commissioner administers and enforces all State statutes governing the Trust. The Trust operates similarly to a money market fund and each share is equal in value to $1.00. The Trust offers shares in two portfolios, COLOTRUST PRIME and COLOTRUST PLUS+. Both portfolios may invest in U.S. Treasury securities and repurchase agreements collateralized by U.S. Treasury securities. COLOTRUST PLUS+ may also invest in certain obligations of U.S. government agencies, highest rated commercial paper and any security allowed under CRS 24-75-601. A designated custodial bank serves as custodian for the Trust's portfolios pursuant to a custodian agreement. The custodian acts as safekeeping agent for the Trust's investment portfolios and provides services as the depository in connection with direct investments and withdrawals. The custodian's internal records segregate investments owned by the Trust. COLOTRUST is rated AAAm by Standard & Poor's. COLOTRUST records its investments at fair value and the District records its investment in COLOTRUST at net asset value as determined by fair value. There are no unfunded commitments, the redemption frequency is daily, and there is no redemption notice period.

NOTE 4 CAPITAL ASSETS

An analysis of the changes in capital assets for the years ended December 31, 2020 follows:

	Balance - December 31, 2019	Increases	Decreases	Balance - December 31, 2020
Capital Assets Not Being Depreciated:				
Land	$ 22,316	$ -	$ -	$ 22,316
Water Rights	105,616	-	-	105,616
Total Capital Assets, Not Being Depreciated	127,932	-	-	127,932
Capital Assets Being Depreciated:				
Building	1,576	-	-	1,576
Water System	1,777,561	85,365	-	1,862,926
Machinery and Equipment	44,555	7,807	-	52,362
Furniture and Equipment	916	-	-	916
Total Capital Assets Being Depreciated	1,824,608	93,172	-	1,917,780
Less Accumulated Depreciation For:				
Building	(1,576)	-	-	(1,576)
Water System	(822,508)	(42,311)	-	(864,819)
Machinery and Equipment	(44,555)	(520)	-	(45,075)
Furniture and Equipment	(916)	-	-	(916)
Total Accumulated Depreciation	(869,555)	(42,831)	-	(912,386)
Total Capital Assets Being Depreciated	955,053	50,341	-	1,005,394
Capital Assets, Net	$ 1,082,985	$ 50,341	$ -	$ 1,133,326

Depreciation expense for the year ended December 31, 2020, was charged to general government in the amount of $42,831.

NOTE 5 LONG-TERM DEBT

The following is an analysis of changes in long-term debt for the period ending December 31, 2020:

	Balance - December 31, 2019	Increases	Decreases	Balance - December 31, 2020	Amounts Due Within One Year
Loans From Direct Borrowings					
Series 2017 Loan	$ 922,900	$ -	$ 58,800	$ 864,100	$ 60,600
Subtotal Loans from Direct Borrowings	922,900	-	58,800	864,100	60,600
Total Long-Term Obligations	$ 922,900	$ -	$ 58,800	$ 864,100	$ 60,600

A description of the long-term obligations as of December 31, 2020, is as follows:

General Obligation Refunding and Improvement Loan – Series 2017

On December 21, 2017, the District obtained from NBH Bank a $1,037,000 General Obligation Refunding and Improvement Loan, Series 2017 (Series 2017 Loan) for the purpose of advance refunding the District's Series 2009 Water Activity Enterprise Revenue Bond (Series 2009 Bond), funding a Loan Project Fund, and paying the cost of issuance of the Series 2017 Loan. Interest on the Series 2017 Loan is 3.08% per annum, payable semiannually on each June 1 and December 1, commencing on June 1, 2018. Principal payments are due annually on December 1, commencing on December 1, 2018. The Series 2017 Loan matures on December 1, 2032.

The Series 2017 Loan is secured with Pledged Revenues consisting of: (i) such portion of the revenue derived by the imposition of the Required Mill Levy as is sufficient to pay the principal of, premium, if any, and interest on the Series 2017 Loan as the same becomes due; (ii) the Specific Ownership Taxes attributable to the Required Mill Levy; and (iii) all other legally available moneys of the District.

With the issuance of the Series 2017 Loan, sufficient funds were placed in escrow to advance refund the principal and interest on the Series 2009 Bond, which will mature on April 1, 2019. The Series 2009 Bond is considered to be defeased and is not considered to be a liability of the District. The reacquisition price of the Series 2009 Bond exceeded the net carrying amount by $30,955. This amount was recorded as a deferred outflow and is being amortized over the original remaining life of the Series 2009 Bond and has been fully amortized as of December 31, 2019. The refunding resulted in an economic gain of $110,214 and a cash flow savings of $3,609 due to the average interest rate of the Series 2007 Loan being lower than the Series 2009 Bond.

The occurrence of any one or more of the following events constitutes an Event of Default under the terms of the Series 2017 Loan: (a) failure to pay principal and interest when due; (b) failure to impose the Required Mill Levy or to apply the Pledged Revenues to the Series 2017 Loan; (c) a default in the performance or observance of any of the covenants, agreements, or conditions of the Series 2017 Loan, or (d) filing a petition under bankruptcy laws seeking to adjust the obligation under the Series 2017 Loan. No Events of Default have occurred since the issuance of the Series 2017 Loan.

NOTE 5 LONG-TERM DEBT (CONTINUED)

The District's long-term debt will mature as follows:

Year Ending December 31,	Principal	Interest	Total
2021	$ 60,600	$ 26,614	$ 87,214
2022	62,500	24,748	87,248
2023	64,400	22,823	87,223
2024	66,400	20,839	87,239
2025	68,400	18,794	87,194
2026-2030	375,100	61,034	436,134
2031-2032	166,700	7,740	174,440
Total	$ 864,100	$ 182,592	$ 1,046,692

Authorized Debt

As of December 31, 2020, the District had no remaining unissued voted general obligation debt authorization.

NOTE 6 NET POSITION

The District has net position consisting of three components - net investment in capital assets, restricted, and unrestricted.

The net investment in capital assets component of net position consists of capital assets that will be owned by the District, net of accumulated depreciation and reduced by the outstanding balances of bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. As of December 31, 2020, the District had net investment in capital assets calculated as follows:

Net Investment in Capital Assets:	
Capital Assets, Net	$ 1,133,326
Less: Outstanding Loan Payable - Current Amount	(60,600)
Outstanding Loan Payable - Noncurrent Amount	(803,500)
Add: Unspent Loan Proceeds	101,879
Net Investment in Capital Assets	$ 371,105

Restricted net position includes assets that are restricted for use either externally imposed by creditors, grantors, contributors, or laws and regulations of other governments or imposed by law through constitution provisions or enabling legislation. The District had $7,200 of funds restricted for TABOR emergency reserves.

The unrestricted component of net position is the net amount of the assets, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position. The District had a deficit in unrestricted net position. The deficit is the result of the District's capital assets, which were funded with long-term debt, being depreciated over the useful lives of the assets.

NOTE 7 RISK MANAGEMENT

Except as provided in the Colorado Governmental Immunity Act, the District may be exposed to various risks of loss related to torts; thefts of, damage to, or destruction of assets; errors or omissions; injuries to employees; or acts of God.

The District is a member of the Colorado Special Districts Property and Liability Pool (the Pool). The Pool is an organization created by intergovernmental agreement to provide property, liability, public officials' liability, boiler and machinery and workers compensation coverage to its members. Settled claims have not exceeded this coverage in any of the past three fiscal years.

The District pays annual premiums to the Pool for liability, property, public officials' liability, and workers' compensation coverage. In the event aggregated losses incurred by the Pool exceed amounts recoverable from reinsurance contracts and funds accumulated by the Pool, the Pool may require additional contributions from the Pool members. Any excess funds which the Pool determines are not needed for purposes of the Pool may be returned to the members pursuant to a distribution formula.

NOTE 8 TAX, SPENDING, AND DEBT LIMITATIONS

Article X, Section 20 of the Colorado Constitution, commonly known as the Taxpayer's Bill of Rights (TABOR), contains tax, spending, revenue, and debt limitations which apply to the state of Colorado and all local governments.

Spending and revenue limits are determined based on the prior year's Fiscal Year Spending adjusted for allowable increases based upon inflation and local growth. Fiscal Year Spending is generally defined as expenditures plus reserve increases with certain exceptions. Revenue in excess of the Fiscal Year Spending limit must be refunded unless the voters approve retention of such revenue.

On November 7, 2017, the voters within the District authorized an increase in property taxes generated from an operations and maintenance mill levy of up to $300,000 annually, without regard to any spending, revenue-raising, or other limitation contained within Article X, Section 20 of the Colorado Constitution, the limits imposed on increases in property taxation by Section 29-1-301, Colorado Revised Statutes in any year, or any other law which purports to limit the District's revenues or expenditures as it currently exists or as it may be amended in the future.

TABOR requires local governments to establish Emergency Reserves. These reserves must be at least 3% of Fiscal Year Spending (excluding bonded debt service). Local governments are not allowed to use the emergency reserves to compensate for economic conditions, revenue shortfalls, or salary or benefit increases.

The District's management believes it is in compliance with the provisions of TABOR. However, TABOR is complex and subject to interpretation. Many of the provisions, including the interpretation of how to calculate Fiscal Year Spending limits and qualification as an enterprise will require judicial interpretation.

SUPPLEMENTARY INFORMATION

IDLEDALE WATER AND SANITATION DISTRICT
DEBT SERVICE FUND
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE - BUDGET AND ACTUAL
YEAR ENDED DECEMBER 31, 2020

	Original and Final Budget	Actual Amounts	Variance with Final Budget Positive (Negative)
DEBT SERVICE			
REVENUES			
Property Taxes	$ 88,627	$ 88,353	$ (274)
Investment Income	660	212	(448)
Other Income	2,000	-	(2,000)
Total Revenues	91,287	88,565	(2,722)
EXPENDITURES			
County Treasurer's Fees	1,329	1,327	2
Loan Interest	28,425	28,425	-
Loan Principal	58,800	58,800	-
Contingency	1,446	-	1,446
Total Expenditures	90,000	88,552	1,448
NET CHANGE IN FUND BALANCE	1,287	13	(1,274)
Funds Balance - Beginning of Year	-	-	-
FUND BALANCE - END OF YEAR	$ 1,287	$ 13	$ (1,274)

OTHER INFORMATION

IDLEDALE WATER AND SANITATION DISTRICT
SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY
DECEMBER 31, 2020

Year Ending December 31,	$1,037,000 General Obligation Refunding and Improvement Loan Series 2017 Dated December 21, 2017 Interest Rate of 3.08% Payable June 1 and December 1 Principal Due December 1		
	Principal	Interest	Total
2021	$ 60,600	$ 26,614	$ 87,214
2022	62,500	24,748	87,248
2023	64,400	22,823	87,223
2024	66,400	20,839	87,239
2025	68,400	18,794	87,194
2026	70,500	16,688	87,188
2027	72,700	14,516	87,216
2028	75,000	12,277	87,277
2029	77,300	9,967	87,267
2030	79,600	7,586	87,186
2031	82,100	5,134	87,234
2032	84,600	2,606	87,206
Total	$ 864,100	$ 182,592	$ 1,046,692

IDLEDALE WATER AND SANITATION DISTRICT
SCHEDULE OF ASSESSED VALUATION, MILL LEVY, AND PROPERTY TAXES COLLECTED
DECEMBER 31, 2020

Year Ended December 31,	Prior Year Assessed Valuation for Current Year Property Tax Levy	Mills Levied	Total Property Taxes Levied	Total Property Taxes Collected	Percent Collected to Levied
2016	$ 2,387,433	9.344	$ 22,308	$ 21,968	98.48 %
2017	2,385,184	9.475	22,600	22,581	99.92
2018	2,859,999	74.963	214,394	214,942	100.26
2019	2,890,518	74.406	215,071	213,814	99.42
2020	3,853,348	75.000	289,001	288,107	99.69
Estimated for the Year Ending December 31,					
2021	$ 3,870,110	85.000	$ 328,960		

NOTE: Property taxes collected in any one year include collection of delinquent property taxes assessed in prior years, as well as reductions for property tax refunds or abatements. Information received from the County Treasurer does not permit identification of specific year of assessment.

Attachment 10
General Liability Insurance

Colorado Special Districts
Property and Liability Pool

Property and Liability Coverage

Invoice

Named Member:
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

Broker of Record:
TCW Risk Management
384 Inverness Parkway
Suite 170
Englewood, CO 80112

Coverage No.	Entity ID	Effective Date	Expiration Date	Invoice Date
POL-0010795	48703	1/1/2022	EOD 12/31/2022	12/15/2021

Coverage	Contribution
General Liability	$835.00
Property	$3,260.00
Crime	$135.00
Non-Owned Auto Liability	$132.00
Hired Auto Physical Damage	$65.00
Equipment Breakdown	$711.00
No-Fault Water Intrusion & Sewer Backup	$209.00
Public Officials Liability	$576.00
Pollution	$0.00

Total Contribution	**$5,923.00**
Estimated Annualized Contribution (for budgeting purposes only)	$5,923.00

Please note: where included above, Hired Auto Physical Damage and Non-Owned Auto Liability are mandatory coverages and may not be removed. No-Fault Water Intrusion & Sewer Backup coverage may only be removed with completion of the No-Fault Opt Out Endorsement.

The following discounts are applied (Not applicable to minimum contributions):

12.53% Continuity Credit Discount
10% Direct Discount
8% Multi Program Discount for WC Program Participation

Payment Due Upon Receipt

Payment evidences "acceptance" of this coverage. The terms of the Intergovernmental Agreement (IGA) require timely payment to prevent automatic cancellation of coverage. Please return this invoice and reference the coverage number on your check to help us apply your payment correctly. Only prior notice to the board of directors of the Colorado Special Districts Property and Liability Pool and subsequent approval may extend cancellation provision.

Please remit to: Colorado Special Districts Property and Liability Pool
c/o McGriff Insurance Services, Inc.
PO Box 1539
Portland, OR 97207-1539

Wire transfer available upon request.
Billing questions:
billing@csdpool.org
800-318-8870 ext. 3

Colorado Special Districts
Property and Liability Pool

Payment Instructions

The annual contribution for coverage with the Pool is due upon receipt of this invoice. To make a payment, please mail your check and a copy of your invoice to:

Colorado Special Districts Property & Liability Pool
c/o McGriff Insurance Services, Inc.
PO Box 1539
Portland, OR 97207

For express or overnight mail services, please use the address below:

Colorado Special Districts Property & Liability Pool
c/o McGriff Insurance Services, Inc.
1800 SW 1st Ave, Suite 400
Portland, OR 97201

To ensure that your payment is accurately applied, please always include a copy of the invoice.

The Pool does not accept a credit card payment at this time; however, if you would like to make payment via wire transfer, please let us know and we will be happy to provide you with wiring instructions.

Please be advised that in accordance with the Intergovernmental Agreement (IGA), automatic expulsion will occur on the 60th day should your account not be current. If you wish to reinstate your district's coverage after cancellation has occurred, a $100 reinstatement fee will apply.

If your district requires a payment extension, please submit a written request within ten (10) business days from the date of the invoice, for consideration by the CSD Pool Board of Directors.

Finally, all members in the Pool must be members in good standing with the Special District Association of Colorado (SDA). Please visit the SDA website at sdaco.org for member information.

Please contact us at billing@csdpool.org or 800-318-8870 ext. 3 for billing questions.

Renewal Documents and Invoice
1/1/2022 to EOD 12/31/2022

Acceptance of this coverage is evidenced only by payment of the enclosed invoice by January 1, 2022.

The following renewal documents are attached where applicable:

1. Invoice: Payment is due upon receipt. Please return a copy of the invoice with your payment to ensure that it is applied correctly. We have attached a Coverage Contribution instructions sheet which provides details about your payment.

2. Comparison of Annual Contributions.

3. Deductible Options:
   - Provides the difference in cost by coverage line if you were to increase or decrease the deductible for that specific coverage.

4. Quote for Excess Liability limits for your consideration:
   - Limits of up to $8 million, in excess of the primary $2 million Liability limit, are available. Although the primary $2 million Liability limit is sufficient to cover the CGIA tort cap, we do recommend you consider purchasing higher limits primarily due to special districts' unlimited liability to federal civil rights, discrimination, harassment, whistle blowing, and other employment-related practices claims.

5. Coverage Declaration Pages: Informational page summarizing the key points about the coverage provided including limits and deductible descriptions for all coverage provided. Full coverage forms will be available at csdpool.org/documents on January 1, 2022.

6. Schedules: Lists of exposures and values.

7. Certificates of coverage: Originals are mailed directly to the Certificate Holders.

8. Automobile identification cards: Hard copies will be mailed.

Colorado Special Districts
Property and Liability Pool

Annual Comparison of 2022 and 2021 contributions.

Loss Ratios based on participation years from 2014 to 2021

Idledale Water and Sanitation District

Year	Contribution
2022	$5,923.00
2021	$5,438.00
Difference	$485.00
% Difference	8.92%

General Liability	Contribution	TOE
Yr. 2022	$835.00	$208,000.00
Yr. 2021	$520.00	$115,000.00
Difference	$315.00	$93,000.00
% Difference	60.58%	80.87%
Loss Ratio	0.00%	

Equipment Breakdown	Contribution
Yr. 2022	$711.00
Yr. 2021	$689.00
Difference	$22.00
% Difference	3.19%
Loss Ratio	0.00%

Auto Liability	Contribution	Auto Count
Yr. 2022	$132.00	0
Yr. 2021	$132.00	0
Difference		0
% Difference	NaN	0.00%
Loss Ratio	0.00%	

Crime	Contribution
Yr. 2022	$135.00
Yr. 2021	$135.00
Difference	$0.00
% Difference	0.00%
Loss Ratio	0.00%

Auto Physical Damage	Contribution	TIV
Yr. 2022	$65.00	$0.00
Yr. 2021	$65.00	$0.00
Difference		$0.00
% Difference	NaN	0.00%
Loss Ratio	0.00%	

Public Officials Liability	Contribution	EE Count
Yr. 2022	$576.00	2
Yr. 2021	$583.00	2
Difference	-$7.00	0
% Difference	-1.20%	0.00%
Loss Ratio	0.00%	

Property/Inland Marine	Contribution	TIV
Yr. 2022	$3,260.00	$1,852,875.00
Yr. 2021	$3,201.00	$1,832,188.00
Difference	$59.00	$20,687.00
% Difference	1.84%	1.13%
Loss Ratio	0.00%	

Excess Liability	Contribution
Yr. 2022	$0.00
Yr. 2021	$0.00
Difference	$0.00
% Difference	0.00%
Loss Ratio	0.00%

Earthquake	Contribution
Yr. 2022	$0.00
Yr. 2021	$0.00
Difference	$0.00
% Difference	0.00%
Loss Ratio	0.00%

Flood	Contribution
Yr. 2022	$0.00
Yr. 2021	$0.00
Difference	$0.00
% Difference	0.00%
Loss Ratio	0.00%

No Fault	Contribution
Yr. 2022	$209.00
Yr. 2021	$113.00
Difference	$96.00
% Difference	84.96%
Loss Ratio	694.17%

Colorado Special Districts
Property and Liability Pool

Deductible Options

Idledale Water and Sanitation District
Based on Coverage POL-0010795 data as of 12/15/2021

Auto Liability

	$5,923.00

General Liability

$0.00	$1,147.00
$500.00	$895.00
$1,000.00	$835.00
$2,500.00	$776.00
$5,000.00	$716.00
$7,500.00	$693.00
$10,000.00	$656.00

Auto Physical Damage

Comprehensive and Collision Deductibles

Both	$5,923.00

Property

Property and Inland Marine Deductibles (IM Max

Both $250.00	*$3,933.00*
Both $500.00	*$3,342.00*
Both $1,000.00	*$3,260.00*
Both $2,500.00	*$3,190.00*
Both $5,000.00	*$2,956.00*
Property $7,500.00	*$2,906.00*
Property $10,000.00	*$2,843.00*
Property $25,000.00	*$2,667.00*
Property $50,000.00	*$2,476.00*
Property $100,000.00	*$2,320.00*

$5,000)

No-Fault

$500.00	$209.00
$1,000.00	$146.00
$2,500.00	$136.00
$5,000.00	$104.00
$7,500.00	$94.00

Public Officials Liability

EPLI $100,000 &:

POL $1,000.00	$576.00
POL $2,500.00	$568.00
POL $5,000.00	$550.00
POL $7,500.00	$531.00
POL $10,000.00	$513.00

POL $1,000 &:

EPLI $5,000.00	$1,235.00
EPLI $7,500.00	$1,125.00
EPLI $10,000.00	$1,015.00
EPLI $25,000.00	$796.00
EPLI $50,000.00	$686.00
EPLI $100,000.00	$576.00

Equipment Breakdown

$1,000.00	$711.00
$2,500.00	$697.00
$5,000.00	$633.00
$7,500.00	$619.00
$10,000.00	$597.00

Colorado Special Districts
Property and Liability Pool

2022 Excess Liability Options Proposal

This Proposal Does Not Bind Coverage

This report demonstrates what it would cost your district to increase coverage from your current limit of liability to a higher limit.

Named Member: Idledale Water and Sanitation District

Certificate Number: POL-0010795

Excess Limit	Annual Excess Contribution	Change in Contribution
$1,000,000	$330	$330
$2,000,000	$570	$570
$3,000,000	$810	$810
$4,000,000	$1,020	$1,020
$5,000,000	$1,250	$1,250
$6,000,000	$1,500	$1,500
$7,000,000	$1,750	$1,750
$8,000,000	$2,000	$2,000

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Note: This is not your Coverage Document. It was created solely for informational purposes.

12/15/2021

Colorado Special Districts
Property and Liability Pool

Public Entity Liability and Auto Physical Damage Certificate Holder Declaration

Master Coverage Document Number: CSD Pool CTC 01 01 22 and CSD Pool PEL 01 01 22
Certificate Number: POL-0010795
Coverage Period: 1/1/2022 to EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

Broker of Record:
TCW Risk Management
384 Inverness Parkway
Suite 170
Englewood, CO 80112

Coverage is provided only for those coverages indicated below for which a contribution is shown.

Coverage	Per Occurrence Limit	Annual Aggregate Limit	Deductible	Contribution
Public Entity Liability Coverage including:	$2,000,000	None		
General Liability	Included	None	$1,000	$835
Medical Payments - Premises	$10,000	None	None	Included
Employee Benefits Liability	Included	None	$1,000	Included
Public Officials Liability	Included	None	$1,000	$576
Employment Practices Liability	Included	None	*$100,000	Included
Pre Loss Legal Assistance	$3,500	$7,000	None	Included
No-Fault Water Intrusion & Sewer Backup	$200,000 limited to $10,000 Any One Premises	***$1,000,000	$500	$209
Cyber	$200,000	**$200,000	$1,000	Included
Fiduciary Liability	$200,000	**$200,000	$1,000	Included
Excess Liability - Coverage agreements	No Coverage	No Coverage	N/A	No
Auto Liability	No Coverage	No Coverage	N/A	No
Medical Payments – Auto	No Coverage	No Coverage	N/A	No
Non-Owned and Hired Auto Liability	Included	None	None	$132
Uninsured/Underinsured Motorists Liability	No Coverage	No Coverage	N/A	No
Auto Physical Damage	No Coverage	No Coverage	N/A	No
Hired Auto Physical Damage	$50,000	N/A	$500/$500	$65
Auto Physical Damage - Employee Deductible	$2,500	N/A	None	Included
			Total Contribution	$1,817

*Employment Practices Liability Deductible: 50% of loss including Indemnity and Legal Expenses subject to a maximum deductible of $100,000 each occurrence.
**A $5,000,000 All Member Annual Aggregate Limit shall apply to Cyber.
**A $1,000,000 All Member Annual Aggregate Limit shall apply to Fiduciary Liability.
***No-Fault Water Intrusion & Sewer Backup has $1,000,000 All Member Annual Aggregate Limit.

Additional Endorsements applicable to Member:

This Certificate Holder Declaration is made and is mutually accepted by the CSD Pool and the Named Member subject to all terms which are made a part of the Public Entity Liability Coverage Document. This Certificate represents only a brief summary of coverages. Please refer to the Master Coverage Document for actual coverage, terms, conditions, and exclusions.

Countersigned by: _____
Authorized Representative

Colorado Special Districts
Property and Liability Pool

Property Certificate Holder Declaration

Master Coverage Document Number: CSD Pool CTC 01 01 22 and CSD Pool Property 01 01 22
Certificate Number: POL-0010795
Coverage Period: 1/1/2022 to EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

Broker of Record:
TCW Risk Management
384 Inverness Parkway
Suite 170
Englewood, CO 80112

Limit of Coverage per Occurrence:

$1,852,875 Reported Buildings, Business Personal Property, Other Scheduled Items, Outdoor Property and EDP per Schedule.

$250,000 Business Income including Extra Expense/Rental Income sublimit unless a higher amount is specified on Schedule.

$202,555 Inland Marine Scheduled items.

$0 Excess of $2,000,000 Earthquake Limit per occurrence and annual aggregate per Property Schedule.

$0 Excess of $2,000,000 Flood Limit per occurrence and annual aggregate per Property Schedule. Flood Zone A and Flood Zone V are subject to an all member combined limit of $60,000,000 per occurrence and annual aggregate.

Locations Covered: Per Schedules on file. Property in Course of Construction must be shown on the Schedule to be covered.

Report of Values: Annual Statement of Values must be submitted and additions/deletions are to be reported as they occur.

Perils Covered: Risk of Direct Physical Loss subject to the terms, conditions, and exclusions in the Master Property Coverage Document.

Deductibles: $1,000 Per Occurrence, except where noted on Member's Schedules

Earthquake - 2% Per Occurrence of the value of the covered damaged property at the time of loss, subject to a $5,000 minimum and $50,000 maximum.
Flood - 2% Per Occurrence of the value of the covered damaged property at the time of loss, subject to a $5,000 minimum and $50,000 maximum.

Contribution: $3,260

Additional Endorsements applicable to Member:

Cosmetic Damage Exclusion
Wind and Hail Deductible Endorsement

This Certificate Holder Declaration is made and is mutually accepted by the CSD Pool and the Named Member subject to all terms which are made a part of the Property Coverage Document. This Certificate represents only a brief summary of coverages. Please refer to the Master Coverage Document for actual coverage, terms, conditions, and exclusions.

Countersigned by: _____
Authorized Representative

Colorado Special Districts
Property and Liability Pool

PROPERTY ENDORSEMENT

Named Member: Idledale Water and Sanitation District	**Property Form No:** CSD Pool Property 01 01 22
Certificate Number: POL-0010795	**Effective Date of Endorsement:** 1/1/2022
Issued By: Colorado Special Districts Property and Liability Pool	

This endorsement modifies coverage provided under the following:

PROPERTY COVERAGE DOCUMENT

WIND AND HAIL DEDUCTIBLE

PLEASE READ IT CAREFULLY

The following is added to Section 2. **DEDUCTIBLE**:

E. Wind and/or Hail damage to a building or structure identified in the **Member District** property schedule as **Real Property** or **Outdoor Property**:

2% per **Occurrence** of the value of the covered damaged property and applicable business income at the time the loss occurs, subject to a $5,000 minimum and $50,000 maximum per **Occurrence**, unless a higher deductible is scheduled at the damaged location.

ALL OTHER TERMS AND CONDITIONS OF THE PROPERTY COVERAGE FORM REMAIN UNCHANGED.

Colorado Special Districts
Property and Liability Pool

PROPERTY ENDORSEMENT

Named Member: Idledale Water and Sanitation District	**Property Form No:** CSD Pool Property 01 01 22
Certificate Number: POL-0010795	**Effective Date of Endorsement:** 1/1/2022
Issued By: Colorado Special Districts Property and Liability Pool	

This endorsement modifies the coverage provided under the following:

PROPERTY COVERAGE DOCUMENT

COSMETIC DAMAGE EXCLUSION

PLEASE READ IT CAREFULLY

The following is added to Section 7 PERILS EXCLUDED:

V. Against **Cosmetic Damage** to **Roof Surfacing** caused by or resulting from wind and/or hail to a building or structure identified in the **Member District** property schedule as **Real Property** or **Outdoor Property**.

For purposes of this endorsement, the following is added to SECTION 32 ADDITIONAL DEFINITIONS:

Roof Surfacing means the shingles, tiles, cladding, metal or synthetic sheeting or similar materials covering the roof and includes all materials used in securing the roof surface and all materials applied to or under the roof surface for moisture protection, as well as roof flashing, vent covers and gutters.

Cosmetic Damage means that the wind and/or hail caused marring, pitting or other superficial damage that altered the appearance of the roof surfacing, but such damage does not prevent the roof from continuing to function as a barrier to entrance of the elements to the same extent as it did before the cosmetic damage occurred.

However, this exclusion shall not apply to **Cosmetic Damage** to the front entry, areas of **Roof Surfacing** visibly apparent to a pedestrian from the street or sidewalk composing less than 25% of the roof area of a **Member District's** scheduled building or structure identified as **Real Property** or **Outdoor Property**. The **Pool** will pay for **Cosmetic Damage** to such areas, limited to less than 25% of the roof area of the scheduled building or structure, subject to all other terms, conditions and exclusions of the Property Coverage Form.

ALL OTHER TERMS AND CONDITIONS OF THE PROPERTY COVERAGE FORM REMAIN UNCHANGED.

Colorado Special Districts
Property and Liability Pool

Equipment Breakdown Declarations

Master Coverage Document Number: CSD Pool EB 01 01 21
Certificate Number: POL-0010795 **Coverage Period:** 1/1/2022 to EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

Broker of Record:
TCW Risk Management
384 Inverness Parkway
Suite 170
Englewood, CO 80112

Covered Equipment:
Equipment that (1) generates, transmits or utilizes energy, including electronic communications and data processing equipment; or (2) which during normal usage, operates under vacuum or pressure, other than the weight of its contents.

Locations:
Property must be at a location described in the Named Member's current Schedule of Property on file with the CSD Pool and must be owned, leased, or operated under the control of the Member District.

Equipment Breakdown Limit: $1,852,875 Scheduled Property

Sub Limits:

Newly Acquired Locations (90 Days Reporting)	$2,500,000
Business Income / Extra Expense	$1,000,000
Expediting Expenses	$1,000,000
Rental Income	$1,000,000
Demolition & Increased Cost of Construction	$1,000,000
Off-Premises Equipment Breakdown	$500,000
Service Interruption	$250,000
Hazardous Substances	$250,000
Perishable Goods	$250,000
Data Restoration	$250,000
Green Property Upgrade	$100,000
Public Relations Coverage	$5,000

Deductible: $1,000 per Occurrence

Contribution: $711

This Equipment Breakdown Declarations is made and is mutually accepted by the CSD Pool and the Member District subject to all terms which are made a part of the Equipment Breakdown Coverage Document. This Certificate represents only a brief summary of coverages. Please refer to the Equipment Breakdown Coverage Document for actual coverage, terms, conditions, and exclusions.

Countersigned by: _____
Authorized Representative

Colorado Special Districts
Property and Liability Pool

Crime Certificate Holder Declaration

Master Coverage Document Number: J05931794
Certificate Number: POL-0010795

Insurer: Federal Insurance Company (Chubb)
Coverage Period: 1/1/2022 to EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

Broker of Record:
TCW Risk Management
384 Inverness Parkway
Suite 170
Englewood, CO 80112

Covered Designated Agent(s):

Coverages and Limits:

Employee Theft:	$5,000
· Limit is maximum for each loss · Employee includes executives, full-time, part-time, seasonal, leased and temporary employee(s), interns or non-compensated volunteer. · Includes funds from a sponsored benefit plan.	
Public Official Faithful Performance of Duty:	$5,000
Client Theft:	$5,000
Forgery or Alteration:	$5,000
On Premises:	$5,000
In Transit:	$5,000
Computer System Fraud:	$5,000
Funds Transfer Fraud:	$5,000
Debit, Credit or Charge Card Fraud:	$5,000
Money Orders and Counterfeit Paper Currency Fraud:	$5,000
Social Engineering Fraud:	$5,000

Deductible(s):

All Crime except Social Engineer Fraud:	$100
Social Engineering Fraud:	20% of Social Engineering Fraud Limit

Contribution: $135

Policy Forms:

PF-52815 (04/20)	The Chubb Primary℠ Commercial Crime Insurance
PF-52853 (04/20)	Governmental Entity (Colorado Special Districts Pool) Endorsement
PF-53127 (04/20)	Colorado Amendatory Endorsement
PF-52851 (04/20)	Add Corporate Credit Card Coverage

This Certificate Holder Declaration is made and is mutually accepted by the CSD Pool and the Named Member subject to all terms which are made a part of the Master Crime Policy. This Certificate represents only a brief summary of coverages. Please refer to the Master Policy Documents for actual coverage, terms, conditions, and exclusions.

Countersigned by: _____

Authorized Representative

Colorado Special Districts
Property and Liability Pool

Identity Recovery Certificate Holder Declaration

Master Coverage Policy Number:
CSD Pool IDR Form 01 01 21

Insurer:
The Hartford Steam Boiler Inspection
and Insurance Company

Certificate Number: POL-0010795

Coverage Period: 1/1/2022 to EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

Broker of Record:
TCW Risk Management
384 Inverness Parkway
Suite 170
Englewood, CO 80112

Member:
All permanent employees and District Board members participating in the Colorado Special Districts Property and Liability Pool; Special District Association of Colorado staff and Board of Directors.

Coverage:
Reimbursement coverage for expenses arising from a defined "Identity Theft" event. Including: legal fees for answer of civil judgements and defense of criminal charges; phone, postage, shipping fees; notary and filing fees; credit bureau reports; lost wages; child/elder care and mental health counseling.

This coverage does not reimburse the member for monies stolen or fraudulently charged to the member, and excludes loss arising from the member's fraudulent, dishonest or criminal act.

Annual Aggregate Limit per Member: $35,000

Case Management Service Expenses - does not reduce the limit available

Legal Costs - reduces the limit available

Sub Limits:

$5,000	Lost Wages and Child/Elder Care
$1,000	Mental Health Counseling
$1,000	Miscellaneous Expenses

Coverage Trigger: Coverage is provided on a discovery basis with a 60-day reporting requirement

Claims: For Recovery Assistance and Counseling, please call 1-800-945-4617

This Certificate Holder Declaration is made and is mutually accepted by the CSD Pool and the Named Member subject to all terms which are made a part of the Identity Recovery Coverage Policy. This Certificate represents only a brief summary of coverages. Please refer to the Master Coverage document for actual coverage, terms, conditions, and exclusions.

Countersigned by: _____

Authorized Representative

Colorado Special Districts
Property and Liability Pool

Environmental Legal Liability Certificate Holder Declaration

Master Policy Number: ER00A9V22
Certificate Number: POL-0010795
Named Member:
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

Insurer: Aspen Specialty Insurance Company
Coverage Period: 1/1/2022 to EOD 12/31/2022
Broker of Record:
TCW Risk Management
384 Inverness Parkway
Suite 170
Englewood, CO 80112

Claims-Made Coverage:

1. **First Party Protection:** For coverages 1.a – 1.d, the pollution incident must be first discovered by the responsible insured and reported to the insurer during the policy period.
   a. **Clean up**: Covers clean-up costs resulting from a pollution incident on, at, under, or migrating from or through an insured location.
   b. **Emergency Response**: Covers emergency response cost resulting from a
   c. **Pollution Incident**: (i) on, at, under or migrating from or through an insured location; (ii) caused by transportation; or (iii) caused by covered operations.
   d. **Environmental Crisis**: Covers crisis cost resulting from a crisis event.
   e. **Business Interruption**: Covers business interruption cost and extra expense incurred by the insured and solely and directly by a pollution incident on, at or under an insured location, provided the pollution incident results in clean-up cost covered by this policy.

2. **Legal Liability Protection:** For coverages 2.a – 2.d, the claim for damages because of such bodily injury or property damage, or a claim for such clean-up cost, is first made against an insured and reported to the insurer during the policy period.
   a. **Insured Location**: Covers sums the insured becomes legally obligated to pay: (1) as damages because of bodily injury or property damage; or (ii) for clean-up costs, resulting from a pollution incident on, at under, or migrating from or through an insured location.
   b. **Non-owned Site**: Covers sums the insured becomes legally obligated to pay (1) as damages because of bodily injury or property damage; or (ii) for clean- up costs, resulting from a pollution incident on, at under, or migrating from or through any non-owned site.
   c. **Transportation**: Covers sums the insured becomes legally obligated to pay (1) as damages because of bodily injury or property damage; or (ii) for clean- up costs, resulting from a pollution incident caused by transportation.
   d. **Covered Operations**: Covers sums the insured becomes legally obligated to pay (1) as damages because of bodily injury or property damage; or (ii) for clean-up costs, resulting from a pollution incident caused by covered operations or completed operations.

Limits of Liability: $1,000,000 Each Pollution Incident
$5,000,000 Total Policy and Program Aggregate – Shared All Members Sublimits:
$500,000 Environmental Crisis Aggregate
$250,000 Business Interruption Aggregate
$100,000 Perfluorinated Compounds Aggregate

Member Deductible: $1,000 Each Pollution Incident

Retroactive Date: January 1, 2009 (unless otherwise specified)
Defense Costs: Legal defense expenses and settlement shall erode the Limits of Liability

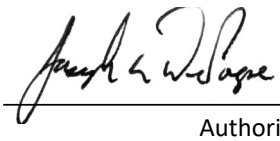
Partial List of Exclusions:
Asbestos, Contractual Liability, Criminal Fines and Criminal Penalties, Cross Liability (Insured vs. Insured), Damage to Insured's Product/Work, Divested Property, Employers Liability, Fraud or Misrepresentation, Intentional Non-Compliance, Internal Expenses, Known Conditions, Lead-Based Paint, Material Change in Risk, Non-Owned Disposal Sites, Underground Storage Tanks and Above Ground Storage Tanks excluded unless scheduled, Vehicle Damage, War or Terrorism, Workers Compensation, Lead at all gun or shooting ranges, Maintenance, Upgrades, Improvements or Installations where required by law, Microbial Matter with carveback for sudden and accidental water intrusion; 10-day discovery period/30 day reporting period, Prior Claims, Communicable Disease

Policy Forms:

ASPENV110 06 17	Environmental Legal Liability Policy
ASPENV098 11 17	Cap on Losses from Certified Acts of Terrorism
ASPENV340 05 17	Insured Location(s) Schedule Endorsement
ASPENV310 05 17	Known Conditions Exclusion Endorsement
ASPENV316 05 17	Legal Expense Aggregate Limit of Liability Endorsement
ASPENV117 11 17	Self-Insured Retention Aggregate (Erosion by Underlying Policies)
ASPENV117 11 17	Sewage Back-up Deductible Amendatory Endorsement
ASPENV117 11 17	Perfluorinated Compounds, Sublimit and Retroactive Date Amendatory Endorsement
ASPENV117 11 17	Cancellation Amendatory Endorsement
ASPENV117 11 17	Microbial Matter Exclusion Endorsement
ASPENV117 11 17	Maintenance, Upgrade, Improvements Or Installations Exclusion Endorsement
ASPENV117 11 17	Retroactive Date All Coverage Endorsement
ASPENV117 11 17	Microbial Matter Sudden and Accidental Coverage Limitation Amendatory Endorsement
ASPENV117 11 17	Insured Location/Acquired Property Endorsement
ASPENV117 11 17	Public Entity Amendatory Endorsement
ASPENV322 05 17	Minimum Earned Premium Endorsement
ASPENV341 05 17	Named Insured Schedule Endorsement
ASPENV118 11 17	Nuclear, Biological, Chemical, or Radiological Terrorism Exclusion
ASPENV003 05 17	Other Insurance Condition Amendatory Endorsement
ASPER334 01 14	Prior Claim Exclusion Endorsement
ASPENV338 04 19	Schedule of Crisis Management Firms Endorsement
ASPENV431 11 17	Aspen Environmental Emergency Response Hotline
SNCO 0314	Colorado Surplus Lines Notice
ASPENV117.EL.0920.X	Communicable Disease Exclusion

Additional Endorsements Applicable to Named Member:

This Certificate Holder Declaration is made and is mutually accepted by the CSD Pool and the Named Member subject to all coverage terms under the Pollution Liability Policy #EV00A9V22 issued by Aspen Specialty Insurance Company. This Certificate represents a brief summary of coverages. Please refer to the Master Coverage Document for all coverage terms, conditions and exclusions.

Countersigned by: 

Authorized Representative

Colorado Special Districts
Property and Liability Pool

Terrorism, Sabotage and Malicious Attack Certificate Holder Declaration

Master Coverage Policy Number:
TER P 004 CW (06/11) physical loss or damage
33HIS00151 Terrorism Combined Liability
TER P0027CW (05/17) Malicious Attack
10/17 Malicious Attack combined liability

Insurer:
Lloyds, Hiscox Syndicate 33

Certificate Number: POL-0010795

Coverage Period: 1/1/2022 to EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

Broker of Record:
TCW Risk Management
384 Inverness Parkway
Suite 170
Englewood, CO 80112

Coverage for All CSD Pool Members combined	Per Occurrence Limit	Annual Aggregate Limit	Deductible
All Coverages Combined	n/a	**$105,000,000**	n/a
Terrorism and Sabotage – Physical Loss or Damage	$100,000,000	$100,000,000	$10,000
Terrorism – Combined Liability	$10,000,000	$10,000,000	$10,000
Malicious Attack – Physical Loss or Damage & Combined Liability	$5,000,000	$5,000,000	$5,000
Malicious Attack Sub-limits applicable:			
Prevention or Restriction of Access	$2,500,000	$2,500,000	$5,000
Utilities	$2,500,000	$2,500,000	$5,000
Personal Accident Costs	$250,000	$250,000	$5,000
Crisis Management Costs	$250,000	$250,000	$5,000

Report all Claims to: Phone: (800) 318-8870, ext. 1
Email: claims@csdpool.org

This Certificate Holder Declaration is made and is mutually accepted by the CSD Pool and the Named Member subject to all terms which are made a part of the Terrorism, Sabotage and Malicious Attack Coverage Policy. This Certificate represents only a brief summary of coverages. Please refer to the Master Coverage document for actual coverage, terms, conditions, and exclusions.

Countersigned by: _____

Authorized Representative

Colorado Special Districts
Property and Liability Pool

General Liability Schedule
Water & Sanitation District

Policy Number: POL-0010795
Named Member: Idledale Water and Sanitation District
Coverage Period: 1/1/2022 – EOD 12/31/2022
Broker: TCW Risk Management

Code	Description	Unit	Amount	Effective Date	Expiration Date
4	4-Maximum Bond Issued	Dollars		1/1/2022	12/31/2022
5	5-Number of Bonds Issued	Total		1/1/2022	12/31/2022
36	36-Pipe Line - Water	Miles	2.70	1/1/2022	12/31/2022
37	37-Pipe Line - Under Drain	Miles	0.00	1/1/2022	12/31/2022
38	38-Pipe Line - Drainage	Miles		1/1/2022	12/31/2022
42	42-Pipe Line - Sewer	Miles		1/1/2022	12/31/2022
98	98-Additional First Named Members	Total	0.00	1/1/2022	12/31/2022
105	105-Total Operating Expenses - Any other	Dollars	208,000.00	1/1/2022	12/31/2022
139	139-Total Operating Expenses - Water	Dollars		1/1/2022	12/31/2022
141	141-Total Operating Expenses - Sanitation	Dollars		1/1/2022	12/31/2022
151	151-Total Operating Expenses - Sanitation MW Discounted	Dollars	0.00	1/1/2022	12/31/2022
215	215-Buildings & Premises Occupied by District	Sq. Ft.		1/1/2022	12/31/2022
270	270-Number of Aboveground Storage Tanks (excluding water tanks)	Total	0.00	1/1/2022	12/31/2022
341	341-Club/Recreation/Camp Volunteers	Hours	0.00	1/1/2022	12/31/2022
342	342-Day Care Volunteers	Hours	0.00	1/1/2022	12/31/2022
344	344-Event Organizer Volunteers	Hours	0.00	1/1/2022	12/31/2022
345	345-General Volunteers	Hours	0.00	1/1/2022	12/31/2022
348	348-Number of Board Members	Total	5.00	1/1/2022	12/31/2022
350	350-Number of Permanent Employees - Full-Time	Total	0.00	1/1/2022	12/31/2022

351	351-Number of Permanent Employees - Part-Time	Total	2.00	1/1/2022	12/31/2022
366	366-Total Payroll	Dollars	55,000.00	1/1/2022	12/31/2022
400	400-Class 1 Boats - Under 26'	Total		1/1/2022	12/31/2022
411	411-Total Water Delivered Annually - Millions of Gallons	MGAL	8.00	1/1/2022	12/31/2022
420	420-Vacant Land	Acres		1/1/2022	12/31/2022
522	522-Number of Ponds, Lakes & Reservoirs	Total		1/1/2022	12/31/2022
710	710-Dams - Class 1 - Low Hazard - Total Acre-Feet	Acre Ft.	0.00	1/1/2022	12/31/2022
712	712-Dams - Class 1 - Low Hazard - Number of Dams	Count	0.00	1/1/2022	12/31/2022
720	720-Dams - Class 2 - Med Hazard - Total Acre-Feet	Acre Ft.	0.00	1/1/2022	12/31/2022
722	722-Dams - Class 2 - Med Hazard - Number of Dams	Count	0.00	1/1/2022	12/31/2022
730	730-Dams - Class 3 - High Hazard - Total Acre-Feet	Acre Ft.	0.00	1/1/2022	12/31/2022
732	732-Dams - Class 3 - High Hazard - Number of Dams	Count	0.00	1/1/2022	12/31/2022
811	811-Number of Spillways	Total		1/1/2022	12/31/2022
900	900-Services Contracted out to Others	Dollars	70,000.00	1/1/2022	12/31/2022
945	945-Number of Sewage Taps	Total		1/1/2022	12/31/2022
946	946-Number of Water Mains or Connections	Total	133.00	1/1/2022	12/31/2022
947	947-Sewer and/or Sanitation Line Maintenance (budget)	Dollars		1/1/2022	12/31/2022
948	948-Water Line Maintenance (budget)	Dollars		1/1/2022	12/31/2022
997	997-Number of district sponsored Events/Fundraisers - No Alcohol Served	Total		1/1/2022	12/31/2022
998	998-Number of District sponsored Events/Fundraisers – With Alcohol Served	Total		1/1/2022	12/31/2022
999	999-Prior Acts Coverage Under a Previous “Claims Made” Policy	Premium		1/1/2022	12/31/2022

If your district has exposures not listed on the General Liability schedule above, such as airplanes, security staff, bridges, drones, etc., please furnish details. Certain activities may be excluded or restricted.

Colorado Special Districts Property and Liability Pool

Property Schedule

Coverage Period: 1/1/2022-EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District

Broker:
TCW Risk Management

Per Occurrence Deductible: $1,000.00

Location/Premise Address / Description	Construction Class	Prot. Class	Valuation	Values	Property Contrib.	Quake Contrib.	Flood Contrib.

Location / Premise#	1-4	**Unique#**	PROP-00105898	Fire Resistive	5	Replacement		**Buildings:**	$ 0.00	$1,670	$	$
Storage Tank		**Year Built:**	2010	**Term:**	1/1/2022 to 12/31/2022			**Contents:**	$ 0.00			
2144 Grapevie Road		**Sq. Feet:**		**County:**	Jefferson	Ded:	$1,000.00	**EDP:**	$ 0.00			
								Business Inc:	$ 0.00			
Idledale, CO 80453		**# Stories**		**Flood Zone:**	Zone X			**UG Pipes:**	$ 0.00			
NOC Equipment Breakdown Applies: Yes		**Excess Quake Applies:** No		**Excess Flood Applies:** No				**Otherwise Classified:**	$982,442.00			

Location / Premise#	1-3	**Unique#**	PROP-00105899	Fire Resistive	5	Replacement		**Buildings:**	$ 0.00	$657	$	$
Storage Tank 240K Gallon		**Year Built:**	1962	**Term:**	1/1/2022 to 12/31/2022			**Contents:**	$ 0.00			
2144 Grapevine Rd.		**Sq. Feet:**		**County:**	Jefferson	Ded:	$1,000.00	**EDP:**	$ 0.00			
								Business Inc:	$ 0.00			
Idledale, CO 80453		**# Stories**	1.00	**Flood Zone:**	Zone X			**UG Pipes:**	$ 0.00			
NOC Equipment Breakdown Applies: Yes		**Excess Quake Applies:** No		**Excess Flood Applies:** No				**Otherwise Classified:**	$386,779.00			

Location / Premise#	1-5	**Unique#**	PROP-00105901	Fire Resistive	5	Replacement		**Buildings:**	$ 0.00	$135	$	$
Wells 1A and 1B with electronical components and controls		**Year Built:**	1962	**Term:**	1/1/2022 to 12/31/2022			**Contents:**	$ 0.00			
2144 Grapevine Road		**Sq. Feet:**		**County:**	Jefferson	Ded:	$1,000.00	**EDP:**	$ 0.00			
								Business Inc:	$ 0.00			
Idledale, CO 80453		**# Stories**		**Flood Zone:**	Zone CX			**UG Pipes:**	$ 0.00			

Colorado Special Districts Property and Liability Pool

Property Schedule

Coverage Period: 1/1/2022-EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District

Broker:
TCW Risk Management

Per Occurrence Deductible: $1,000.00

Location/Premise Address / Description	Construction Class	Prot. Class	Valuation	Values	Property Contrib.	Quake Contrib.	Flood Contrib.

NOC Equipment Breakdown Applies: Yes	**Excess Quake Applies:** No	**Excess Flood Applies:** No		**Otherwise Classified:**	$79,379.00

Location / Premise#	2	**Unique#**	PROP-00105900	Frame	5	Replacement		**Buildings:**	$71,286.00	$272	$	$
Chlorination Building		**Year Built:**	1990	**Term:**	1/1/2022 to 12/31/2022			**Contents:**	$117,105.00			
2595 Grapevine Rd.		**Sq. Feet:**	476	**County:**	Jefferson	Ded:	$1,000.00	**EDP:**	$ 0.00			
								Business Inc:	$ 0.00			
Lakewood, CO 80228		**# Stories**	1.00	**Flood Zone:**	Zone X			**UG Pipes:**	$ 0.00			
NOC Equipment Breakdown Applies: No		**Excess Quake Applies:** No		**Excess Flood Applies:** No				**Otherwise Classified:**	$ 0.00			

Location / Premise#	1-1	**Unique#**	PROP-00105903	Joisted Masonry	5	Replacement		**Buildings:**	$34,202.00	$ 97	$	$
Chlorination Building		**Year Built:**	1962	**Term:**	1/1/2022 to 12/31/2022			**Contents:**	$56,092.00			
2144 Grapevine Rd.		**Sq. Feet:**	228	**County:**	Jefferson	Ded:	$1,000.00	**EDP:**	$ 0.00			
								Business Inc:	$ 0.00			
Idledale, CO 80453		**# Stories**	1.00	**Flood Zone:**	Zone CX			**UG Pipes:**	$ 0.00			
NOC Equipment Breakdown Applies: No		**Excess Quake Applies:** No		**Excess Flood Applies:** No				**Otherwise Classified:**	$ 0.00			

Location / Premise#	1-2	**Unique#**	PROP-00105902	Noncombustible	5	Replacement		**Buildings:**	$82,781.00	$122	$	$
Storage Building		**Year Built:**	1962	**Term:**	1/1/2022 to 12/31/2022			**Contents:**	$42,809.00			
2144 Grapvine Rd.		**Sq. Feet:**	806	**County:**	Jefferson	Ded:	$1,000.00	**EDP:**	$ 0.00			
								Business Inc:	$ 0.00			
Idledale, CO 80453		**# Stories**	1.00	**Flood Zone:**	Zone X			**UG Pipes:**	$ 0.00			

Colorado Special Districts Property and Liability Pool

Property Schedule

Coverage Period: 1/1/2022-EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District

Broker:
TCW Risk Management

Per Occurrence Deductible: $1,000.00

Location/Premise Address / Description	Construction Class	Prot. Class	Valuation	Values	Property Contrib.	Quake Contrib.	Flood Contrib.

NOC Equipment Breakdown Applies: No	**Excess Quake Applies:** No	**Excess Flood Applies:** No		**Otherwise Classified:**	$ 0.00

Totals:	**Buildings:**	$188,269.00	$2,953.00	$0.00	$0.00
	Contents:	$216,006.00			
	EDP:	$0.00			
	Business Inc:	$0.00			
	UG Pipes:	$0.00			
	Otherwise Classified:	$1,448,600.00			

Minimum Property Contribution: $400

Colorado Special Districts Property and Liability Pool

Inland Marine Schedule **Coverage Period**: 1/1/2022-EOD 12/31/2022

Named Member:
Idledale Water and Sanitation District

Broker:
TCW Risk Management

Per Occurrence Deductible: $1,000.00

IM Code	Description	Serial Number	Model Number	Ded:	Effective	Expiration	Value	Inland Mar. Contribution
Mobile Equipment	Backhoe New Holland	31012457	T575E	$1,000.00	1/1/2022	12/31/2022	$44,555.00	$67
	Equipment Inventory			$1,000.00	1/1/2022	12/31/2022	$150,000.00	$227
	Miscellaenous Tools and Equipment			$1,000.00	1/1/2022	12/31/2022	$8,000.00	$12

Minimum Combined Property and Inland Marine Contribution:	$400	**Totals:**	$202,555.00	$306.00	

Colorado Special Districts Property and Liability Pool

CERTIFICATE OF COVERAGE

Certificate Number
CERT-007699

ADMINISTRATOR
Colorado Special Districts Property and Liability Pool
c/o McGriff Insurance Services, Inc.
PO Box 1539
Portland, OR 97207-1539

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

NAMED MEMBER
Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

COMPANIES AFFORDING COVERAGE

COMPANY A:	Colorado Special Districts Property and Liability Pool
COMPANY B:	
COMPANY C:	
COMPANY D:	
COMPANY E:	

COVERAGES

THIS IS TO CERTIFY THAT COVERAGE DOCUMENTS LISTED HEREIN HAVE BEEN ISSUED TO THE NAMED MEMBER HEREIN FOR THE COVERAGE PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE COVERAGE AFFORDED BY THE COVERAGE DOCUMENTS LISTED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH COVERAGE DOCUMENTS.

CO LTR	Type of Coverage	Coverage #	Effective Date	Expiration Date	LIMITS	
A	General Liability ☒Commercial General Liability ☒Public Officials Liability ☒Employment Practices ☒Occurrence	POL-0010795	01/01/22	12/31/22	General Aggregate	Unlimited
		*Except that for claims, occurrences or suits to which the monetary limits of the Colorado Immunity Act, C.R.S. & 24-10-101, et.seq., as amended, apply, there shall be a further sublimit of (a) $387,000 for an injury to any one person in any single occurrence; and (b) $1,093,000 for an injury to two or more persons in any single occurrence; but in the event of an injury to two or more persons in any single occurrence, the sublimit shall not exceed $387,000 for each injured person.			Each Occurrence*	$2,000,000
A	Automobile Liability ☐Scheduled Autos ☒Hired Autos ☒Non-Owned Autos	POL-0010795	01/01/22	12/31/22	Each Occurrence*	$2,000,000
A	Auto Physical Damage ☐Scheduled Autos ☒ Hired Autos	POL-0010795	01/01/22	12/31/22	See below if applicable.	
	Excess Liability ☐Other Than Umbrella Form				General Aggregate	
					Each Occurrence*	
	Property ☐					

Description:
Evidence of coverage only. Re: Rental of 2019 Ram 2500 VIN #3C6UR5DJ4KG666372. Non-Owned/Hired Auto Liability is subject to a $0 deductible and Hired Auto Physical Damage is subject to a $500 deductible. Enterprise is listed as an Additional Covered Member under Auto Liability as outlined under written contract. Only those liabilities covered by the Pool's coverage document for the Member District shall apply and is subject to the provisions and limitations contained in the Colorado Governmental Immunity Act C.R.S. 24-10-101, as amended. Enterprise is listed as a Loss Payee under Hired Auto Physical Damage coverage with respects to their interest in the 2019 Ram 2500 VIN #3C6UR5DJ4KG666372 as outlined under written contract number and subject to the $500 Hired Auto Physical Damage deductible.

CERTIFICATE HOLDER

Idledale Water and Sanitation District
PO Box 52
Idledale, CO 80453

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED COVERAGES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE COVERAGE FORM PROVISIONS.

	AUTHORIZED REPRESENTATIVE: By: Joseph E. DePaepe  Date: December 15, 2021

Attachment 12
Water Rights Documentation

DISTRICT COURT, WATER DIVISION 1, COLORADO

Case No. 94CW168

FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF THE REFEREE, JUDGMENT AND DECREE

CONCERNING THE APPLICATION OF WATER RIGHTS OF IDLEDALE WATER AND SANITATION DISTRICT,

IN JEFFERSON AND PARK COUNTIES.

THIS APPLICATION, having been filed with the Water Clerk, Water Division 1, on September 30, 1994 and an amended application having been filed in January, 1995, and all matters contained having been taken and evidence presented as was necessary, and being otherwise fully advised in the premises, the Referee hereby enters the following Ruling of the Referee:

FINDINGS OF FACT

1. Name, address and telephone number of Applicant:

Idledale Water and Sanitation District
390 Union Boulevard, Suite 310
Lakewood, Colorado 80228
(303) 987-0535

2. Statements of Opposition to the Application were filed by the State Engineer and Division Engineer of Water Division 1, City of Englewood, Evergreen Metropolitan District, Genesee Water & Sanitation District, Town of Morrison, City and County of Denver, acting by and through its Board of Commissioners, Jefferson County, Colorado, a body politic and corporate, and South Evergreen Water District. No other objections have been filed and the time for filing such objections has expired. Applicant and the South Evergreen Water District entered into a stipulation in this case dated June 14, 1995. The State and Division Engineers for Water Division 1, the City of Englewood and Evergreen Metropolitan District have also stipulated to a proposed decree.

3. Timely and adequate notice of the pendency of these proceedings has been given in the manner required by law. The Water Referee sitting in this Court has jurisdiction over the subject matter of these proceedings and over all who have standing to appear as parties, whether they have appeared or not.

APPROVAL OF WATER RIGHTS

4. Names, locations, rates of flow, and appropriation dates:

A. Ridgeway Well (5431-F), located in the SE1/4SE1/4 of Section 29, T4S, R70W of the 6th P.M., for a rate of flow of 12 gpm with appropriation date of April 14, 1964.

B. Ridgeway #3 (34385-F), located in the SE1/4SE1/4 of Section 29, T4S, R70W of the 6th P.M., for a rate of flow of 40 gpm with appropriation date of April 14, 1964).

C. Well #1A (34384-F), located in the SE1/4NE1/4 of Section 29, T4S, R70W of the 6th P.M., for a rate of flow of 20 gpm with appropriation date of September 22, 1970.

D. Well #1-B (34383-F), located in the SE1/4NE1/4 of Section 29, T4S, R70W of the 6th P.M., for a rate of flow of 10 gpm with appropriation date of November 22, 1968.

E. Sawmill Creek Spring, located in the NE1/4NE1/4 of Section 29, T4S, R70W of the 6th P.M., for a rate of flow of 25 gpm with appropriation date of November 1947.

F. Braun Spring, located in the NE1/4NE1/4 of Section 29, T4S, R70W of the 6th P.M., for a rate of flow of 25 gpm with appropriation date of November 1947.

G. West Gulch Spring, located in the NW1/4NE1/4 of Section 29, T4S, R70W of the 6th P.M., for a rate of flow of 25 gpm with appropriation date of November 1947.

5. Source: Groundwater tributary to Bear Creek

6 Uses: Municipal

APPROVAL OF PLAN FOR AUGMENTATION AND EXCHANGE

7. Structures to be augmented:

A. Structures and amounts as described in paragraph 4.A through 4.G above.

B. The following as decreed in Case No. W-432 on October 30, 1972 in District Court, Water Division 1 (all four structures have an appropriation date of November 13, 1947 and are decreed for municipal uses).

1. Braun's Gulch Pipeline, decreed for a rate of flow of 0.70 cfs with source of Braun's Gulch.

2. Sawmill Creek Pipeline, decreed for a rate of flow of 0.95 cfs with source of Sawmill Gulch.

3. West Gulch Pipeline, decreed for a rate of flow of 0.54 cfs with source of West Gulch.

4. Devil's Gulch Pipeline, decreed for a rate of flow of 0.47 cfs with source of Devil's Gulch.

8. Water rights to be used for augmentation:

In order to provide the necessary replacement water to the stream system, Idledale has purchased from North Fork Associates 180 shares of the capital stock of the Mountain Mutual Reservoir Company. The Mountain Mutual Reservoir Company, a nonprofit Colorado corporation, has been created for the following principal purposes:

(1) To receive and hold title to direct flow and storage water rights, reservoirs and interests therein, lands, easements, rights-of-way, and other related facilities, in trust for its shareholders.

(2) To administer for its stockholders water rights and operate facilities in accordance with individual plans for augmentation approved by the Water Court.

The 180 shares of stock represent the right to receive 5.65 acre-feet of augmentation water per year from the water rights and storage facilities which Mountain Mutual Reservoir Company holds for the benefit of its shareholders. The specific water rights which will be utilized pursuant to this decree by Idledale are as follows:

A. 8.71 shares of the 400 shares of stock (2.18%) issued for Soda Lakes Reservoirs Nos. 1 and 2 Entitlement, decreed in Civil Action No. 91471 on September 24, 1935, with appropriation date of February 11, 1893 for 1,794 acre-feet for irrigation and 595 acre-feet for storage for supplying the City of Denver with water for municipal purposes, including the watering of lawns and gardens. The Soda Lakes Reservoirs are generally located in Section 1, T5S, R70W of the 6th P.M.

B. 7.71 shares of the 400 shares of stock (1.93%)issued for the Harriman Ditch, decreed in Civil Action No. 6832 on February 4, 1884, for irrigation, domestic and municipal uses for the following priorities:

Priority	Appropriation date	Source	Amount	MMRC Entitlement (7.71 shares)
21	April 15, 1868	Turkey Creek	10.75 cfs	0.2072 cfs
23	March 16, 1869	Bear Creek	7.94 cfs	0.1530 cfs
25	May 1, 1871	Bear Creek	25.54 cfs	0.4923 cfs
30	March 1, 1882	Bear Creek	12.87 cfs	0.2481 cfs

The headgates of the Harriman Ditch are generally located in Section 2, T5S, R70W and Section 6, T5S, R69W of the 6th P.M.

C. Spinney Mountain Reservoir, decreed in Case No. W-739 in District Court, Water Division 1, for 66,000 acre-feet with appropriation date of March 26, 1973 for all beneficial uses, the dam is generally located in Section 25, T12S, R74W of the 6th P.M. MMRC is the owner by deed of a firm annual yield of 80 acre feet of water stored in Spinney Mountain Reservoir. The Spinney Mountain Reservoir is included for the purpose of providing a backup storage facility for Soda Lakes Reservoirs Nos. 1 and 2 if necessary.

D. Two shares of the 160 shares of stock issued for Warrior Ditch, decreed in Arapahoe County District Court, Water District 9, on February 4, 1884, in Civil Action No. 6832, in the following priorities. The Bear Creek point of diversion is located at the headgate of the Harriman Ditch on the south bank of Bear Creek, in the NE1/4 of Section 2, T5S, R70W of the 6th P.M. The Turkey Creek point of diversion is located at the headgate of the Harriman Ditch on the east bank of Turkey Creek, in the NW1/4NW1/4 of Section 7, T5S, R69W of the 6th P.M.:

Priority	Source	Amount	Appropriation Date	MMRC Entitlement (2 Shares)
4	Bear Creek	12.33 cfs	12/01/1861	0.1541 cfs
8[1]	Turkey Creek	2.86 cfs	04/16/1862	0.0358 cfs
14	Bear Creek	25.47 cfs	10/31/1864	0.3184 cfs
16	Bear Creek	11.49 cfs	04/01/1865	0.1436 cfs

Applicant is also the owner of the following:

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[1] This priority is part of MMRC's water rights but is not a source of augmentation under this plan. Therefore no determination regarding this priority is made in this decree.

E. Starbuck Heights Reservoir, decreed in Case No. 91471 with an appropriation date of May 1, 1920 for 2.49 acre-feet for irrigation and 7.46 acre-feet for domestic uses, generally located in Section 29, T4S, R70W of the 6th P.M. Applicant agrees to replace depletions associated with evaporative losses by monthly releases from the reservoir, in an amount equal to the reservoirs surface acreage multiplied by the following net annual evaporation rates: April=0.11 feet, May=0.21 feet, June=0.34 feet, July=0.34 feet, August=0.28 feet, September=0.26 feet, October=0.14 feet, and November=0.06 feet.

9. Operation of Mountain Mutual Reservoir Company's water rights:

A. Soda Lakes Entitlement (8.71 shares).

MMRC agrees to reserve for Idledale's use in this plan 2.81 acre feet of the safe yield of the water rights stored in Soda Lakes. Commitments for the balance of the safe yield to the other plans of augmentation are attached in Exhibit A. MMRC is entitled under its 8.71 shares of stock to the proportionate share (2.81%) of the operating capacity of Soda Lakes. MMRC's right to store and release water in the Soda Lakes for this plan for augmentation is subject to the following operation procedures:

(1) Divert full entitlement under the Soda Lakes Reservoir and Mineral Water Company (Soda Lakes) decree up to the limit of available storage. The decision to store in the MMRC storage capacity entitlement under the Soda Lakes decrees will be determined by MMRC. All waters in the MMRC storage capacity allocation at the beginning of the November 1st will be considered replacement water for plans for augmentation except for those ground and surface water return flows in Paragraph 9.A(3) and (6). Available storage capacity at the beginning of the storage season will be determined by the storage entitlement for 8.71 shares less that remaining in Soda Lakes from that irrigation season just concluded.

(2) From the waters stored from November 1st through May 31st, 20% will be reserved for releases to Marston Reservoir through the Harriman Ditch when requested by the Denver Water Department. Releases requested by the Denver Water Department must be made no later than June 30th of that same storage season for delivery through Harriman Ditch. Such releases are the historic delayed groundwater return flows of the subject water rights.

(3) From the waters stored from June 1st through October 31st, 20% will be reserved for release to Marston Reservoir through the Harriman Ditch when requested by the Denver Water Department. Releases of these waters requested by the Denver Water Department must be made no later than November 30th of that same calendar year for delivery through Harriman Ditch to Marston Reservoir.

Such releases are additional historic delayed ground water return flows of the subject water rights.

(4) If releases are not requested by the Denver Water Department by the dates specified in Paragraphs (2) and (3) of this section, said water will become the property of Mountain Mutual Reservoir Company for augmentation purposes.

(5) No later than May 31st of each storage season, 20% of the water stored under MMRC's Soda Lakes storage entitlement filled since the beginning of the storage season that began on November 1st and continuing through May 31st, shall be released to Turkey Creek. Such releases are the historic irrigation season surface return flows of the subject water rights.

(6) No later than November 30th, 20% of the water stored under the MMRC's Soda Lakes storage entitlement of water stored between June 1st and October 31st, shall be released to Turkey Creek. Such releases are the historic irrigation season surface return flows of the subject water rights.

(7) Evaporation and seepage of all MMRC waters in Soda Lakes will be assessed by Soda Lakes Reservoir and Mineral Water Company. Until an actual record of evaporation and seepage losses are established, three acre-feet of MMRC Soda Lakes entitlement yield will be reserved for such purposes.

(8) Releases for augmentation purposes from Soda Lakes to Turkey Creek or Harriman Ditch or by trucking replacement waters from Soda Lakes will be made in accordance with the operating rules and regulations of Soda Lakes Reservoir and Mineral Water Company which are attached hereto and incorporated by reference.

(9) For a period of seven years from the date of this decree, at such times as the amount of water in Bear Creek is less than 3.5 cfs, as measured at the Morrison gauge, Idledale cannot exchange upstream unless Idledale's depletions are replaced above Morrison's intake by the methods set forth in subparagraphs a) through d) below. (In computing the stream flow in Bear Creek at Morrison's gauge, Morrison's diversions from its intake upstream of the gauge shall be added to the gauge reading.) At the end of the seven-year period, in the event that Morrison puts a call on the river to satisfy its existing decrees, Idledale, upon notification, will provide augmentation water above Morrison's intake by one of the following means:

a) By making releases of water stored in Starbuck Heights Reservoir.

b) By replacing Idledale's depletions above Morrison's intake by trucking replacement water from Soda Lakes.

c) By releasing water equal to Idledale's depletions from the Idledale water distribution system directly into Bear Creek.

d) By releasing water legally available to Idledale for such use from any other reservoir located upstream of Morrison's intake.

B. Harriman Ditch Company Entitlement (7.71 shares):

1. Only the historic consumptive use portion of MMRC's Harriman Ditch Entitlement shall be utilized by MMRC for replacement, augmentation, exchange and storage purposes. Storage of MMRC's Harriman Ditch entitlement of historic consumptive use of irrigation water will be in MMRC's storage capacity allocation in Soda Lakes. Diversions of the Harriman Ditch entitlement to Soda Lakes will be made in accordance with the following schedule, and only when the Harriman Ditch rights are in priority.

	Diversion rates in CFS							Maximum 10 Year Diversions
Priority No / Date	Apr	May	Jun	Jul	Aug	Sep	Oct	(Ac-Ft)
21 4/15/1868	.207	.207	.207	.207	.207	.207	.207	- [2]
23 3/16/1869	.087	.117	.130	.078	.078	.081	-	162
25 5/01/1871	.098	.171	.353	.257	.187	.213	-	330

2. To provide for the maintenance of historic ditch losses, an amount of water equal to fifteen percent (15%) of MMRC's pro-rata entitlement to the Harriman Ditch direct flow priorities from Bear Creek (i.e. up to a maximum of 0.0230 cfs of the March 16, 1869 priority; up to a maximum of 0.0738 cfs of the May 1, 1871 priority; and up to a maximum of 0.0372 cfs of the March 1, 1882 priority), shall be available for call by the Harriman Ditch Company for the benefit of the shareholders who continue to use the Harriman Ditch

3. The following MMRC's Harriman Ditch Company water rights will be abandoned to Bear Creek upon expiration of the retained jurisdiction period as defined in paragraph 25.

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[2] Any portion of the historic consumptive use of irrigation water as allocated herein is available for exchange at the rate of 0.207 cfs under the 4/15/1868 priority and as authorized by the Division Engineer. Such exchange will be limited to the April 1 to October 31 season.

Priority No./Date	Amount in CFS
25 5/01-1871	0.0655
30 3/01/1882	0.2109

C. Warrior Ditch Company (2 shares)

MMRC agrees to reserve for Idledale's use in this plan 2.84 acre feet of the safe yield of their two shares of the Warrior Ditch Company. Their commitments for these water rights to other plans for augmentation are attached as Exhibits B and C. These Warrior Ditch rights will operate under the following procedures:

1. From May 1 to October 31, MMRC's Warrior Ditch entitlement will be used for direct flow replacement of depletions of this plan for augmentation, however in the interim the historic depletions as determined in this decree may also be stored in Soda Lakes. The same diversion rates will be used for storage in Soda Lakes or for direct replacement of depletions by this plan for augmentation. The following diversion rates of flow are approved:

Priority No./Date	Instream Replacement Rate in CFS	Time Period of Diversion	Maximum Yearly Diversion (AF)
4 12/01/1861	0.0809	May 1 through October 31	21.7
14 10/31/1864	0.0892	June 1 through August 31	8.7

2. The following Warrior Ditch water rights will be abandoned to the stream upon expiration of the retained jurisdiction period as defined in paragraph 25:

Priority No./Date	Abandoned in CFS
4 12/01/1861	0.0424
14 10/31/1864	0.1655
16 4/01/1865	0.1149

3. To provide for the maintenance of historic ditch losses, an amount of water equal to the rate of flow available to 20 percent of MMRC's two ditch shares will be left in the ditch for ditch losses. This amount shall not exceed the following flow rates: 0.0308 cfs decreed to Priority No. 4, 0.0637 cfs decreed to Priority No. 14 and 0.0287 cfs decreed to Priority No. 16.

D Allocation of water rights under this plan for augmentation:

1. The following water rights are designated for use for replacement water in this plan for augmentation:

a Warrior Ditch Priority 4 for 0.0079 cfs
b. Warrior Ditch Priority 14 for 0.0073 cfs
c. Soda Lakes-MMRC rights for 2.81 acre-feet of the combined waters stored in Soda Lakes, including those rights included in paragraphs 9.A , 9.B.1. and 9.C.1.

10. Water Supply. It is estimated that Applicant will provide water service for approximately 140 taps. The District is generally located in parts of Sections 29 and 32, T4S, R70W of the 6th P.M., Jefferson County, Colorado, as shown on Exhibit D hereto. The current system of disposal inside of the District is by non-evaporative septic systems. Consumptive use associated with in-house use is estimated to be approximately 10% of use. In the future, Applicant may utilize a central disposal system for such use, and estimates that consumptive use associated with a central system to be approximately 5% of use. It is estimated that in-house use for the 140 taps will be approximately 42.34 acre-feet annually. Each tap may also irrigate a maximum of 200 square-feet for an annual amount of 0.80 acre-feet if all taps irrigate 200 square feet. Annual consumptive use associated with in-house and irrigation use is estimated to be 4.23 acre-feet and 0.64 acre-feet, respectively. The Court retains jurisdiction to determine injury if the Applicant utilizes more than 140 taps.

11. Description for plan for augmentation and exchange: To replace depletions associated with out of priority diversions from the water rights described in paragraph 7 above, Applicant will return to the affected stream system 5.65 acre-feet from water rights described above in paragraph 8. This decree also approves an exchange from the Soda Lakes Reservoir Nos. 1 and 2, and the Harriman Ditch headgate to the depletions associated with the subject structures with an appropriation date of September 17, 1991. Applicant has stipulated with Objector, South Evergreen Water District, that withdrawals of the water rights pursuant to the operation of this plan for augmentation will not precipitate a call on Turkey Creek other than that which is decreed to those water rights described in Paragraphs 8.B and 8.D. supra.

Replacement of out of priority depletions directly with Warrior Ditch Company direct flow water rights and storage water in Soda Lakes will be in accordance with the following schedule:

A. May 1 through October 31: Replace direct depletions with Warrior Ditch Company entitlement when in priority and by releases from Soda Lakes or Spinney Mountain Reservoir when Warrior Ditch rights are out of priority.

B. November 1 through April 30: The Warrior Ditch has not historically diverted during this time period. Depletions are to be replaced by releases from Soda Lakes as follows:

1. Releases to Turkey Creek when the call is outside of the Harriman Ditch System

2. If river call is from or within the Harriman Ditch system, the releases will be made from Soda Lakes to the Harriman Ditch.

For a period of seven years from the date of this decree, at such times as the amount of water in Bear Creek is less than 3.5 cfs, as measured at the Morrison gauge, Idledale cannot exchange ups'ream unless Idledale's depletions are replaced above Morrison's intake by the metho s set forth in paragraph 9.A(7) a) through d) herein. (In computing the stream flow in Bear Creek at Morrison gauge, Morrison's diversions from its intake upstream of the gauge shall be added to the gauge reading. At the end of the seven-year period, in the event that Morriso n puts a call on the river to satisfy its existing decrees, Idledale, upon notification, will provide augmentation water above Morrison's intake by any one of the following of the methods set forth in Paragraph 9.A(7)a) - d).

12. Mountain Mutual Reservoir Company agrees to reserve 2.81 acre-feet of the safe yield of the water rights used for storage and 2.84 acre-feet of direct flow water rights for use by Applicant in this plan for augmentation.

APPROVAL OF CHANGE OF WATER RIGHT

13. Decreed changes:

A. The uses decreed to the Soda Lakes Reservoir Nos. 1 and 2, Warrior Ditch, and the Harriman Ditch water rights described above, are hereby changed to include storage, replacement, augmentation and exchange purposes for Applicant's pro rata share in the water rights for use in this plan for augmentation and exchange.

B. Starbuck Heights Pipeline, decreed in Civil Action No. 91471 on September 24, 1935 with appropriation date of May 1, 1920 for a rate of flow of 0.125 cfs for irrigation and 0.125 cfs for stockwatering and domestic uses. The water is decreed nontributary and the pipeline is generally located in Section 29, T4S, R70W of the 6th P.M.

The uses decreed for the Starbuck Heights Pipeline described above are hereby changed to include storage or replacement of water system diversions under this application. The Starbuck Heights Pipeline may be used to replace out-of-

priority diversions on a one-for-one basis from the structures described in paragraphs 4.A. through 4.G., provided, however, the rate of flow for such replacement from the Starbuck Heights Pipeline shall at no time exceed .125 cfs. Should Applicant seek to develop the Starbuck Heights Pipeline in the future by means of a well or other structure, Applicant agrees to notify the Genessee Water and Sanitation District and the Town of Morrison, who retain the right to challenge the Applicant's right to do so under the original decree for the Starbuck Heights Pipeline, or for any other reason.

C. That the wells or replacement wells described in paragraph 4.A through D. be designated as alternate points of diversion for the Sawmill Creek Spring, the Braun Spring, West Gulch Spring, the Braun's Gulch Pipeline, the Sawmill Creek Pipeline, West Gulch Pipeline, and Devil's Gulch Pipeline, as described in paragraphs 4.E through G and paragraph 7.B.

CONCLUSIONS OF LAW

14. This Court has jurisdiction over the subject matter of these proceedings and over all who may be affected thereby, whether they have chosen to appear or not pursuant to Sections 37-92-302, 37-92-304(6), and 37-92-305, C.R.S.

15. Timely and adequate notice of the pendency of this action was given in the manner provided by law.

16. The request for water rights, change of water right, and plan for augmentation including exchange decreed herein are, as a matter of law, permissible and come within the definitions authorized by statute.

17. The terms and conditions as set forth in this decree are adequate to prevent injury to the owners of, or persons entitled to use, water under a vested water right or a decreed conditional water right.

18. This decree is administrable by the water officials of the State of Colorado provided that the Applicant furnishes to the Division Engineer, or his representative upon request, appropriate records evidencing its operation under this decree.

19. Pursuant to Section 37-92-305(8), C.R.S., the State Engineer shall curtail all out-of-priority diversions, the depletions from which are not so replaced as to prevent injury to vested water rights.

JUDGMENT AND DECREE

20. The foregoing Findings of Fact and Conck ˈˈons of Law are fully incorporated herein.

21. The water rights in paragraph 4 above are hereby granted. The application in this case was filed in the Water Court for Water Division 1 in the year 1994, and the priority awarded herein shall be administered as having been filed in that year, and shall be junior to all priorities awarded in earlier years for water derived from the same source. As between water rights awarded in the same calendar year, priorities shall be determined by the date of appropriation as decreed and shall not be affected by the date of this Decree.

22. The change of water rights and plan for augmentation is hereby approved, subject to the terms and conditions provided for herein. The State Engineer, Division Engineer for Water Division 1, and other water administration officials are ordered to administer the plan for augmentation in accordance with this decree and in accordance with the priorities awarded herein.

23. Accounting: In order to assure that the vested water rights of others are protected from injury and to assure proper administration of this decree, Applicant shall provide accounting pursuant to the form described on Exhibit E, containing monthly data to the Division Engineer and the Water Commissioner on a monthly basis. Applicant shall install appropriate measuring devices on all the augmented structures referenced herein and shall keep accurate records of water diverted and replacements made pursuant to this decree. Applicant, upon written request, will provide Objectors with copies of such accounting.

24. Retained Jurisdiction: In order to assure that the vested water rights of others are not injured by the change and plan for augmentation decreed herein, the Court retains jurisdiction in this matter and upon proper petition the Court will reconsider its approval of the change and plan for augmentation including exchange. Retained jurisdiction also applies to Applicant's development of the Starbuck Heights Pipeline if such development exceeds that which is described in Paragraph 13.B., herein. Jurisdiction is also retained for the purpose of determining injury should Applicant utilize more than 140 taps pursuant to this decree. In the event Applicant or any party petition the Court for reconsideration on any of the elements of the plan, the Court shall order appropriate notice to be given to all the parties hereto. Such petition shall be made in good faith, under oath, and shall set forth with particularity the factual basis upon which the requested reconsideration is premised. The party lodging the petition shall have the burden of going forward to establish the prima facie facts alleged in the petition. If a prima facie case of injury to vested water rights is established, Applicant shall thereupon bear the burden of proof to show (a) that any modification sought by any other party is not required to avoid injury to

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other appropriators, or (b) that any term or condition proposed by Applicant in response to the petition avoids injury to other appropriators.

23. Period of Retained Jurisdiction: The Court retains jurisdiction for a period of 7 years for the purpose of determining whether any provision of this decree is necessary and/or sufficient to prevent injury to senior water rights, in particular whether the permanent augmentation sources describe in paragraph 9(A)(7) are necessary and/or sufficient to prevent injury to Morrison's senior rights. The Court also retains continuing jurisdiction with respect to development of the Starbuck Heights Pipeline as described in Paragraph 13.B. herein. The Court retains continuing jurisdiction for the question of injury should Applicant utilize more than 140 taps. Res judicata shall apply to all other aspects of the case upon the expiration of the respective retained jurisdiction period.

Dated this 29 day of July, 1996.

Raymond S. Liesman
Water Referee

THE COURT DOTH FIND THAT NO PROTEST WAS FILED IN THIS MATTER, THEREFOR THE FOREGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Dated: AUG 20 1996

Jonathan W. Hays
Water Judge

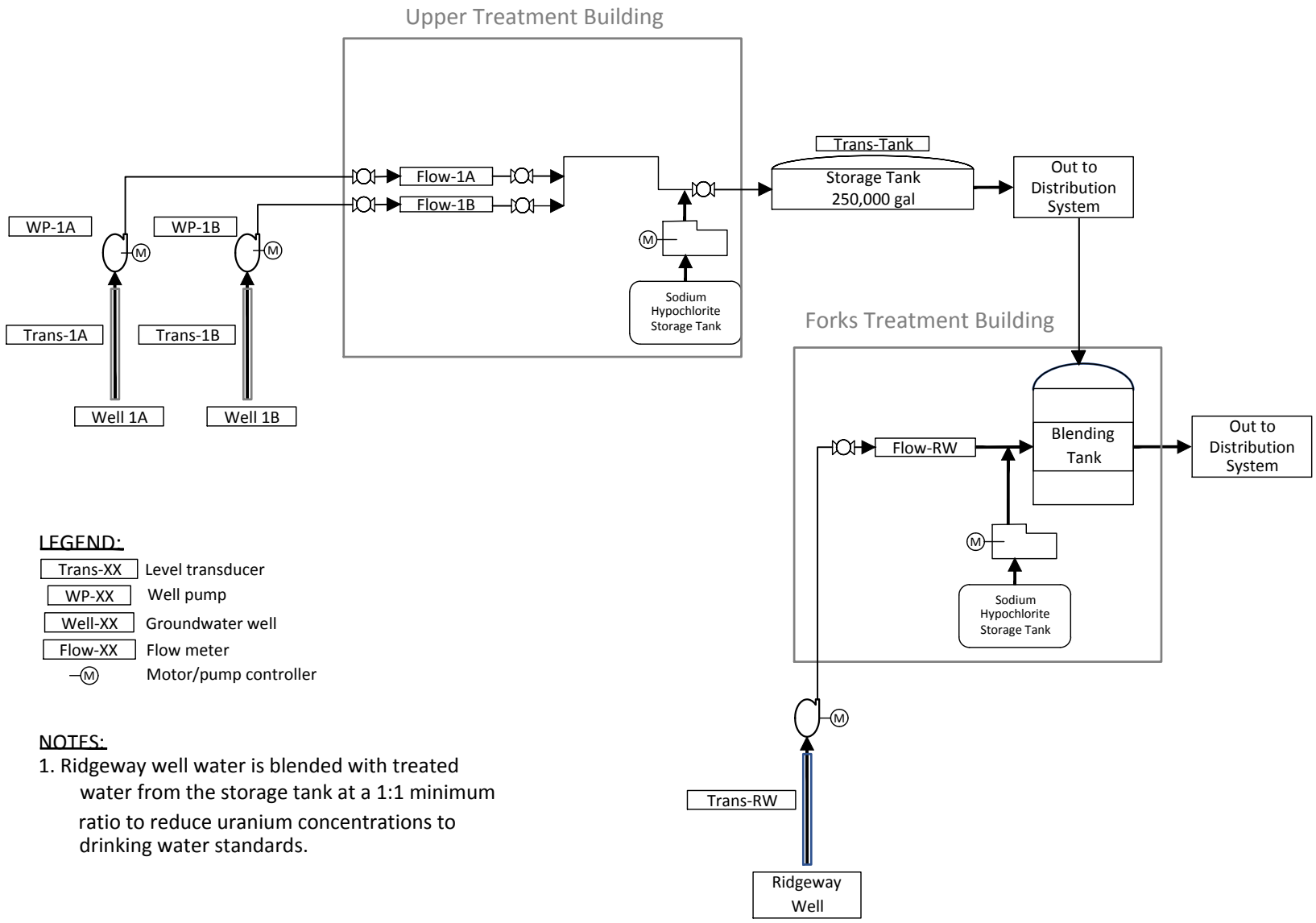
APPROVED AS TO FORM AND CONTENT:

HOLLY I. HOLDER, P.C.

Holly I. Holder, #10216
Priscilla S. Fulmer, #14936
Margaret O'Donnell, #21145
518 - 17th Street, #1560
Denver, Colorado 80202
(303) 534-3636

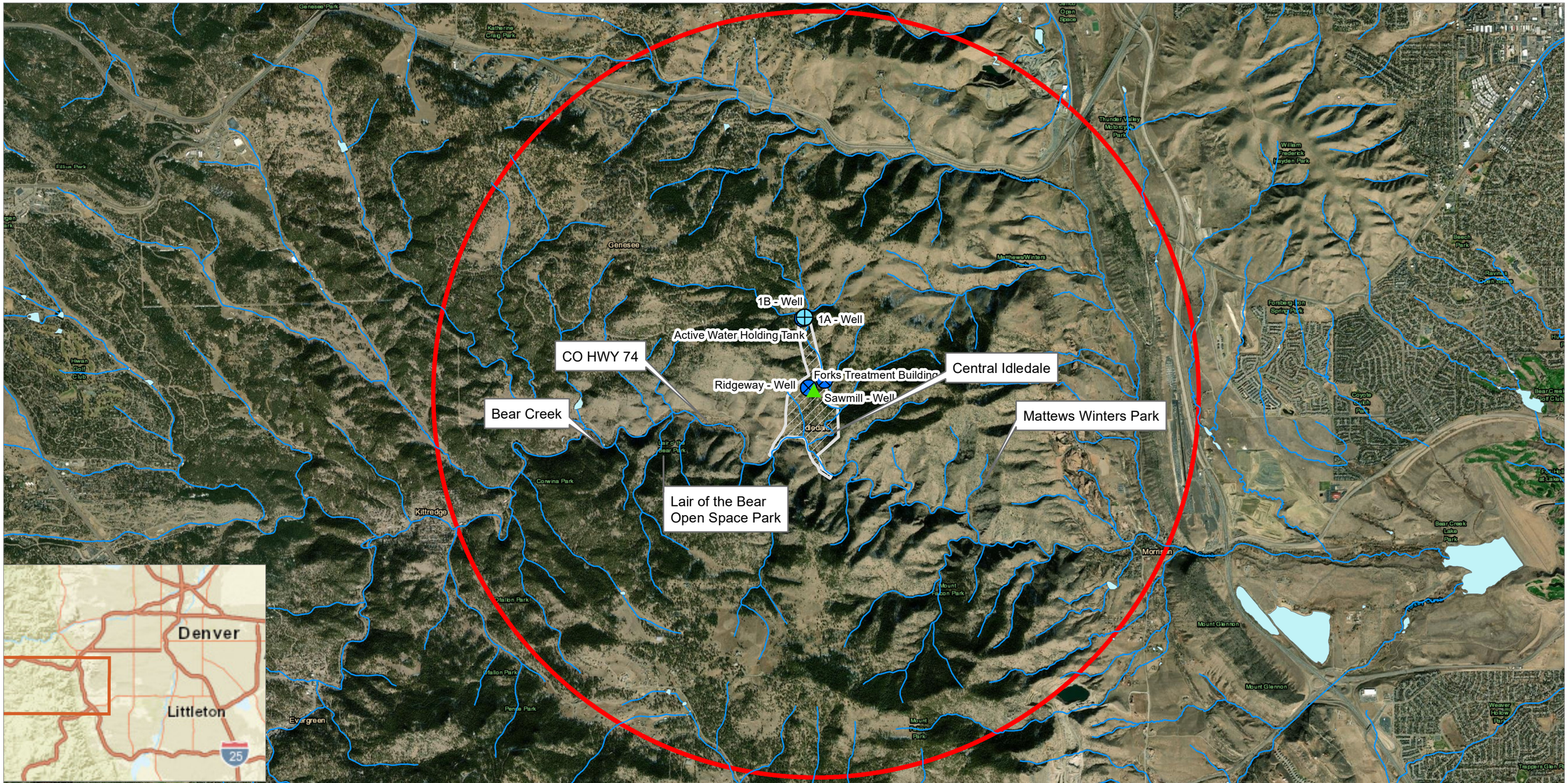
ATTORNEYS FOR APPLICANT

Attachment 13
Existing Process Flow Diagram



Publish Date: 2022/02/08 10:59 AM | User: rpetrie
Filepath: K:\Projects\1818-Orsatti Water Consultants\Idledale\1818-Ideldale-RP003-Process Flow.dwg Figure 1

Attachment 16
3-Mile Radius Map



LEGEND:

- Active Water Holding Tank
- Treatment Building
- Groundwater Well
- Stream/River/intermittent
- Approx. Idledale District Service Extents
- 3-Mile Radius

NOTES:
Stream/River/Intermittent dataset from USGS National Hydrography Dataset Best Resolution (NHD) for Hydrologic Unit (HU) 4. Published October 10, 2021.

0 1
Miles

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ANCHOR QEA

Attachment 16
3-Mile Radius Map
Idledale Water and Sanitation District
Project Needs Assessment

Attachment 17
Population Projection

3821 Union Ct.
Wheat Ridge, CO 80033
(303) 881-1337

Orsatti Water Consultants

Memorandum

February 7, 2022

To: CDPHE, Grants and Loans

From: Bob Orsatti, Orsatti Water Consultants

cc:

Re: Idledale PNA: Attachment 17 – Population Projection

The following is the requested information for projecting population over the 20-year planning period. Method 1 was selected and utilizes population-based projections.

Current System Population (# people)

274

Population Growth Rates (% increase per year)

1%

Average Daily per Capita Flow Rate (GPD)

85.6

Maximum Daily per Capita Flow Rate (GPD)

135

Peak hourly flow multiplier (GPH)

1.5

The values above were used to calculate the values required in one of the final forms of the PNA, whose fields are shown below.

Year	System Population	Service Area Population (if different)	Average Daily Flow (GPCD)	Maximum Daily Flow (GPCD)	Peak Hour Flow (GPH)
+0	274		23,454	36,990	2,312
+5	288		24,653	38,880	2,430
+10	303		25,937	40,905	2,557
+15	319		27,306	43,065	2,692
+20	336		28,762	45,360	2,835

Attachment 19
Additional Alternatives

3821 Union Ct.
Wheat Ridge, CO 80033
(303) 881-1337

Orsatti Water Consultants

Memorandum

January 25, 2022

To: CDPHE, Grants and Loans

From: Bob Orsatti, Orsatti Water Consultants

cc:

Re: Idledale PNA: Attachment 19 – Additional Alternatives

The following is an additional alternative assessed during project development and supplements Section 7.1 Alternatives of the Project Needs Assessment (PNA).

Genesee Connection

Alternative 4 Description (2000 character limit):

In evaluating different alternatives to provide year-round reliable water supply to its customer base, it is routine to assess the potential to regionalize or become part of an adjacent, larger system rather than provide the capital required to significantly improve the existing water system. In the case of Idledale, this alternative is a very real potential situation. The Genesee Water and Sanitation District is contiguous to and immediately west of Idledale's service area. They have been contacted by the District to discuss and determine the viability of Idledale becoming a service customer of the Genesee District. Through numerous discussions, it has been determined that the best technical solution includes the construction of a 1.5-inch master service meter station located just adjacent to 2136 Montane Drive East where an existing 8" watermain would be tapped. The Master Meter installation would also require approximately 4,025 lineal feet of 2" potable transmission main, crossing private property to ultimately connect to the Upper Treatment Building for delivery to the 250,000-gallon storage tank. Construction of the pipeline is anticipated to incorporate Horizontal Directional Drilling (HDD) to reduce construction costs and minimize surface disturbance.

Alternative 4 Capital and Operation and Maintenance Costs (2000 character limit):

Genesee expressed the opinion that this water rights work and all associated costs should be the full responsibility of Idledale as Idledale would be the beneficiary and owner of the right, should it ultimately provide a solution to the matter. Associated costs to move through this process have been estimated at $2.23 M. Finally, Genesee would also plan to charge Idledale $18.00 per 1,000 gallons of metered flow as an ongoing direct service charge. With a future annual District-wide demand of approximately 8M gallons, this adds $144,000/year in additional District operations costs.

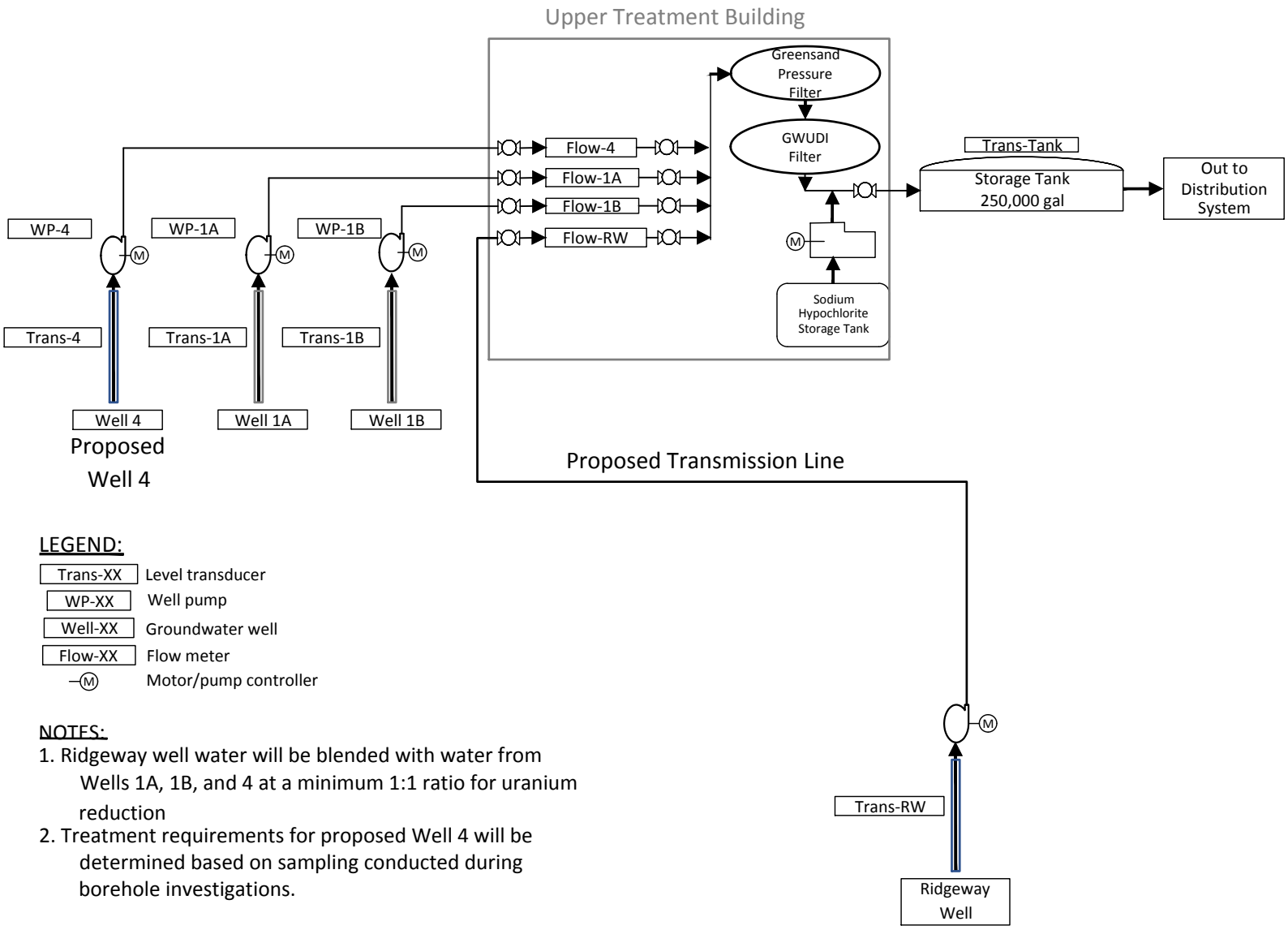
Alternative 4 Advantages and Disadvantages (2000 character limit):

The Genesee Connection concept has significant benefits when compared to the alternative to improve and expand Idledale's groundwater well system infrastructure. By connecting to Genesee, the District would be connecting to a source that comes from surface water rights of supply which are inherently more reliable over the life of the District. There would be no further concerns about existing well facilities operation & maintenance or seasonal problems with groundwater recharge. The District functioning and associated day to day responsibilities would become far simpler, focusing on the continued operation and maintenance of the water storage tank and distribution system.

There are constraints that the Genesee Water & Sanitation District has placed on a master meter service connection that need to be understood before assessing Idledale's appetite for this approach. Specifically, Genesee has stated, "Any water not stored, but diverted, treated, and supplied by Genesee to Idledale would need to be predicated upon the successful transfer of related water rights by Idledale, in the amount necessary and when in priority, for Genesee to divert at its' Genesee Mountain Pipeline ("point of diversion") for subsequent treatment, pumping and distribution to a separately metered Master Tap."

This would require Idledale to first acquire and perfect the necessary water rights through related engineering and the Colorado water courts. Only then would Genesee move forward with a realistic service agreement. Conversations with Genesee indicate they recently acquired an option to purchase 9 shares of Hodgson Ditch water. This was done primarily with Idledale's interests in mind, believing this may provide for a possible but uncertain solution to the water rights issue. The Hodson Ditch is the No. 3 right on Bear Creek, meaning it is a very senior right on the stream system and, historically not called out very often. The water right (9 shares) would require the necessary engineering and legal work to quantify usable amounts and ability to move the water from the ditch upstream to Genesee's point of diversion.

Attachment 20
Proposed Process Flow Diagram



Publish Date: 2022/02/08 10:59 AM | User: rpetrie
Filepath: K:\Projects\1818-Orsatti Water Consultants\Idledale\1818-Ideldale-RP003-Process Flow.dwg Figure 2

Attachment 22
Environmental Checklist

COLORADO
Department of Public Health & Environment

ENVIRONMENTAL CHECKLIST

Use the Discussion and References space at the end of each section to document your responses. For example, explain how you determined the level of impact and document the reasoning if checking PA (possible adverse) for any resource. Attach additional pages if necessary.

1. Brief project description, including identification of selected alternative:

   This proposed project involves new groundwater well construction, installing a new transmission line between an existing groundwater well and the existing Upper Treatment Building, rehabilitation of drinking water distribution system hydrants and valves, and installation of residential water meters.

2. Describe if the project will improve or maintain water quality, and if the project addresses a TMDL, and/or Watershed Management Plan.

   The proposed project will improve raw water supply to the system to reduce seasonal supply deficits related to decreased groundwater recharge in the summer. Treatment equipment will be installed to bring existing wells into compliance with recent GWUDI determination.

3. Provide latitude and longitude of the proposed project (if a transmission / distribution / collection line identify the center point not the whole line):

   39.678658, -105.243311

4. Provide discharge (WW) or source (DW) information: N/A □

   Additional source water will be used from a new groundwater well/GWUDI well.

5. Provide NPDES/PWSID number:

   CO0130055

6. Provide primary waterbody name and waterbody ID, secondary name (if available), and State designated surface water use:

   NA, groundwater source.

7. Did your analysis consider how this project impacts community planning efforts in other areas (i.e. transportation, housing, etc.)?

Analysis conducted for this project assessed population and service area increases over a 20-year planning period, which included discussions with the local Water Board and general public on effects decreased water supply would have of development.

Y = Yes N = No PA = Possible Adverse

1. Physical Aspects - Topography, Geology and Soils

Y ☐	N ☑	PA ☐	a.	Are there physical conditions (e.g., steep slopes, shrink-swells soils, etc.) that might be adversely affected by or might affect construction of the facilities?
Y ☐	N ☑	PA ☐	b.	Are there similar limiting physical conditions in the planning area that might make development unsuitable?
Y ☐	N ☑	PA ☐	c.	Are there any unusual or unique geological features that might be affected?
Y ☐	N ☑	PA ☐	d.	Are there any hazardous areas (slides, faults, etc.) that might affect construction or development?

Discussion and References:

No adverse conditions have effected the construction of subgrade water infrastruture projects in the service area, based on discussions with District operators.

2. Climate

Y ☐	N ☑	PA ☐	a.	Are there any unusual or special meteorological constraints in the planning area that might result in an air quality problem?
Y ☐	N ☑	PA ☐	b.	Are there any unusual or special meteorological constraints in the planning area that might affect the feasibility of the proposed alternative?

Discussion and References:

The project has been initiated due to decreased groundwater recharge in the region that has occurred over the last 3-4 years. The purpose of the project is to ensure an

3. Population

Y ☐	N ☑	PA ☐	a.	Are the proposed growth rates excessive (exceeding State projections, greater than 6% per annum for the 20 year planning period)?
Y ☐	N ☑	PA ☐	b.	Will additional growth be induced or growth in new areas encouraged as a result of facilities construction?
Y ☐	N ☑	PA ☐	c.	Will the facilities serve areas which are largely undeveloped areas at present?

Discussion and References:

The extents of the service area is constrained by physical limitations due to topography and existing development.

4. Housing, Industrial and Commercial Development and Utilities

Y ☐	N ☑	PA ☐	a.	Will existing homes or business be displaced as a result of construction of this property?
Y ☐	N ☑	PA ☐	b.	Will new housing serviced by this facility affect existing facilities, transportation patterns, environmentally sensitive areas, or be in special hazard or danger zones?
Y ☐	N ☑	PA ☐	c.	Will new housing create strains on other utilities and services - policies, power, water supply, schools, hospital care, etc.?

Discussion and References:

No new residential or commercial development is anticipated to be created through the implementation of this project.

5. Economics and Social Profile

Y ☐ N ☑ PA ☐ a. Will certain landowners benefit substantially from the development of land due to location and size of the facilities?
Y ☐ N ☑ PA ☐ b. Will the facilities adversely affect land values?
Y ☐ N ☑ PA ☐ c. Are any poor or disadvantaged groups especially affected by this project?

Discussion and References:

This project will provide a more stable supply of water to existing users while decreasing operating costs to the District and consumers.

6. Land Use

Y ☐ N ☑ PA ☐ a. Will projected growth defeat the purpose of local land use controls (if any)?
Y ☐ N ☑ PA ☐ b. Is the location of the facilities incompatible with local land use plans?
Y ☐ N ☑ PA ☐ c. Will inhabited areas be adversely impacted by the project site?
Y ☐ N ☑ PA ☐ d. Will new development have adverse effects on older existing land uses (agriculture, forest land, etc.)?
Y ☐ N ☑ PA ☐ e. Will this project contribute to changes in land use in association with recreation (skiing, parks, etc.), mining or other large industrial or energy developments?

Discussion and References:

The planned improvements will occur entirely on District owned property and within public utility corridors and will not effect development, recreation, or local land use.

7. Floodplain Development

Y ☐ N ☑ PA ☐ a. Does the planning area contain 100 year floodplains?
If yes -
Y ☐ N ☑ PA ☐ b. Will the project be constructed in a 100 year floodplain?
Y ☐ N ☑ PA ☐ c. Will the project serve direct or indirect development in a 100 year floodplain anywhere in the planning area?

Discussion and References:

FEMA Flood Map Service Center, FEMA mapping tool

8. Wetlands

Y ☑ N ☐ PA ☐ a. Does the planning area contain wetlands as defined by the U.S. Fish and Wildlife Service?
If yes -
Y ☐ N ☑ PA ☐ b. Will any structure of the facility be located in wetlands?
Y ☐ N ☑ PA ☐ c. Will the project serve growth and development which will directly or indirectly affect wetlands?

Discussion and References:

USFWS National Wetlands Inventory. No structures are planned to be constructed in areas designated as wetlands.

9. Wild and Scenic Rivers

Y ☐ N ☑ PA ☐ a. Does the planning area contain a designated or proposed wild and scenic river?
If yes -
Y ☐ N ☑ PA ☐ b. Will the project be constructed near the river?

Y ☐ N ☑ PA ☐ c. Will projected growth and development take place contiguous to or upstream from the river segment?

Y ☐ N ☑ PA ☐ d. Will the river segment be used for disposal of effluent?

Discussion and References:

The project focus is on groundwater/GWUDI sources and will not encroach upon any surface waterbodies, including rivers or streams

10. Cultural Resources (Archeological/Historical)

Y ☐ N ☑ PA ☐ a. Are there any properties (historic, architectural, and archeological) in the planning area which are listed on or eligible for listing on the National Register of Historic Places?

If yes -

Y ☐ N ☑ PA ☐ b. Will the project have direct or indirect adverse impacts on any listed or eligible property?

Discussion and References:

No, all work will be conducted on District owned property and within the public

11. Flora and Fauna (including endangered species)

Y ☐ N ☑ PA ☐ a. Are there any designated threatened or endangered species or their habitat in the planning area?

Y ☐ N ☑ PA ☐ b. Will the project have direct or indirect adverse impacts on any such designated species?

Y ☐ N ☑ PA ☐ c. Will the project have direct or indirect adverse impacts on fish, wildlife or their habitat including migratory routes, wintering or calving areas?

Y ☐ N ☑ PA ☐ d. Does the planning area include a sensitive habitat area designed by a local, State or Federal wildlife agency?

Discussion and References:

The planning area is not within an area of interest for potential conservation areas and the footprint for improvements will not effect surface habitat past the construction phase

12. Recreation and Open Space

Y ☐ N ☑ PA ☐ a. Will the project eliminate or modify recreational open space, parks or areas of recognized scenic or recreational value?

Y ☐ N ☑ PA ☐ b. Is it feasible to combine the project with parks, bicycle paths, hiking trails, waterway access and other recreational uses?

Discussion and References:

The project will not effect recreation and open spaces near the planning area and will only occur on District owned property

13. Agricultural Lands

Y ☐ N ☑ PA ☐ a. Does the planning area contain any environmentally significant agricultural lands (prime, unique, statewide importance, local importance, etc.) as defined in the EPA Policy to Protect Environmentally Significant Agricultural Lands dated September 8, 1978?

Y ☐ N ☑ PA ☐ b. Will the project directly or indirectly encourage the irreversible conversion of Environmentally Significant Agricultural Lands to uses which result in the loss of these lands as an environmental or essential food production resource?

Discussion and References:

The project will not effect agricultural lands near the planning area and will only occur on District owned property.

14. Air Quality

Y ☐ N ☑ PA ☐	a.	Are there any direct air emissions from the project (e.g., odor controls, sludge incinerator) which do not meet Federal and State emission standards contained in the State Air Quality Implementation Plan (SIP)?
Y ☐ N ☑ PA ☐	b.	Is the project service area located in an area without an approved or conditionally approved SIP?
Y ☐ N ☑ PA ☐	c.	Is the increased capacity of the project greater than 1 mgd?
Y ☐ N ☑ PA ☐	d.	Do the population projections used in the facilities plan exceed the Sate or area wide projections in the SIP by more than 5%?
Y ☑ N ☐ PA ☐	e.	Does the project conform to the requirements of the SIP? (See EPA regulations under Section 316 of the Clean Air Act.)
Y ☐ N ☑ PA ☐	f.	Is the project inconsistent with the SIP of an adjoining State that may be impacted by the Project?
Y ☐ N ☑ PA ☐	g.	Does the project violate national ambient Air Quality Standards in an attainment or unclassified area?
Y ☐ N ☑ PA ☐	h.	Will the facilities create an odor nuisance problem?

Discussion and References:

No new emissions will be generated by this project that would effect the SIP.

15. Water Quality and Quantity (Surface/Groundwater)

Y ☐ N ☑ PA ☐	a.	Are present stream classifications in the receiving stream being challenged as too low to protect present or recent uses?
Y ☐ N ☑ PA ☐	b.	Is there a substantial risk that the proposed discharge will not meet existing stream standards or will not be of sufficient quality to protect present or recent stream uses?
Y ☐ N ☑ PA ☐	c.	Will construction of the project and development to be served by the project result in non-point water quality problems (sedimentation, urban stormwater, etc.)?
Y ☐ N ☑ PA ☐	d.	Will water rights be adversely affected by the project?
Y ☐ N ☑ PA ☐	e.	Will the project cause a significant amount of water to be transferred from one sub-basin to another (relative to the 7-day, 10 year flow of the diverted basin)?
Y ☐ N ☑ PA ☐	f.	Will stream habitat be affected as a result of the change in flow or stream bank modification?
Y ☐ N ☑ PA ☐	g.	Are stream conditions needed for deciding upon the required limitations inadequately specified in the 208 Plan? If so, have the wasteload allocations calculations been performed and approved by the State and EPA?
Y ☐ N ☑ PA ☐	h.	Is an Antidegradation Review required?
Y ☐ N ☑ PA ☐	i.	Will the project adversely affect the quantity or quality of a groundwater resource?
Y ☐ N ☑ PA ☐	j.	Does the project adversely affect an aquifer used as a potable drinking water supply?
Y ☐ N ☑ PA ☐	k.	Are there additional cost effective water conservation measures that could be adopted by community to reduce sewage generation?

Discussion and References:

Additional groundwater withdrawals will occur due to this project but withdrawals will not exceed the water rights of the District.

16. Public Health

Y ☐ N ☐ PA ☑	a.	Will there be adverse direct or indirect noise impacts from the project?
Y ☐ N ☑ PA ☐	b.	Will there be a vector problem (e.g., mosquito) from the project?

Y ☐ N ☑ PA ☐ c. Will there be any unique public health problems as a result of the project (e.g., increased disease risks)?

Discussion and References:

Additional noise will be generated during construction but will be limited to general construction equipment and activities.

17. Solid Waste (Sludge Management)

Y ☐ N ☑ PA ☐ a. Will sludge disposal occur in an area with inadequate sanitary landfills or on land unsuitable for land application?

Y ☐ N ☑ PA ☐ b. Are there special problems with the sludge that makes disposal difficult (hazardous, difficult to treat)?

Y ☐ N ☑ PA ☐ c. Is the technology selected for sludge disposal controversial?

Discussion and References:

No sludge will be produced by the recommended improvements.

18. Energy

Y ☑ N ☐ PA ☐ a. Are there additional cost effective measures to reduce energy consumption or increase energy recovery which could be included in this project?

Discussion and References:

Variable frequency drives will be installed to control the new well pump that will have energy savings capabilities. Additionally, solar panels for emergency battery power, high

19. Land Application

Y ☐ N ☑ PA ☐ a. Has a new or unproven technique been selected?

Y ☐ N ☑ PA ☐ b. Is there considerable public controversy about the project?

Y ☐ N ☑ PA ☐ c. Will the project require additional water rights or impact existing water Rights?

Y ☐ N ☑ PA ☐ d. Is the project multi-purpose?

Discussion and References:

No additional water rights will be required.

20. Regionalization

Y ☐ N ☑ PA ☐ a. Are there jurisdictional disputes or controversy over the project?

Y ☐ N ☑ PA ☐ b. Is conformance with the 208 plan in question?

Y ☐ N ☑ PA ☐ c. Is the proliferation of small treatment plants and septic systems creating a significant health problem?

Y ☐ N ☑ PA ☐ d. Have inter-jurisdictional agreements been signed?

Discussion and References:

21. Public Participation

Y ☐ N ☑ PA ☐ a. Is there a substantial level of public controversy?

Y ☑ N ☐ PA ☐ b. Is there adequate evidence of public participation in the project?

Discussion and References:

Public hearings will be held to discuss the project and to provide an opportunity for

22. Environmental Laws

Y ☐ N ☑ PA ☐ a. Does the project threaten to violate any State, Federal or local law or requirement imposed to protect the environment?

Discussion and References:

Prepared By: Kyle Gustafson, Engineer, Orsatti Water Consultants
Name, Title, and Affiliation

Date: 1/26/2022

Attachment 23
Public Meeting Documentation

Appendix B
District Financial Information

Resolution No. 2022-11-03

RESOLUTION
ADOPTING BUDGET, IMPOSING MILL LEVY AND APPROPRIATING FUNDS

(2023)

The Board of Directors of Idledale Water & Sanitation District (the "**Board**"), Town of Idledale, County of Jefferson, Colorado (the "**District**") held a special meeting held at Idledale Community Church, 21429 CO-74, Idledale, CO, 80453, on November 10, 2022, at the hour of 6:00 P.M.

Prior to the meeting, each of the directors was notified of the date, time and place of the budget meeting and the purpose for which it was called and a notice of the meeting was posted or published in accordance with § 29-1-106, C.R.S.

[Remainder of Page Intentionally Left Blank.]

NOTICE AS TO PROPOSED 2023 BUDGET

Colorado Community Media
750 W. Hampden Ave. Suite 225
Englewood, CO 80110

Idledale WSD (Public Alliance) **
13131 W. Alameda Pkwy, Suite 200
Lakewood CO 80228

AFFIDAVIT OF PUBLICATION

State of Colorado }
County of Jefferson } ss

This Affidavit of Publication for the Canyon Courier, a weekly newspaper, printed and published for the County of Jefferson, State of Colorado, hereby certifies that the attached legal notice was published in said newspaper once in each week, for 1 successive week(s), the last of which publication was made 10/20/2022, and that copies of each number of said paper in which said Public Notice was published were delivered by carriers or transmitted by mail to each of the subscribers of said paper, according to their accustomed mode of business in this office.

For the Canyon Courier

State of Colorado }
County of Jefferson } ss

The above Affidavit and Certificate of Publication was subscribed and sworn to before me by the above named Linda Shapley, publisher of said newspaper, who is personally known to me to be the identical person in the above certificate on 10/20/2022. Linda Shapley has verified to me that she has adopted an electronic signature to function as her signature on this document.

Carla Bethke
Notary Public
My commission ends April 11, 2026

CARLA BETHKE
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20004025550
MY COMMISSION EXPIRES APRIL 11, 2026

Public Notice

IDLEDALE WATER & SANITATION DISTRICT NOTICE CONCERNING AMENDED 2022 BUDGET AND THE PROPOSED 2023 BUDGET

NOTICE IS HEREBY GIVEN to all interested parties that the need has arisen for the Idledale Water & Sanitation District (the District) to amend its 2022 Budget, and that a proposed 2023 Budget has been submitted to the Board of Directors of the District; and that copies of the proposed Amended 2022 Budget and 2023 Budget have been filed at the office of the District Manager, Public Alliance, LLC, 13131 W. Alameda Pkwy, Suite 200, Lakewood, CO, 80228, where the same are open for public inspection; and, that adoption of Resolutions Amending the 2022 Budget and Adopting the 2023 Budget will be considered at a public meeting of the Board of Directors of the District to be held on Thursday, November 10, 2022, at 6:00 p.m. The meeting will be held at Idledale Community Church, 21429 Highway 74, Idledale, CO, 80453.

Any elector within the District may, at any time prior to the final adoption of the Resolutions to Amend the 2022 Budget and to Adopt the 2023 Budget, inspect and file or register any objections thereto.

IDLEDALE WATER & SANITATION DISTRICT BOARD OF DIRECTORS

By: /s/ AJ Beckman, District Manager

Legal Notice No. CC992
First Publication: October 20, 2022
Last Publication: October 20, 2022
Publisher: Canyon Courier

A RESOLUTION SUMMARIZING EXPENDITURES AND REVENUES FOR EACH FUND AND ADOPTING A BUDGET AND APPROPRIATING SUMS OF MONEY TO EACH FUND IN THE AMOUNTS AND FOR THE PURPOSES SET FORTH HEREIN FOR THE DISTRICT FOR THE CALENDAR YEAR BEGINNING ON THE FIRST DAY OF JANUARY 2023 AND ENDING ON THE LAST DAY OF DECEMBER 2023.

WHEREAS, the Board has authorized its accountant to prepare and submit a proposed budget to the Board in accordance with Colorado law; and

WHEREAS, the proposed budget has been submitted to the Board for its review and consideration; and

WHEREAS, upon due and proper notice, provided in accordance with Colorado law, said proposed budget was open for inspection by the public at a designated place, a public hearing was held on November 10, 2022, interested electors were given the opportunity to file or present any objections to said proposed budget at any time prior to final adoption of the budget by the Board.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD AS FOLLOWS:

Section 1. Adoption of Budget. The budget attached hereto and incorporated herein is approved and adopted as the budget of the District for fiscal year 2023. In the event of recertification of values by the County Assessor's Office after the date of adoption hereof, staff is hereby directed to modify and/or adjust the budget and certification to reflect the recertification without the need for additional Board authorization. Any such modification to the budget or certification as contemplated by this Section 1 shall be deemed ratified by the Board.

Section 2. Levy for General Operating Expenses. For the purpose of meeting all general operating expenses of the District during the 2023 budget year, there is hereby levied a tax of 63.684 mills upon each dollar of the total valuation of assessment of all taxable property within the District.

Section 3. Levy for Debt Service Obligations. For the purposes of meeting all debt service obligations of the District during the 2023 budget year, there is hereby levied a tax of

23.624 mills upon each dollar of the total valuation of assessment of all taxable property within the District.

Section 4. Levy for Contractual Obligation Expenses. For the purposes of meeting all contractual obligations of the District during the 2023 budget year, there is hereby levied a tax of 0.000 mills upon each dollar of the total valuation of assessment of all taxable property within the District.

Section 5. Levy for Capital Project Expenses. For the purposes of meeting all capital project obligations of the District during the 2023 budget year, there is hereby levied a tax of 0.000 mills upon each dollar of the total valuation of assessment of all taxable property within the District.

Section 6. Certification to County Commissioners. The Board directs its legal counsel, manager, accountant or other designee to certify to the Board of County Commissioners of Arapahoe County, Colorado the mill levies for the District as set forth herein. Such certification shall be in compliance with the requirements of Colorado law.

Section 7. Appropriations. The amounts set forth as expenditures in the budget attached hereto are hereby appropriated.

Section 8. Filing of Budget and Budget Message. The Board hereby directs its legal counsel, manager or other designee to file a certified copy of the adopted budget resolution, the budget and budget message with the Division of Local Government by January 30 of the ensuing year.

Section 9. Budget Certification. The budget shall be certified by a member of the District, or a person appointed by the District, and made a part of the public records of the District.

[Remainder of page intentionally left blank.]

ADOPTED THIS 10H DAY OF NOVEMBER, 2022.

IDLEDALE WATER & SANITATION DISTRICT

H L Gardner

Officer of the District

ATTEST:

STATE OF COLORADO
COUNTY OF JEFFERSON
IDLEDALE WATER & SANITATION DISTRICT

I hereby certify that the foregoing resolution constitutes a true and correct copy of the record of proceedings of the Board adopted by a majority of the Board at a District meeting held on Tuesday, November 10, 2022, Idledale Community Church, 21429 CO-74, Idledale, CO, 80453, as recorded in the official record of the proceedings of the District.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 10 day of November, 2022.

DocuSigned by:
Nancy Crivello
443784C5603D4CB...

EXHIBIT A

BUDGET DOCUMENT

BUDGET MESSAGE

IDLEDALE WATER AND SANITATION DISTRICT

ANNUAL BUDGET

FOR THE YEAR ENDING DECEMBER 31, 2023

IDLEDALE WATER AND SANITATION DISTRICT
SUMMARY
2023 BUDGET
WITH 2021 ACTUAL AND 2022 ESTIMATED
For the Years Ended and Ending December 31,

1/21/23

	ACTUAL 2021	ESTIMATED 2022	BUDGET 2023
BEGINNING FUND BALANCES	$ 68,947	$ 121,401	$ 154,381
REVENUE			
Property taxes	327,632	322,976	312,294
Specific ownership tax	25,154	22,500	21,861
Water service fees	5,656	4,000	4,000
Grant revenue	9,819	8,857	240,000
Bank loan	-	-	2,000
Other revenue	-	213	-
Net investment income	614	3,000	2,100
Total revenue	368,875	361,546	582,255
TRANSFERS IN	-	-	2,000
Total funds available	437,822	482,947	738,636
EXPENDITURES			
General and administrative	90,817	127,189	136,730
Operations and maintenance	89,889	74,326	102,000
Debt Service	88,570	88,566	88,508
Capital Projects	47,145	34,100	310,000
Contingency	-	4,385	5,762
Total expenditures	316,421	328,565	643,000
TRANSFERS OUT	-	-	2,000
Total expenditures and transfers out requiring appropriation	316,421	328,565	645,000
ENDING FUND BALANCES	$ 121,401	$ 154,381	$ 93,636

No assurance provided. See summary of significant assumptions.

IDLEDALE WATER AND SANITATION DISTRICT
PROPERTY TAX SUMMARY INFORMATION
2023 BUDGET
WITH 2021 ACTUAL AND 2022 ESTIMATED
For the Years Ended and Ending December 31,

1/21/23

	ACTUAL 2021	ESTIMATED 2022	BUDGET 2023
ASSESSED VALUATION			
Jefferson County			
Residential - Single Family	$ 3,569,627	$ 3,468,267	$ 3,274,540
Residential - Multi Family	-	-	47,691
Commercial	90,412	93,453	93,453
State assessed	161,312	199,119	111,416
Vacant land	48,759	31,308	31,308
Certified Assessed Value	$ 3,870,110	$ 3,792,147	$ 3,558,408
MILL LEVY			
General	62.000	62.000	63.684
Debt Service	23.000	23.000	23.624
Total mill levy	85.000	85.000	87.308
PROPERTY TAXES			
General	$ 239,947	$ 235,113	$ 226,614
Debt Service - 2006	89,013	87,219	84,064
Levied property taxes	328,960	322,332	310,678
Adjustments to actual/rounding	(1,328)	-	-
Budgeted property taxes	$ 327,632	$ 322,332	$ 310,678
ASSESSED VALUATION - EXCLUDED PROPRTY			
Jefferson County			
Residential - Single Family	$ -	$ 27,958	$ 68,415
Certified Assessed Value	$ -	$ 27,958	$ 68,415
MILL LEVY			
Debt Service	0.000	23.000	23.624
Total mill levy	0.000	23.000	23.624
PROPERTY TAXES			
Debt Service - 2006	-	$ 643	$ 1,616
Budgeted property taxes	$ -	$ 643	$ 1,616
BUDGETED PROPERTY TAXES			
General	**$ 238,978**	**$ 235,113**	**$ 226,614**
Debt Service	**88,654**	**87,862**	**85,680**
	$ 327,632	**$ 322,976**	**$ 312,294**

No assurance provided. See summary of significant assumptions.

IDLEDALE WATER AND SANITATION DISTRICT
GENERAL FUND
2023 BUDGET
WITH 2021 ACTUAL AND 2022 ESTIMATED
For the Years Ended and Ending December 31,

1/21/23

	ACTUAL 2021	ESTIMATED 2022	BUDGET 2023
BEGINNING FUND BALANCE	$ 68,934	$ 121,143	$ 154,127
REVENUE			
Property taxes	238,978	235,113	226,614
Specific ownership tax	25,154	22,500	21,861
Water service fees	5,656	4,000	4,000
Grant revenue	9,819	8,857	240,000
Other revenue	-	213	-
Net investment income	453	2,300	1,800
Total revenue	280,060	272,983	494,275
Total funds available	348,994	394,126	648,402
EXPENDITURES			
General and administrative			
Accounting	30,854	45,000	45,000
Audit	4,200	5,200	5,500
County Treasurer's fees	3,569	3,530	3,400
Director fees	1,700	3,000	3,000
District management	24,944	43,000	35,000
Dues and licenses	972	1,197	1,200
Election	-	1,779	15,000
Insurance	8,144	8,253	10,000
Legal	14,892	15,000	15,000
Miscellaneous	59	500	500
Office supplies/postage	1,208	500	1,000
Payroll taxes	275	230	230
Publications	-	-	100
Seminars/Training	-	-	1,800
Operations and maintenance			
Equipment rental	-	-	2,000
Field Services	-	-	30,000
Payroll taxes - plant operator salary	5,736	1,466	-
Plant operator salary	41,356	16,249	-
Operator in Responsible Charge	-	8,200	20,000
Repairs and maintenance	16,835	25,000	25,000
Supplies	136	-	-
Training	30	911	-
Treatment and testing	15,045	9,000	10,000
Utilities	9,841	13,500	15,000
Water purchases/Augmentation/Hauling	910	-	-
Capital			
Engineering	23,544	30,000	250,000
Furniture and equipment	-	300	-
Management	2,964	1,800	10,000
Water distribution system	20,637	2,000	50,000
Contingeny	-	4,385	4,270
Total expenditures	227,851	240,000	553,000
TRANSFERS OUT			
Debt Service Fund	-	-	2,000
Total transfers out	-	-	2,000
Total expenditures and transfers out requiring appropriation	227,851	240,000	555,000
ENDING FUND BALANCE	$ 121,143	$ 154,127	$ 93,402
EMERGENCY RESERVE	$ 8,500	$ 8,200	$ 14,800

No assurance provided. See summary of significant assumptions.

IDLEDALE WATER AND SANITATION DISTRICT
DEBT SERVICE FUND
2023 BUDGET
WITH 2021 ACTUAL AND 2022 ESTIMATED
For the Years Ended and Ending December 31,

1/21/23

	ACTUAL 2021	ESTIMATED 2022	BUDGET 2023
BEGINNING FUND BALANCE	$ 13	$ 258	$ 254
REVENUE			
Property taxes	88,654	87,862	85,680
Bank loan	-	-	2,000
Net investment income	161	700	300
Total revenue	88,815	88,562	87,980
TRANSFERS IN			
General Fund	-	-	2,000
Total transfers in	-	-	2,000
Total funds available	88,828	88,820	90,234
EXPENDITURES			
County Treasurer's fees	1,324	1,318	1,285
Miscellaneous	32		
Loan interest	26,614	24,748	22,823
Loan principal	60,600	62,500	64,400
Contingency	-	-	1,492
Total expenditures	88,570	88,566	90,000
Total expenditures and transfers out requiring appropriation	88,570	88,566	90,000
ENDING FUND BALANCE	$ 258	$ 254	$ 234

No assurance provided. See summary of significant assumptions.

IDLEDALE WATER AND SANITATION DISTRICT
2023 BUDGET
SUMMARY OF SIGNIFICANT ASSUMPTIONS

Services Provided

Idledale Water and Sanitation District (the District), a quasi-municipal corporation and political subdivision of the state of Colorado, was organized by order and decree of the District Court for Jefferson County and is governed pursuant to provisions of the Colorado Special District Act (Title 32, Article 1, Colorado Revised Statutes). The District's service area is located in the Town of Idledale, Jefferson County, Colorado. The District was established in 1947 provide for the orderly and uniform administration of water and sewer operation within the jurisdictional boundaries of the District. The district currently serves approximately 133 connected water taps. The District does not currently provide any sewer services. The District's primary revenues are property taxes and water service fees. The District is governed by an elected Board of Directors.

The District has no employees, and all administrative functions are contracted.

The District prepares its budget on the modified accrual basis of accounting in accordance with the requirements of Colorado Revised Statutes C.R.S. 29-1-105 using its best estimates as of the date of the budget hearing. These estimates are based on expected conditions and its expected course of actions. The assumptions disclosed herein are those that the District believes are significant to the budget. There will usually be differences between the budget and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material.

Revenues

Property Taxes

Property taxes are levied by the District's Board of Directors. The levy is based on assessed valuations determined by the County Assessor generally as of January 1 of each year. The levy is normally set by December 15 by certification to the County Commissioners to put the tax lien on the individual properties as of January 1 of the following year. The County Treasurer collects the determined taxes during the ensuing calendar year. The taxes are payable by April or, if in equal installments, at the taxpayer's election, in February and June. Delinquent taxpayers are notified in August, and generally, sale of the tax liens on delinquent properties are held in November or December. The County Treasurer remits the taxes collected monthly to the District.

The calculation of the taxes levied is displayed on the Property Tax Summary page of the budget using the mill levy adopted by the District.

Senate Bill 21-293 among other things, designates multi-family residential real property (defined generally, as property that is a multi-structure of four or more units) as a new subclass of residential real property. For tax collection year 2023, the assessment rate for single family residential property decreases to 6.95% from 7.15%. The rate for multifamily residential property, the newly created subclass, decreases to 6.80% from 7.15%. Agricultural and renewable energy production property decreases to 26.4% from 29.0%. Producing oil and gas remains at 87.5%. All other nonresidential property stays at 29%.

Revenues (continued)

Specific Ownership Taxes

Specific ownership taxes are set by the State and collected by the County Treasurer, primarily on vehicle licensing within the County as a whole. The specific ownership taxes are allocated by the County Treasurer to all taxing entities within the County. The budget assumes that the District's share will be equal to approximately 7% of the property taxes collected.

Interest Income

Interest to be earned on the District's debt service funds has been estimated based on an average interest rate of approximately 1.50%.

Service Fees

The District charges customers residing outside the District for water, sewer and storm water services.

Grant Revenue

The District has budgeted receiving a design and engineering grant from the Colorado Water Resources and Power Development Authority.

Expenditures

General, Administrative and Operating Expenditures

General, administrative and operating expenditures have been provided based on estimates of the District's Board of Directors and consultants and include the estimated costs of operating water and sewer facilities, maintaining streets and retaining walls, and the services necessary to maintain the District's administrative viability such as legal, accounting, managerial, insurance, meeting, and other administrative expenditures.

Debt Service

Principal and interest payments in 2023 are provided based on the debt amortization schedule from the Series 2017 Refunding and Improvement Loan (discussed under Debt and Leases).

Capital Expenditures

The District has budgeted expenditures for the design of and other improvements to the District's water system in accordance with an ongoing water system engineering study.

IDLEDALE WATER AND SANITATION DISTRICT
2023 BUDGET
SUMMARY OF SIGNIFICANT ASSUMPTIONS

Debt and Leases

General Obligation Refunding and Improvement Loan – Series 2017

On December 21, 2017, the District obtained from NBH Bank a $1,037,000 General Obligation Refunding and Improvement Loan, Series 2017 (Series 2017 Loan) for the purpose of advance refunding the District's Series 2009 Water Activity Enterprise Revenue Bond (Series 2009 Bond), funding a Loan Project Fund, and paying the cost of issuance of the Series 2017 Loan. Interest on the Series 2017 Loan is 3.08% per annum, payable semiannually on each June 1 and December 1, commencing on June 1, 2018. Principal payments are due annually on December 1, commencing on December 1, 2018. The Series 2017 Loan matures on December 1, 2032.

With the issuance of the Series 2017 Loan, sufficient funds were placed in escrow to advance refund the principal and interest on the Series 2009 Bond, which will mature on April 1, 2019. The Series 2009 Bond is considered to be defeased and is not considered to be a liability of the District. The reacquisition price of the Series 2009 Bond exceeded the net carrying amount by $30,955. This amount was recorded as a deferred outflow and is being amortized over the original remaining life of the Series 2009 Bond. The refunding resulted in an economic gain of $110,214 and a cash flow savings of $3,609 due to the average interest rate of the Series 2007 Loan being lower than the Series 2009 Bond.

The District has no outstanding operating or capital leases.

Reserves

Emergency Reserve

The District has provided for an Emergency Reserve equal to at least 3% of fiscal year spending for 2023 as defined under TABOR.

This information is an integral part of the accompanying budget.

IDLEDALE WATER AND SANITATION DISTRICT
SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY

$1,037,000 General Obligation
Refunding and Improvement Loan
Series 2017
Dated December 21, 2017
Interest Rate of 3.08%
Payable June 1 and December 1
Principal due December 1

	Principal	Interest	Total
2023	$ 64,400	$ 22,823	$ 87,223
2024	66,400	20,839	87,239
2025	68,400	18,794	87,194
2026	70,500	16,688	87,188
2027	72,700	14,516	87,216
2028	75,000	12,277	87,277
2029	77,300	9,967	87,267
2030	79,600	7,586	87,186
2031	82,100	5,134	87,234
2032	84,600	2,606	87,206
	$ 741,000	$ 131,230	$ 872,230

IDLEDALE WATER AND SANITATION DISTRICT
Jefferson County, Colorado

FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION

YEAR ENDED DECEMBER 31, 2021

IDLEDALE WATER AND SANITATION DISTRICT
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YEAR ENDED DECEMBER 31, 2021

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SIMMONS & WHEELER, P.C. Certified Public Accountants
304 Inverness Way South, Suite 490, Englewood, CO 80112 (303) 689-0833

Independent Auditors' Report

Board of Directors
Idledale Water and Sanitation District
Jefferson County, Colorado

Opinions

We have audited the accompanying financial statements of the governmental activities and each major fund, of the Idledale Water and Sanitation District (the "District") as of and for the year ended December 31, 2021, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of Idledale Water and Sanitation District as of December 31, 2021, and the respective changes in financial position and the respective budgetary comparison for the general fund for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America ("GAAS"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of District, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, andmaintenance of internal control relevant to the preparation and fair presentation of financial statements that are freefrom material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events,considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that mayraise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than forone resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Matters

Management has omitted the management's discussion and analysis that accounting principles generally accepted in the United States require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the District's financial statements as a whole. The individual fund budgetary schedules and property tax information listed in the accompanying table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements. The individual fund budgetary schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. The budgetary schedules have been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the budgetary schedules are fairly stated in all material respects in relation to the financial statements as a whole.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises of the introductory and statistical sections but does not include the basic financial statements and our auditor's report there on. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Simmons & Wheeler P.C.

Englewood, CO
June 28, 2022

BASIC FINANCIAL STATEMENTS

IDLEDALE WATER AND SANITATION DISTRICT
STATEMENT OF NET POSITION
DECEMBER 31, 2021

ASSETS		
Cash and Investments	$	69,268
Cash and Investments - Restricted		63,492
Accounts Receivable		7,048
Receivable from County Treasurer		1,568
Prepaid Insurance		6,698
Property Taxes Receivable		322,975
Capital Assets Not Being Depreciated		154,440
Capital Assets, Net of Accumulated Depreciation		976,700
Total Assets		1,602,189
LIABILITIES		
Accounts Payable		23,256
Payroll Liabilities		3,417
Accrued Loan Interest		2,062
Noncurrent Liabilities:		
Due Within One Year		62,500
Due in More Than One Year		741,000
Total Liabilities		832,235
DEFERRED INFLOWS OF RESOURCES		
Deferred Property Tax Revenue		322,975
Total Deferred Inflows of Resources		322,975
NET POSITION		
Net Investment in Capital Assets		382,374
Restricted		8,500
Unrestricted		56,105
Total Net Position	$	446,979

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2021

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net Revenues (Expenses) and Change in Net Position: Governmental Activities
Primary Government:					
Governmental Activities:					
General Government	$ 230,037	$ 5,656	$ -	$ 9,819	$ (214,562)
Interest and Related Costs on Long-Term Debt	27,814	-	-	-	(27,814)
Total Governmental Activities	$ 257,851	$ 5,656	$ -	$ 9,819	(242,376)
GENERAL REVENUES					
Property Taxes					327,632
Specific Ownership Taxes					25,154
Net Investment Income					614
Total General Revenues					353,400
CHANGE IN NET POSITION					111,024
Net Position - Beginning of Year					335,955
NET POSITION - END OF YEAR					$ 446,979

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
BALANCE SHEET –
GOVERNMENTAL FUNDS
DECEMBER 31, 2021

	General	Debt Service	Total Governmental Funds
ASSETS			
Cash and Investments	$ 69,268	$ -	$ 69,268
Cash and Investments - Restricted	63,234	258	63,492
Accounts Receivable	7,048	-	7,048
Accounts Receivable - County Treasurer	1,568	-	1,568
Prepaid Insurance	6,698	-	6,698
Property Taxes Receivable	235,113	87,862	322,975
Total Assets	$ 382,929	$ 88,120	$ 471,049
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES			
LIABILITIES			
Accounts Payable	$ 23,256	$ -	$ 23,256
Payroll Liabilities	3,417	-	3,417
Total Liabilities	26,673	-	26,673
DEFERRED INFLOWS OF RESOURCES			
Deferred Property Tax Revenue	235,113	87,862	322,975
Total Deferred Inflows of Resources	235,113	87,862	322,975
FUND BALANCES			
Nonspendable	6,698	-	6,698
Restricted for:			
Emergency Reserves - TABOR	8,500	-	8,500
Debt Service	-	258	258
Capital Projects	54,734	-	54,734
Assigned To:			
Subsequent Year's Expenditures	21,959	-	21,959
Unassigned	29,252	-	29,252
Total Fund Balances	121,143	258	121,401
Total Liabilities, Deferred Inflows of Resources, and Fund Balances	$ 382,929	$ 88,120	
Amounts reported for governmental activities in the statement of net position are different because:			
Capital assets used in governmental activities are not financial resources and, therefore, are not reported in the funds.			1,131,140
Long-term liabilities are not due and payable in the current period and, therefore, are not reported in the funds.			
Loans Payable			(803,500)
Accrued Interest on Loans Payable			(2,062)
Net Position of Governmental Activities			$ 446,979

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
YEAR ENDED DECEMBER 31, 2021

	General	Debt Service	Total Governmental Funds
REVENUES			
Property Taxes	$ 238,978	$ 88,654	$ 327,632
Specific Ownership Taxes	25,154	-	25,154
Water Service Fees	5,656	-	5,656
Grant Revenue	9,819	-	9,819
Interest Income	453	161	614
Total Revenues	280,060	88,815	368,875
EXPENDITURES			
Administrative	90,817	1,356	92,173
Operations	89,889	-	89,889
Capital	47,145	-	47,145
Debt Service	-	87,214	87,214
Total Expenditures	227,851	88,570	316,421
NET CHANGE IN FUND BALANCES	52,209	245	52,454
Fund Balances - Beginning of Year	68,934	13	68,947
FUND BALANCES - END OF YEAR	$ 121,143	$ 258	$ 121,401

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES OF THE GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2021

Net Change in Fund Balances - Total Governmental Funds	$	52,454
Amounts reported for governmental activities in the statement of activities are different because:		
Governmental funds report capital outlays as expenditures. In the statement of activities, capital outlay is not reported as an expenditure. However, the statement of activities will report as depreciation expense the allocation of the cost of any depreciable assets over the estimated useful life of the asset. During the current period, this is the net amount of capital outlay.		
Capital Outlay		47,145
Depreciation Expense		(49,331)
The issuance of long-term debt provides current financial resources to governmental funds, while the repayment of principal of long-term debt consumes the current financial resources of governmental funds. Neither transaction, however, has any effect on net position. The net effect of these differences in the treatment of long-term debt is as follows:		
Loan Principal Payment		60,600
Some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in governmental funds:		
Accrued Interest on Loans Payable - Change in Liability		156
Change in Net Position of Governmental Activities	$	111,024

See accompanying Notes to Basic Financial Statements.

IDLEDALE WATER AND SANITATION DISTRICT
GENERAL FUND –
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
DECEMBER 31, 2021

	Original and Final Budget	Actual Amounts	Variance with Final Budget Positive (Negative)
REVENUES			
Property Taxes	$ 239,947	$ 238,978	$ (969)
Specific Ownership Taxes	23,030	25,154	2,124
Water Service Fees	5,000	5,656	656
Grant Revenue	20,000	9,819	(10,181)
Interest Income	300	453	153
Total Revenues	288,277	280,060	(8,217)
EXPENDITURES			
Administrative:			
Director Fees	2,000	1,700	300
Dues/Licenses	500	972	(472)
Election/Publication	100	-	100
Insurance	9,000	8,144	856
Miscellaneous	500	59	441
Office Supplies/Postage	1,000	1,208	(208)
Payroll Taxes	153	275	(122)
Professional Services:			
Audit/Accounting	34,000	35,054	(1,054)
Legal	15,000	14,892	108
Management	20,000	24,944	(4,944)
County Treasurer's Fees	3,600	3,569	31
Operations:			
Equipment Rental	1,000	-	1,000
Maintenance and Repairs	10,000	16,835	(6,835)
Plant Operator Salaries	55,000	41,356	13,644
Payroll Taxes	4,208	5,736	(1,528)
Supplies and Expenses	500	136	364
Training	500	30	470
Treatment and Testing	12,000	15,045	(3,045)
Utilities	8,000	9,841	(1,841)
Water Purchase/Augmentation/Hauling	25,000	910	24,090
Capital:			
Management	5,000	2,964	2,036
Engineering	25,000	23,544	1,456
Legal	5,000	-	5,000
Water Distribution System	50,000	20,637	29,363
Contingency	2,939	-	2,939
Total Expenditures	290,000	227,851	62,149
NET CHANGE IN FUND BALANCE	(1,723)	52,209	53,932
Fund Balance - Beginning of Year	62,031	68,934	6,903
FUND BALANCE - END OF YEAR	$ 60,308	$ 121,143	$ 60,835

See accompanying Notes to Basic Financial Statements.

NOTE 1 DEFINITION OF REPORTING ENTITY

Idledale Water and Sanitation District (the District), a quasi-municipal corporation and political subdivision of the state of Colorado, was organized by order and decree of the District Court for Jefferson County and is governed pursuant to provisions of the Colorado Special District Act (Title 32, Article 1, Colorado Revised Statutes). The District's service area is located in the Town of Idledale, Jefferson County, Colorado. The District was established in 1947 to provide for the orderly and uniform administration of water and sewer operation within the jurisdictional boundaries of the District. The district currently serves approximately 137 connected water taps. The District does not currently provide any sewer services. The District's primary revenues are property taxes, specific ownership taxes, and water service fees. The District is governed by an elected Board of Directors.

The District follows the Governmental Accounting Standards Board (GASB) accounting pronouncements which provide guidance for determining which governmental activities, organizations and functions should be included within the financial reporting entity. GASB pronouncements set forth the financial accountability of a governmental organization's elected governing body as the basic criterion for including a possible component governmental organization in a primary government's legal entity. Financial accountability includes, but is not limited to, appointment of a voting majority of the organization's governing body, ability to impose its will on the organization, a potential for the organization to provide specific financial benefits or burdens and fiscal dependency.

The District is not financially accountable for any other organization, nor is the District a component unit of any other primary governmental entity.

The District has two employees who perform plant operations functions. All administrative functions are contracted.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The more significant accounting policies of the District are described as follows:

Government-Wide and Fund Financial Statements

The government-wide financial statements include the statement of net position and the statement of activities. These financial statements include all of the activities of the District. The effect of interfund activity has been removed from these statements. Governmental activities are normally supported by property taxes and intergovernmental revenues.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Government-Wide and Fund Financial Statements (Continued)

The statement of net position reports all financial and capital resources of the District. The difference between the assets, deferred outflow of resources, liabilities, and deferred inflow of resources of the District is reported as net position.

The statement of activities demonstrates the degree to which the direct and indirect expenses of a given function or segment are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. Program revenues include 1) charges to customers or applicants who purchase, use, or directly benefit from goods, services, or privileges provided by a given function or segment, and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not properly included among program revenues are reported instead as general revenues.

Separate financial statements are provided for the governmental funds. Major individual governmental funds are reported as separate columns in the fund financial statements.

Measurement Focus, Basis of Accounting, and Financial Statement Presentation

The government-wide financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the District considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. The major sources of revenue susceptible to accrual are property and specific ownership taxes. All other revenue items are considered to be measurable and available only when cash is received by the District. Expenditures, other than interest on long-term obligations, are recorded when the liability is incurred, or the long-term obligation is due.

The District reports the following major governmental funds:

The General Fund is the District's primary operating fund. It accounts for all financial resources of the general government, except those required to be accounted for in another fund.

The Debt Service Fund accounts for the resources accumulated and payments made for principal and interest on long-term general obligation debt of the governmental funds.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Budgets

In accordance with the State Budget Law, the District's Board of Directors holds public hearings in the fall each year to approve the budget and appropriate the funds for the ensuing year. The appropriation is at the total fund expenditures level and lapses at year-end. The District's Board of Directors can modify the budget by line item within the total appropriation without notification. The appropriation can only be modified upon completion of notification and publication requirements.

Pooled Cash and Investments

The District follows the practice of pooling cash and investments of all funds to maximize investment earnings. Except when required by trust or other agreements, all cash is deposited to and disbursed from a single bank account. Cash in excess of immediate operating requirements is pooled for deposit and investment flexibility. Investment earnings are allocated periodically to the participating funds based upon each fund's average equity balance in the total cash.

Property Taxes

Property taxes are levied by the District's Board of Directors. The levy is based on assessed valuation determined by the County Assessor generally as of January 1 of each year. The levy is normally set by December 15 by certification to the County Commissioners to put the tax lien on the individual properties as of January 1 of the following year. The County Treasurer collects the determined taxes during the ensuring calendar year. The taxes are payable by April 30 or if in equal installments, at the taxpayer's election, in February and June. Delinquent taxpayers are notified in August and generally sales of the tax liens on delinquent property are held in November or December. The County Treasurer remits the taxes collected monthly to the District.

Property taxes, net of estimated uncollectible taxes, are recorded initially as deferred inflow of resources in the year they are levied and measurable. The unearned property tax revenues are recorded as revenue in the year they are available or collected.

Capital Assets

Capital assets, which include computer equipment and sewer system components, are reported by the District. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed.

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend the life of the asset are not capitalized. Improvements are capitalized and depreciated over the remaining useful lives of the related fixed assets, as applicable.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Capital Assets (Continued)

Depreciation expense has been computed using the straight-line method over the following estimated economic useful lives:

Water System	3 to 50 Years
Machine and Equipment	10 Years
Buildings	40 Years
Office Equipment	10 Years

Tap Fees and Construction Contributions

Public improvements contributed to the District by developers are recorded as capital contributions and additions to the systems at estimated fair value when received. Tap fees become collectible upon issuance of a tap permit and are classified as capital contributions at the time of collection.

Water Rights

The cost of water rights includes acquisition cost, legal, and engineering costs related to the development and augmentation of those rights. Since the rights have a perpetual life, they are not amortized. All other costs, including costs incurred for the protection of those rights, are expensed.

Deferred Inflows of Resources

In addition to liabilities, the statement of net position reports a separate section for deferred inflows of resources. This separate financial statement element, *deferred inflows of resources,* represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time. The District has one item that qualifies for reporting in this category. Accordingly, the item, *deferred property tax revenue,* is deferred and recognized as an inflow of resources in the period that the amount becomes available.

Equity

Net Position

For government-wide presentation purposes when both restricted and unrestricted resources are available for use, it is the District's practice to use restricted resources first, then unrestricted resources as they are needed.

Fund Balance

Fund balance for governmental funds should be reported in classifications that comprise a hierarchy based on the extent to which the government is bound to honor constraints on the specific purposes for which spending can occur. Governmental funds report up to five classifications of fund balance: nonspendable, restricted, committed, assigned, and unassigned. Because circumstances differ among governments, not every government or every governmental fund will present all of these components. The following classifications describe the relative strength of the spending constraints:

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Equity (Continued)

Fund Balance (Continued)

Nonspendable Fund Balance – The portion of fund balance that cannot be spent because it is either not in spendable form (such as prepaid amounts or inventory) or legally or contractually required to be maintained intact.

Restricted Fund Balance – The portion of fund balance that is constrained to being used for a specific purpose by external parties (such as bondholders), constitutional provisions, or enabling legislation.

Committed Fund Balance – The portion of fund balance that can only be used for specific purposes pursuant to constraints imposed by formal action of the government's highest level of decision-making authority, the Board of Directors. The constraint may be removed or changed only through formal action of the board of directors.

Assigned Fund Balance – The portion of fund balance that is constrained by the government's intent to be used for specific purposes but is neither restricted nor committed. Intent is expressed by the Board of Directors to be used for a specific purpose. Constraints imposed on the use of assigned amounts are more easily removed or modified than those imposed on amounts that are classified as committed.

Unassigned Fund Balance – The residual portion of fund balance that does not meet any of the criteria described above.

If more than one classification of fund balance is available for use when an expenditure is incurred, it is the District's practice to use the most restrictive classification first.

This District did not have any unused lines of credit as of December 31, 2021.

NOTE 3 CASH AND INVESTMENTS

Cash and investments as of December 31, 2021 are classified in the accompanying financial statements as follows:

Statement of Net Position:		
Cash and Investments	$	69,268
Cash and Investments - Restricted		63,492
Total Cash and Investments	$	132,760

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

Cash and investments as of December 31, 2021 consist of the following:

Deposits with Financial Institutions	$	12,679
Investments		120,081
Total Cash and Investments	$	132,760

Deposits with Financial Institutions

The Colorado Public Deposit Protection Act (PDPA) requires that all units of local government deposit cash in eligible public depositories. Eligibility is determined by state regulators. Amounts on deposit in excess of federal insurance levels must be collateralized. The eligible collateral is determined by the PDPA. PDPA allows the institution to create a single collateral pool for all public funds. The pool for all the uninsured public deposits as a group is to be maintained by another institution or held in trust. The market value of the collateral must be at least 102% of the aggregate uninsured deposits.

The state commissioners for banks and financial services are required by statute to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools.

At December 31, 2021, the District's cash deposits had a bank balance and a carrying balance of $12,679.

Investments

The District has adopted a formal investment policy which follows state statutes regarding investments.

The District generally limits its concentration of investments to those noted with an asterisk (*) below, which are believed to have minimal credit risk, minimal interest rate risk and no foreign currency risk. Additionally, the District is not subject to concentration risk or investment custodial risk disclosure requirements for investments that are in the possession of another party.

Colorado revised statutes limit investment maturities to five years or less unless formally approved by the Board of Directors. Such actions are generally associated with a debt service reserve or sinking fund requirements.

Colorado statutes specify investment instruments meeting defined rating and risk criteria in which local governments may invest which include:

- Obligations of the United States, certain U.S. government agency securities, and securities of the World Bank
- General obligation and revenue bonds of U.S. local government entities
- Certain certificates of participation

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

- Certain securities lending agreements
- Bankers' acceptances of certain banks
- Commercial paper
- Written repurchase agreements and certain reverse repurchase agreements collateralized by certain authorized securities
- Certain money market funds
- Guaranteed investment contracts
- Local government investment pools

As of December 31, 2021, the District had the following investments:

Investment	Maturity	Amount
Colorado Local Government Liquid Asset Trust (COLOTRUST PLUS+)	Weighted-Average Under 60 Days	$ 120,081

COLOTRUST

The District invested in the Colorado Local Government Liquid Asset Trust (COLOTRUST) (the Trust); an investment vehicle established for local government entities in Colorado to pool surplus funds. The State Securities Commissioner administers and enforces all state statutes governing the Trust. The Trust currently offers three portfolios – COLOTRUST PRIME, COLOTRUST PLUS+, AND COLOTRUST EDGE.

COLOTRUST PRIME and COLOTRUST PLUS+, which operate similarly to a money market fund, offer daily liquidity. Each share is equal in value to $1.00. Both portfolios may invest in U.S. Treasury securities and repurchase agreements collateralized by U.S. Treasury securities. COLOTRUST PLUS+ may also invest in certain obligations of U.S. government agencies, highest rated commercial paper, and any security allowed under CRS 24-75-601.

COLOTRUST EDGE, a variable Net Asset Value (NAV) Local Government Investment Pool, offers weekly liquidity and is managed to approximate a $10.00 transactional share price. COLOTRUST EDGE may invest in securities authorized by CRS-24-75-601, including U.S. Treasury securities, repurchase agreements collateralized by U.S. Treasury securities, certain obligations of U.S. government agencies, highest rated commercial paper, and any security allowed under CRS-24-75-601.

A designated custodial bank serves as custodian for the Trust's portfolios pursuant to a custodian agreement. The custodian acts as safekeeping agent for the Trust's investment portfolios and provides services as the depository in connection with direct investments and withdrawals. The custodian's internal records segregate investments owned by the Trust. COLOTRUST is rated AAAm by Standard & Poor's. COLOTRUST records its investments at fair value and the District records its investment in COLOTRUST at net asset value as determined by fair value. There are no unfunded commitments, the redemption frequency is daily or weekly, and there is no redemption notice period.

NOTE 4 CAPITAL ASSETS

An analysis of the changes in capital assets for the year ended December 31, 2021 follows:

	Balance - December 31, 2020	Increases	Decreases	Balance - December 31, 2021
Capital Assets Not Being Depreciated:				
Construction in Progress	$ -	$ 26,508	$ -	$ 26,508
Land	22,316	-	-	22,316
Water Rights	105,616	-	-	105,616
Total Capital Assets, Not Being Depreciated	127,932	26,508	-	154,440
Capital Assets Being Depreciated:				
Building	1,576	-	-	1,576
Water System	1,862,926	14,829	-	1,877,755
Machinery and Equipment	52,362	5,808	-	58,170
Furniture and Equipment	916	-	-	916
Total Capital Assets Being Depreciated	1,917,780	20,637	-	1,938,417
Less Accumulated Depreciation For:				
Building	(1,576)	-	-	(1,576)
Water System	(864,819)	(47,189)	-	(912,008)
Machinery and Equipment	(45,075)	(2,142)	-	(47,217)
Furniture and Equipment	(916)	-	-	(916)
Total Accumulated Depreciation	(912,386)	(49,331)	-	(961,717)
Total Capital Assets Being Depreciated	1,005,394	(28,694)	-	976,700
Capital Assets, Net	$ 1,133,326	$ (2,186)	$ -	$ 1,131,140

Depreciation expense for the year ended December 31, 2021, was charged to general government in the amount of $49,331.

NOTE 5 LONG-TERM DEBT

The following is an analysis of changes in long-term debt for the year ended December 31, 2021:

	Balance - December 31, 2020	Increases	Decreases	Balance - December 31, 2021	Amounts Due Within One Year
Loans From Direct Borrowing Series 2017 Loan	$ 864,100	$ -	$ 60,600	$ 803,500	$ 62,500
Subtotal Loans from Direct Borrowings	864,100	-	60,600	803,500	62,500
Total Long-Term Obligations	$ 864,100	$ -	$ 60,600	$ 803,500	$ 62,500

A description of the long-term obligations as of December 31, 2021, is as follows:

General Obligation Refunding and Improvement Loan – Series 2017

On December 21, 2017, the District obtained from NBH Bank a $1,037,000 General Obligation Refunding and Improvement Loan, Series 2017 (Series 2017 Loan) for the purpose of advance refunding the District's Series 2009 Water Activity Enterprise Revenue Bond (Series 2009 Bond), funding a Loan Project Fund, and paying the cost of issuance of the Series 2017 Loan. Interest on the Series 2017 Loan is 3.08% per annum, payable semiannually on each June 1 and December 1, commencing on June 1, 2018. Principal payments are due annually on December 1, commencing on December 1, 2018. The Series 2017 Loan matures on December 1, 2032.

The Series 2017 Loan is secured with Pledged Revenues consisting of: (i) such portion of the revenue derived by the imposition of the Required Mill Levy as is sufficient to pay the principal of, premium, if any, and interest on the Series 2017 Loan as the same becomes due; (ii) the Specific Ownership Taxes attributable to the Required Mill Levy; and (iii) all other legally available moneys of the District.

With the issuance of the Series 2017 Loan, sufficient funds were placed in escrow to advance refund the principal and interest on the Series 2009 Bond, which will mature on April 1, 2019. The Series 2009 Bond is considered to be defeased and is not considered to be a liability of the District. The reacquisition price of the Series 2009 Bond exceeded the net carrying amount by $30,955. This amount was recorded as a deferred outflow and is being amortized over the original remaining life of the Series 2009 Bond and has been fully amortized as of December 31, 2019. The refunding resulted in an economic gain of $110,214 and a cash flow savings of $3,609 due to the average interest rate of the Series 2007 Loan being lower than the Series 2009 Bond.

NOTE 5 LONG-TERM DEBT (CONTINUED)

The occurrence of any one or more of the following events constitutes an Event of Default under the terms of the Series 2017 Loan: (a) failure to pay principal and interest when due; (b) failure to impose the Required Mill Levy or to apply the Pledged Revenues to the Series 2017 Loan; (c) a default in the performance or observance of any of the covenants, agreements, or conditions of the Series 2017 Loan, or (d) filing a petition under bankruptcy laws seeking to adjust the obligation under the Series 2017 Loan. No Events of Default have occurred since the issuance of the Series 2017 Loan.

The District's long-term debt will mature as follows:

Year Ending December 31,	Principal	Interest	Total
2022	$ 62,500	$ 24,748	$ 87,248
2023	64,400	22,823	87,223
2024	66,400	20,839	87,239
2025	68,400	18,794	87,194
2026	70,500	16,688	87,188
2027-2031	386,700	49,480	436,180
2032	84,600	2,606	87,206
Total	$ 803,500	$ 155,978	$ 959,478

Authorized Debt

As of December 31, 2021, the District had $263,000 of remaining unissued voted general obligation debt authorization for water improvements.

NOTE 6 NET POSITION

The District has net position consisting of three components - net investment in capital assets, restricted, and unrestricted.

The net investment in capital assets component of net position consists of capital assets that will be owned by the District, net of accumulated depreciation and reduced by the outstanding balances of bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. As of December 31, 2021, the District had net investment in capital assets calculated as follows:

Net Investment in Capital Assets:	
Capital Assets, Net	$ 1,131,140
Less: Outstanding Loan Payable - Current Amount	(62,500)
Outstanding Loan Payable - Noncurrent Amount	(741,000)
Add: Unspent Loan Proceeds	54,734
Net Investment in Capital Assets	$ 382,374

NOTE 6 NET POSITION (CONTINUED)

Restricted net position includes assets that are restricted for use either externally imposed by creditors, grantors, contributors, or laws and regulations of other governments or imposed by law through constitution provisions or enabling legislation. The District had $8,500 of funds restricted for TABOR emergency reserves.

The unrestricted component of net position is the net amount of the assets, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position.

NOTE 7 RISK MANAGEMENT

Except as provided in the Colorado Governmental Immunity Act, the District may be exposed to various risks of loss related to torts; thefts of, damage to, or destruction of assets; errors or omissions; injuries to employees; or acts of God.

The District is a member of the Colorado Special Districts Property and Liability Pool (the Pool). The Pool is an organization created by intergovernmental agreement to provide property, liability, public officials' liability, boiler and machinery and workers' compensation coverage to its members. Settled claims have not exceeded this coverage in any of the past three fiscal years.

The District pays annual premiums to the Pool for liability, property, public officials' liability, and workers' compensation coverage. In the event aggregated losses incurred by the Pool exceed amounts recoverable from reinsurance contracts and funds accumulated by the Pool, the Pool may require additional contributions from the Pool members. Any excess funds which the Pool determines are not needed for purposes of the Pool may be returned to the members pursuant to a distribution formula.

NOTE 8 TAX, SPENDING, AND DEBT LIMITATIONS

Article X, Section 20 of the Colorado Constitution, commonly known as the Taxpayer's Bill of Rights (TABOR), contains tax, spending, revenue, and debt limitations which apply to the state of Colorado and all local governments.

Spending and revenue limits are determined based on the prior year's Fiscal Year Spending adjusted for allowable increases based upon inflation and local growth. Fiscal Year Spending is generally defined as expenditures plus reserve increases with certain exceptions. Revenue in excess of the Fiscal Year Spending limit must be refunded unless the voters approve retention of such revenue.

NOTE 8 TAX, SPENDING, AND DEBT LIMITATIONS (CONTINUED)

On November 7, 2017, the voters within the District authorized an increase in property taxes generated from an operations and maintenance mill levy of up to $300,000 annually, without regard to any spending, revenue-raising, or other limitation contained within Article X, Section 20 of the Colorado Constitution, the limits imposed on increases in property taxation by Section 29-1-301, Colorado Revised Statutes in any year, or any other law which purports to limit the District's revenues or expenditures as it currently exists or as it may be amended in the future.

TABOR requires local governments to establish Emergency Reserves. These reserves must be at least 3% of Fiscal Year Spending (excluding bonded debt service). Local governments are not allowed to use the emergency reserves to compensate for economic conditions, revenue shortfalls, or salary or benefit increases.

The District's management believes it is in compliance with the provisions of TABOR. However, TABOR is complex and subject to interpretation. Many of the provisions, including the interpretation of how to calculate Fiscal Year Spending limits and qualification as an enterprise will require judicial interpretation.

SUPPLEMENTARY INFORMATION

IDLEDALE WATER AND SANITATION DISTRICT
DEBT SERVICE FUND
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE - BUDGET AND ACTUAL
YEAR ENDED DECEMBER 31, 2021

	Original and Final Budget	Actual Amounts	Variance with Final Budget Positive (Negative)
DEBT SERVICE			
REVENUES			
Property Taxes	$ 89,013	$ 88,654	$ (359)
Investment Income	200	161	(39)
Other Income	2,000	-	(2,000)
Total Revenues	91,213	88,815	(2,398)
EXPENDITURES			
County Treasurer's Fees	1,335	1,324	11
Loan Interest	26,614	26,614	-
Loan Principal	60,600	60,600	-
Miscellaneous	-	32	(32)
Contingency	1,451	-	1,451
Total Expenditures	90,000	88,570	1,430
NET CHANGE IN FUND BALANCE	1,213	245	(968)
Funds Balance - Beginning of Year	5	13	8
FUND BALANCE - END OF YEAR	$ 1,218	$ 258	$ (960)

OTHER INFORMATION

IDLEDALE WATER AND SANITATION DISTRICT
SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY
DECEMBER 31, 2021

Year Ending December 31,	$1,037,000 General Obligation Refunding and Improvement Loan Series 2017 Dated December 21, 2017 Interest Rate of 3.08% Payable June 1 and December 1 Principal Due December 1		
	Principal	Interest	Total
2022	$ 62,500	$ 24,748	$ 87,248
2023	64,400	22,823	87,223
2024	66,400	20,839	87,239
2025	68,400	18,794	87,194
2026	70,500	16,688	87,188
2027	72,700	14,516	87,216
2028	75,000	12,277	87,277
2029	77,300	9,967	87,267
2030	79,600	7,586	87,186
2031	82,100	5,134	87,234
2032	84,600	2,606	87,206
Total	$ 803,500	$ 155,978	$ 959,478

IDLEDALE WATER AND SANITATION DISTRICT
SCHEDULE OF ASSESSED VALUATION, MILL LEVY, AND PROPERTY TAXES COLLECTED
DECEMBER 31, 2021

Year Ended December 31,	Prior Year Assessed Valuation for Current Year Property Tax Levy		Mills Levied	Total Property Taxes Levied	Total Property Taxes Collected	Percent Collected to Levied
2017	$ 2,385,184		9.475	$ 22,600	$ 22,581	99.92 %
2018	2,859,999		74.963	214,394	214,942	100.26
2019	2,890,518		74.406	215,071	213,814	99.42
2020	3,853,348		75.000	289,001	288,107	99.69
2021	3,870,110		85.000	328,960	327,632	99.60
Estimated for the Year Ending December 31, 2022	$ 3,792,147	a	85.000	$ 322,332		
	$ 27,958	b	23.000	643		
				$ 322,975		

NOTE: Property taxes collected in any one year include collection of delinquent property taxes assessed in prior years, as well as reductions for property tax refunds or abatements. Information received from the County Treasurer does not permit identification of specific year of assessment.

a - Assessed value of District

b - Assessed value of excluded property, which is still responsible for debt service obligation at time of exclusion

Appendix C
Existing Well Improvements Survey

ATTACHMENT A

- Well 1A Improvement Survey
- Well 1B Improvement Survey
- Ridgeway Well Improvement Survey
- Colorado Water Well Proposal to Replace & Lower Well Pump 1A

COLORADO WATER WELL

PUMP INSTALLATION REPORT

DATE INSTALLED	4/1/2020

CUSTOMER	IDLEDALE WATER & SAN
ADDRESS	WELL 1A
CITY	IDLEDALE
STATE & ZIP	CO

CONTACT	
PHONE	

PUMP INFORMATION

PUMP TYPE	SUBMERSIBLE
PUMP MFG	GOULDS
PUMP MODEL #	13GS30
PUMP SERIAL #	F1732928
DATE CODE	17-Jun
RATED GPM	13
RATED HEAD	
RATED HORSEPOWER	3 HP

MOTOR INFORMATION

MOTOR TYPE	SUBMERSIBLE
MOTOR MFG	CETRIPRO
MOTOR HORSEPOWER	3 HP
MOTOR VOLTAGE	230V
PHASE	3 PH
MOTOR MODEL #	M30432
MOTOR SERIAL #	B818Z310018
DATE CODE	
NAME PLATE AMPS	9.2
SF AMPERAGE	1.15
RPM	3450

WELL INFORMATION

WELL DEPTH	706
CASING SIZE	6" SURFACE/4" PLASTIC
STATIC LEVEL	23 FT
PUMPING LEVEL	
PITLESS ADAPTER	1.25 INCH
PICK SUB SIZE	1.5 INCH

SETTING INFORMATION

PUMP SETTING	460 FT
COLUMN PIPE SIZE	1.5 INCH
COLUMN PIPE MTL.	PVC SCH 120
COLUMN PIPE LENGTHS	20 FT
TREAD PATTERN	NPT
PICK UP SUBS	1.25
CHANGE OVER NIPPLES	
CHECK VALVE	1.5 BRASS
KNOCK OUT (yes/no)	NO
CHECK VALVE DEPTHS	380 FT
CHANGE OVER NIPPLES	
AIRLINE	1" FLUSH JOINT PVC
WIRE SZE	10/3G
PROBES SETTING	

START UP DATA

RESISTANCE L1 to GRD	>550
RESISTANCE L2 to GRD	>550
RESISTANCE L3 to GRD	>550
RESISTANCE L1 to L2	2.1
RESISTANCE L1 to L3	2.2
RESISTANCE L2 to L3	2.1
VOLTAGE L1 to L2	230
VOLTAGE L1 to L3	230
VOLTAGE L2 to L3	230
AMPERAGE L1	7.8
AMPERAGE L2	7.8
AMPERAGE L3	7.9
GPM	19 GPM
PWL	
DISCHARGE PRESSURE	

ELECTRICAL CONTOLS

VOLTAGE	230 V
PHASE	3 PH
FUSE SIZE & TYPE	
MOTOR STARTER MFG	PID 50
MOTOR STARTER SIZE	
HEATER SIZE	
CONTROL VOLTAGE	
CONTROL FUSE SIZE	
PHASE PROTECTION	

COLORADO WATER SYSTEMS
2001 E. 58th AVE.
DENVER, CO. 80216
(303) 892-9053
FAX 303-892-1924

April 7, 2020

AJ Beckman
Public Alliance
Idledale Water and Sanitation District Manager
3159 N. Speer
Denver, CO. 80211
Tel: (303) 877-6284

Dear AJ:

Below please find details of the well video logs performed in March of 2020 at Idledale Well 1A and Well 1B:

Well 1A – March 25, 2020

Depth	Description
**0’	24” (2’) Below Top of Casing – 6” steel casing
2.9	Pitless discharge (Note: water backflowing until valves were shut off)
10’	Top of PVC
19.0’	Static Water Level (SWL)
626’	Top of first screen (Note: Screen is only slotted on two sides)
646’	End of first screen section
666’	Top of second screen (Note: Screen is only slotted on two sides)
686’	End of second screen section
706’	Total Depth (TD) – note plastic scrapings at TD

While watching video of 1A, all depths should be adjusted by 2’ since video started 24” below ground. Video was clean and clear. Very little staining on PVC casing and screen.

Well 1B – March 27, 2020

Depth	Description
0’	Top of Casing – 6” steel casing (Note: transducer in hole collecting data)
4.9’	Pitless discharge
20’	End of Casing – Open Hole
28’	Noticeable water entering well bore
40’	Static Water Level (SWL)
410’	Transducer End
451’	Total Depth (TD)

Video was clean and clear. Open Hole appears stable to 451’

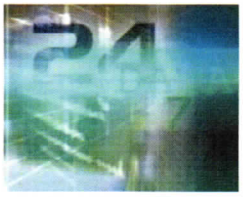
Sincerely,

Thomas M. Dea P.E.
Secretary / Treasurer

We Move Water

Mountain States ACCUTEST LABORATORIES

03/28/13



Technical Report for

Idledale Water

PWSID CO0130055, Idledale WSD

1A & 1B RADIONUCLIDE TESTING

Accutest Job Number: D40981X

Sampling Date: 11/15/12

Report to:

Total number of pages in report: **8**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

Table of Contents

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Section 2: Sample Results 4
Section 3: Misc. Forms 5
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Accutest Laboratories

Sample Summary

Idledale Water

Job No: D40981X

PWSID CO0130055, Idledale WSD

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
D40981-1X	11/15/12	12:10	BF	11/15/12	DW	Drinking Water	008 1A/B

Sample Results

Report of Analysis

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Page ____of____

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Job # D40981

4036 Youngfield Street
Wheat Ridge, CO 80033-3862
303-425-6021; 877-737-4521
FAX: 303-425-6854
www.accutest.com

Client/Reporting Information	Billing Information (If different from reporting)	Project Information
Company: Idledale Water Dept	Company:	PWSID or Project#: 130095
Street: 141 Union Blvd	Street:	System Name: Idledale Water
City: Idledale State: CO ZIP: 80453	City: State: ZIP:	System Address: 141 Union Blvd
Contact: R Pinter E-Mail: 7Pinter@[illegible]mail.com	Attention:	City: Lakewood State: CO ZIP: 80228
Phone: 720 318 9547 Fax:	Client PO #:	Contact Person: R Pinter
Sampler: Phone:	Accutest Quote/Bottle Order #:	Tel: Email: 7Pinter@Gmail.com

Turn Around Time (Business days)
- ☐ Std 10 business Days
- ☐ 5 Day Rush
- ☐ 3 Day Rush
- ☐ 2 Day Rush
- ☐ 1 Day Rush

Rush ASAP

State Form Information

State Forms Required	Yes ☐	No ☒		
Compliance Samples	Yes ☐	No ☐		
Mail Forms to State	Yes ☐	No ☐		
Fax ☐	PDF ☐	EDD ☐		

PHASE I, II, V Drinking Water Analyses (check analysis)

Analyses columns: No. of Containers; THM 524.2 / VOC 524.2; Haloacetic Acids 552.2; EDB/DBCP 504.1; Pesticides / PCBs 508; Herbicides 515.4; SOC 525.2 (3 analytes only); OP Pesticides 525.2; Carbamates 531.1; Glyphosate 547; Endothall 548.1; Diquat 549.2; Nitrite-N / Nitrate-N; Fluoride / Alkalinity; Langlier Index; TOC / DOC; Cyanide; SUVA / UV254; 11 Inorganic Metals *; Lead & Copper; Total Coliform (p/a); Subcontracted Analysis: Gross-A + Total Solid (% b.46 -20); Gross-A+B; Ra 226 ☒ / Ra 228 ☒; Uranium; Lab Use Only

Sample Location or ID	Date	Time	Gross-A + Total Solid	Gross-A+B	Ra 226 / Ra 228	Uranium	Lab Use Only
008 1A	11/15/12	12:10 PM	X	X	X	X	01
008 1B	11/15/12	12:10 PM	X	X	X	X	

NK 11/15/12

Instructions: ALL ONE SAMPLE (Combined Wells)

* Inorganic Metals Include: Sb, As, Ba, Be, Cd, Cr, Hg, Ni, Se, Na, Tl

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date/Time	Received By:	Date / Time	Relinquished By:	Date / Time
1	11-15-12 1327	1 [signature]		2	
Received By: 2 R Pinter	Date/Time	Relinquished By: 3	Date / Time	Received By: 3	Date / Time

Custody Seal Intact ☒ Not Intact ☐ Preserved where applicable ☒ HD Cooler Temp: 3.9 On Ice ☒ Location:

3.1 3

D40981X: Chain of Custody
Page 1 of 3

CHAIN OF CUSTODY

ACCUTEST

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D40981X
Accutest Quote #:	0
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information		
Name: Accutest Mountain States (AMS)			Name: Hazen (Radiological)		
Address: 4036 Youngfield St.			Address: 4601 Indiana Street		
City: Wheat Ridge,	State: CO	Zip: 80033	City: Golden	State: CO	Zip: 80403
Send Report to: Tiffany Pham			Contact: Sample Management		
Any questions contact: Shea Greiner					
Phone/Fax #: (303) 425-6021; (303)425-6854			Phone: (303) 279-4501		

Field ID / Point of Collection	Collection Date	Collection Time		Matrix	# of bottles	Preservation HCL	NaOH	HNO3	H2So4	None	Radium 226/228	Uranium	Gross Alpha per email			Comments
D40981X -1	11/15/12	12:10 PM		DW	5						X	X	X			

Turnaround Information

- [X] 10 Business Day Standard
- [ ] Other RUSH (Days) 2 weeks

Approved By:

10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Commercial "BN"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] PDF
- [ ] Compact Disk Deliverable
- [ ] Electronic Delivery:
- [ ] State Forms
- [ ] Other (Specify)

Comments / Remarks

Please use Colorado regulations and RLs.

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date & Time:	Received By:	Date & Time:
1	[signature]	11/15/12 1337	1	11/15/12 1337
2			2	2
3			3	3

For Subcontract Laborartory Use Only

Seal #:

Headspace: Yes ☐ No ☐ NA ☐

Preserved where applicable: ☐

Temperature °C _____ On Ice ☐

3.1 3

D40981X: Chain of Custody
Page 2 of 3

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

DATE	November 29, 2012
HRI PROJECT	009-93
HRI SERIES NO	K321/12
DATE REC'D.	11/16/2012
CUST. P.O.#	D40981X

Accutest Mountain States
Ann Doerr
4036 Youngfield
Wheat Ridge, CO 80033

REPORT OF ANALYSIS

SAMPLE NO. K321/12-1

SAMPLE IDENTIFICATION: D40981X-1 - Drinking water - Sampled on 11/15/2012 @ 1210

PARAMETER	RESULT	DETECTION LIMIT	METHOD	ANALYSIS DATE	ANALYST
Gross Alpha (+-Precision*), pCi/l (T)	8.7(+-3.2)	1.4	SM 7110 B	11/26/2012 @ 0841	AN
Gross Alpha (+-Precision*), pCi/l (T)***	5.8(+-3.2)	1.4	SM 7110 B	11/26/2012 @ 0841	AN
Radium-226 (+-Precision*), pCi/l (T)	0.3(+-0.2)	0.1	SM 7500-Ra B	11/26/2012 @ 1110	AN
Radium-228 (+-Precision*), pCi/l (T)	0.6(+-0.6)	0.6	EPA Ra-05	11/20/2012 @ 0647	EH
Uranium, pCi/l (T)**	2.9	0.5	ASTM D2907-97	11/16/2012 @ 2203	DP
Uranium, ug/l (T)	4.4	0.7	ASTM D2907-97	11/16/2012 @ 2203	DP

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.
Certification ID's: CO/EPA CO00008; CT PH-0152; KS E-10265; NYELAP 11417;
PADEP 68-00551; RI LAO00284; TX T104704256-11-2; WI 998376610

**Uranium results reported assuming the activity of natural U = 6.77 x 10-7 Ci/gm.
***Less Radon and Uranium.

Results reported herein relate only to discrete samples submitted by the client. Hazen Research, Inc. does not warrant that the results are representative of anything other than the samples that were received in the laboratory.

CODES: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Recoverable
(PD) = Potentially Dissolved < = Less Than

By: Robert Rostad
Laboratory Manager

An Employee-Owned Company

D40981X: Chain of Custody
Page 3 of 3

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 20M02830
Received: Sep 30, 2020
Reported: Oct 12, 2020
Purchase Order No.
None Received

Customer ID: 04396Z
Account ID: Z05628

Michael Richardson
Idledale Water and Sanitation
PO Box 50
Idledale, CO 80453

ANALYTICAL REPORT

By: _____
Jessica Axen
Analytical Laboratories Director

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 20M02830
Received: Sep 30, 2020
Reported: Oct 12, 2020
Purchase Order No.
None Received

Customer ID: 04396Z
Account ID: Z05628

ANALYTICAL REPORT

Michael Richardson
Idledale Water and Sanitation

Lab Sample ID	20M02830-001
Customer Sample ID	**011** - Idledale Water & Sanitation - PWSID: CO0130055 - 011 sampled on 09/30/20 @ 1430 by Richard Pintor

Parameter	Units	Code	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	8.8	3.5	0.1	SM 7110 B	10/5/20 @ 0914	KT
Gross Alpha* **	**pCi/L**	**T**	6.1	3.5	0.1	SM 7110 B	10/5/20 @ 0914	KT
Radium-226	**pCi/L**	**T**	0.2	0.2	0.2	SM 7500-Ra B	10/1/20 @ 1107	SS
Radium-228	**pCi/L**	**T**	2.8	0.9	0.3	EPA Ra-05	10/2/20 @ 1136	JR
Uranium**	**pCi/L**	**T**	2.7	-	0.7	ICP-MS 200.8	10/7/20 @ 0912	AL
Uranium	**ug/L**	**T**	4.0	-	1.0	ICP-MS 200.8	10/7/20 @ 0912	AL

Certification ID's: CO/EPA CO00008; CT PH-0152; KS E-10265; MI 9070; NJ CO008;
NYSELAP (NELAC Certified) 11417; RI LAO00284; WI 998376610, TX T104704256-15-6

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

**Uranium results reported assuming the activity of natural U = 6.77 x 10-7 Ci/g.
***Less Radon and Uranium.

Uranium analysis performed at subcontract laboratory - Huffman Hazen Laboratories - 4630 Indiana Street, Golden, CO 80403

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 10/05/2020

Batch QC Summary Form

Analyte: Gross Alpha

Control Standard/LFB: ID: C-11 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C-11 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(60.4)\ (1.000) - (0.4)\ (0.200)}{57.4} \times 100 = 105\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap			x

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

20M02794	
20M02795	
20M02830	
20M02838	
20M02848	
20M02849	

Evaluator: Lynnea Rockwell

10/06/2020
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 10/01/2020

Batch QC Summary Form

Analyte: Radium-226

Control Standard/LFB: ID: NBL-6A pCi/mL: 23 (use 2 diluted)

Spike Solution: ID: NBL-6A pCi/mL: 23 (use 2 mL)

Spike Recovery Calculation: Sample: 20M02528-001c

Calculation: $\frac{(48.0)\ (0.970) - (0.6)\ (0.970)}{46} \times 100 =$ 100%

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap			x

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

20M02528	
20M02578	
20M02630	
20M02830	
20M02514	

Evaluator: Lynnea Rockwell

10/08/2020
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 10/02/2020

Batch QC Summary Form

Analyte: Radium-228

Control Standard/LFB: ID: NBL-7A pCi/mL: 13.5 (use 10 diluted)

Spike Solution: ID: NBL-7A pCi/mL: 13.5 (use 10 mL)

Spike Recovery Calculation: Sample: 20M02632-003b

Calculation: $\frac{(147.3)\ (1.000) - (1.7)\ (1.000)}{135} \times 100 = 108\%$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap			x

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

20M02623
20M02830

Evaluator: Lynnea Rockwell

10/08/2020
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 10/07/2020

Batch QC Evaluation Form

Analyte: Uranium

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
MRL	+/- 50 %	x		
Control Std./LFB	+/- 15 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 2 x MRL	x		
Duplicate 1	0% - 20 %	x		
Duplicate 2 *	0% - 20 %			x

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

20M02830	
20M02835	
20M02869	
20M02871	
20M02874	

Evaluator: Lynnea Rockwell

10/12/2020
Date

HAZEN RESEARCH, INC.
4601 INDIANA STREET
GOLDEN, CO 80403
Phone - (303) 279 4501 Fax - (303) 278 1528

CHAIN OF CUSTODY RECORD, P. 1

20 m02830

Customer Information		Billing Information (If different)	
Client Name:	Idledale Water & Sanitation	Billing Name:	
Contact:	Michael Richarson	Billing Contact:	
Address:	PO Box 52	Billing Address:	
	Ideldale, CO 80453		
	operator@idledalewsd.org		
Phone:	303-697-4319 e-mail: contact@idledalewsd.org	PO #:	e-mail:

Report Delivery: Email Only_____ EMAIL and USPS (Additional $2.00 per report)_____

Sample Return (If not selected below, sample will be shipped back at client expense and added to the invoice. Not applicable to RadChem Waters)

Non-hazardous sample disposal ($2.00/sample)_____ Sample returned to client (UPS cost + overhead fee)_____

Sampler's Name(s) (Print) Richard Pinter (Signature)

PWSID: CO0130055 **System Name** **Entry Point:** **Facility ID:** 011 **Send Results to CDPHE:** Y N

Sample Identification	Sample Date and Time	Grab	Composite	Samp Type(1)	No. of Containers	Cont. Type(2)	Preservative(3)	Analyses Required
011	9/30/20 1530	x		DW	5	P	U	Gross alpha, Ra226/228, Uranium

(1) DW=Drinking Water WW=Wastewater SW=Surface Water SO=Soil GW=Ground Water SL=Sludge HZ=Hazardous O=Other
(2) P=Plastic G=Glass O=Other
(3) N=Nitric Acid U=Unpreserved C=Cooled S=Sulfuric Acid B=Sodium Hydroxide T=Sodium Thiosulfate Z=Zinc Acetate O=Other

By submitting samples for analysis, client agrees that services shall be govered by Hazen's analyticla terms and conditions; Hazen's terms and conditions supersede other terms and conditions (see page 2).

Relinquished by	Date/ Time 9-30-20 1509	Received by	Date/ Time /
Relinquished by	Date/ Time /	Received by	Date/ Time /
Shipped by	Date/ Time /	Received for Lab by Tynrea Rockwell	Date/ Time 9/30/2015:14

Method of Shipment

Requested Turnaround Time
Standard ☐ Rush (Must be approved, additional charges apply) ☒

Lab use only

Rec'd Preserved: Y N Date/Time: 9/30/20 1521

Updated 02/26/2020

TECHNICAL BROCHURE
B5-25GS R8

FEATURES

Powered for Continuous Operation: All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.

Field Serviceable: Units have left hand threads and are field serviceable with common tools and readily available repair parts.

Sand Handling Design: Our face clearance, floating impeller stack has proven itself for over 50 years as a superior sand handling, durable pump design.

FDA Compliant Non-Metallic Parts: Impellers, diffusers and bearing spiders are constructed of glass filled engineered composites. They are corrosion resistant and non-toxic.

Discharge Head/Check Valve: Cast 303 stainless steel for strength and durability. Two cast-in safety line loops for installer convenience. The built-in check valve is constructed of stainless steel and FDA compliant BUNA rubber for abrasion resistance and quiet operation.

Motor Adapter: Cast 303 stainless steel for rigid, accurate alignment of pump and motor. Easy access to motor mounting nuts using standard open end wrench.

Stainless Steel Casing: Polished stainless steel is strong and corrosion resistant.

Hex Shaft Design: Six sided shafts for positive impeller drive.

Engineered Polymer Bearings: The proprietary, engineered polymer bearing material is strong and resistant to abrasion and wear. The enclosed upper bearing is mounted in a durable Noryl® bearing spider for excellent abrasion resistance.

5GS, 7GS, 10GS, 13GS, 18GS & 25GS

5-25 GPM, ½ – 5 HP, 60 HZ, SUBMERSIBLE PUMPS

BUILT IN THE USA
ENGINEERED, ASSEMBLED & TESTED

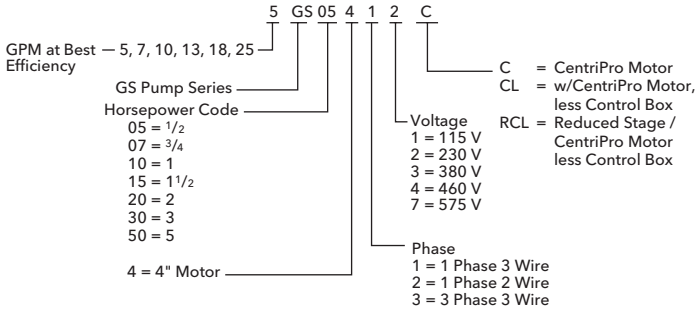
GOULDS WATER TECHNOLOGY
a xylem brand

WATER END DATA

Series	Model	Required HP	Stages	Length (in)	Weight (lbs)
5GS	5GS05R	.5	9	12.9	8
	5GS05	.5	12	15.0	9
	5GS07	.75	15	17.0	11
	5GS10	1	20	21.7	13
	5GS15	1.5	26	25.8	15
	5GS20	2	33	31.6	19
7GS	7GS05R	.5	7	11.7	6
	7GS05	.5	10	13.8	7
	7GS07	.75	13	16.0	8
	7GS10	1	17	18.8	9
	7GS15	1.5	22	23.6	12
	7GS20	2	27	27.2	13
	7GS30	3	34	33.2	18
10GS	10GS05R*	0.5	8	12.2	7
	10GS05*	0.5	10	13.6	8
	10GS07*	0.75	14	16.4	9
	10GS10*	1	16	17.7	11
	10GS15	1.5	17	18.4	12
	10GS20	2	20	21.7	13
	10GS30	3	27	27.5	18
	10GS50R	5	35	33	21
	10GS50	5	42	40.2	24
13GS	13GS05	.5	5	10.1	6
	13GS07	.75	7	11.5	7
	13GS10	1	10	13.6	8
	13GS15	1.5	12	15.0	9
	13GS20	2	17	18.4	12
	13GS30	3	21	22.3	15
18GS	18GS07	.75	6	11.8	7
	18GS10	1	8	13.5	8
	18GS15	1.5	11	16.1	10
	18GS20	2	14	18.6	11
	18GS30	3	19	24.1	15
	18GS50R	5	24	28.3	17
	18GS50	5	30	34.4	21
25GS	25GS10	1	7	13.4	8
	25GS15	1.5	9	15.3	9
	25GS20	2	11	17.2	10
	25GS30	3	15	20.9	14
	25GS50R	5	22	28.7	17
	25GS50	5	26	33.4	21

*New High Head Hydraulic Design for models manufactured starting 8/2017

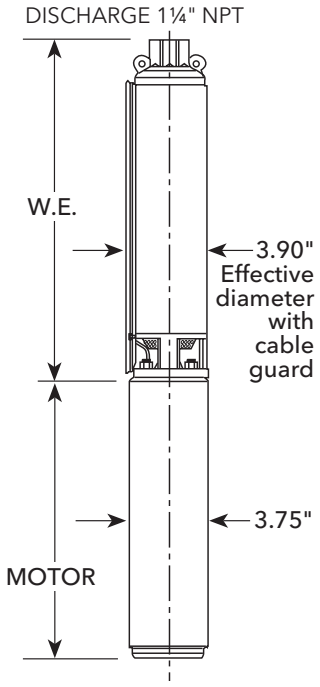
NOMENCLATURE See price book for complete order numbers.



"GS" SERIES MATERIALS OF CONSTRUCTION

Part Name	Material
Discharge Head	AISI 303 SS
Check Valve Poppet	AISI 304 SS
Check Valve Seal	BUNA, FDA compliant
Check Valve Seat	AISI 304 SS
Check Valve Retaining Ring	AISI 302 SS
Bearing Spider - Upper	Noryl® GFN2
Bearing	Proprietary Engineered Polymer
Klipring	AISI 301 SS
Diffuser	Lexan®
Impeller	Noryl®
Bowl	AISI 304 SS
Intermediate Sleeve *	AISI 304 SS, Powder Metal
Intermediate Shaft Coupling *	AISI 304 SS, Powder Metal
Intermediate Bearing Spider *	Glass Filled Engineered Composite
Intermediate Bearing Spider *	AISI 303 SS
Shim	AISI 304 SS
Screws – Cable Guard	AISI 304 SS
Motor Adapter	AISI 303 SS
Casing	AISI 304 SS
Shaft	
Coupling	AISI 304 SS, Powder Metal
Cable Guard	AISI 304 SS
Suction Screen	AISI 304 SS

*See repair parts for where used.



SPECIFICATIONS

Model	Flow Range GPM	Horsepower Range	Best Efficiency GPM	Discharge Connection	Minimum Well Size	Rotation①
5GS	1.2 – 7.5	½ – 2	5	1¼	4"	CCW
7GS	1.5 – 10	½ – 3	7	1¼	4"	CCW
10GS	3 – 16	½ – 5	10	1¼	4"	CCW
13GS	4 – 20	½ – 3	13	1¼	4"	CCW
18GS	6 – 28	¾ – 5	18	1¼	4"	CCW
25GS	8 – 33	1 – 5	25	1¼	4"	CCW

① Rotation is counterclockwise when observed from pump discharge end.

CENTRIPRO 4" SINGLE-PHASE MOTORS

Order No.	Type	HP	Volts	Length in. (mm)	Weight lb. (kg.)
M05421	2-wire PSC	½	115	11.0 (279)	20 (9.1)
M05422		½	230	11.0 (279)	20 (9.1)
M07422		¾		12.4 (314)	23 (10.4)
M10422		1		13.3 (337)	25 (11.3)
M15422		1.5		14.9 (378)	29 (13.2)
M05411	3-wire	½	115	10.0 (253)	19 (8.6)
M05412		½	230	9.7 (246)	18 (8.2)
M07412		¾		10.8 (275)	22 (10)
M10412		1		11.7 (297)	23 (10.4)
M15412		1.5		13.6 (345)	28 (12.7)
M20412		2		15.1 (383)	31 (14.1)
M30412		3		18.3 (466)	40 (18.1)
M50412		5		27.7 (703)	70 (31.8)

NEMA MOTOR

- Corrosion resistant stainless steel construction.
- Built-in surge arrestor is provided on single phase motors through 5 HP.
- Stainless steel splined shaft.
- Hermetically sealed windings.
- Replaceable motor lead assembly.
- NEMA mounting dimensions.
- Control box is required with 3 wire single phase units.
- Three phase units require a magnetic starter with three leg Class 10 overload protection.

CENTRIPRO 4" THREE-PHASE MOTORS

Order No. by Voltage			HP	Length in. (mm)	Weight lb. (kg.)
200V	230V	460V			
M05430	M05432	M05434	½	10.8 (275)	22 (9.7)
M07430	M07432	M07434	¾	10.8 (275)	22 (9.7)
M10430	M10432	M10434	1	11.7 (297)	23 (10.4)
M15430	M15432	M15434	1.5	11.7 (297)	23 (10.4)
M20430	M20432	M20434	2	13.8 (351)	28 (12.7)
M30430	M30432	M30434	3	15.3 (389)	32 (14.5)
M50430	M50432	M50434	5	21.7 (550)	55 (24.9)
M75430	M75432	M75434	7.5	27.7 (703)	70 (1.8)

Order No.	HP	Volts	Length in. (mm)	Weight lb. (kg.)
M15437	1.5	575	11.7 (297)	23 (10.4)
M20437	2		15.3 (389)	32 (14.5)
M30437	3		15.3 (389)	32 (14.5)
M50437	5		27.7 (703)	70 (31.8)
M75437	7.5		27.7 (703)	70 (31.8)

AGENCY LISTINGS

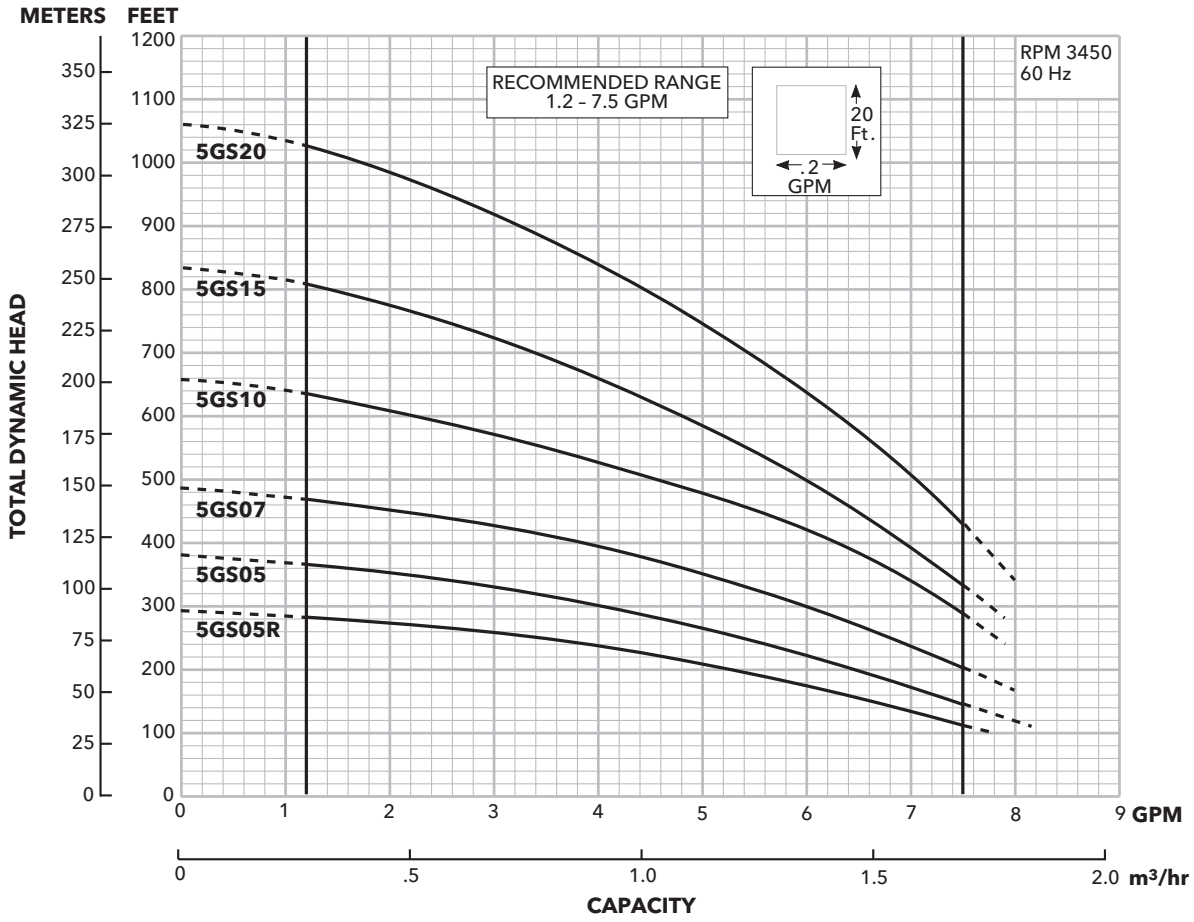
Pump/Water End and CentriPro Motor - tested to UL778 and CAN 22.2 by CSA International (Canadian Standards Association)

CentriPro Motor - Certified to NSF/ANSI 61, Annex G, Drinking Water System Components 4P49

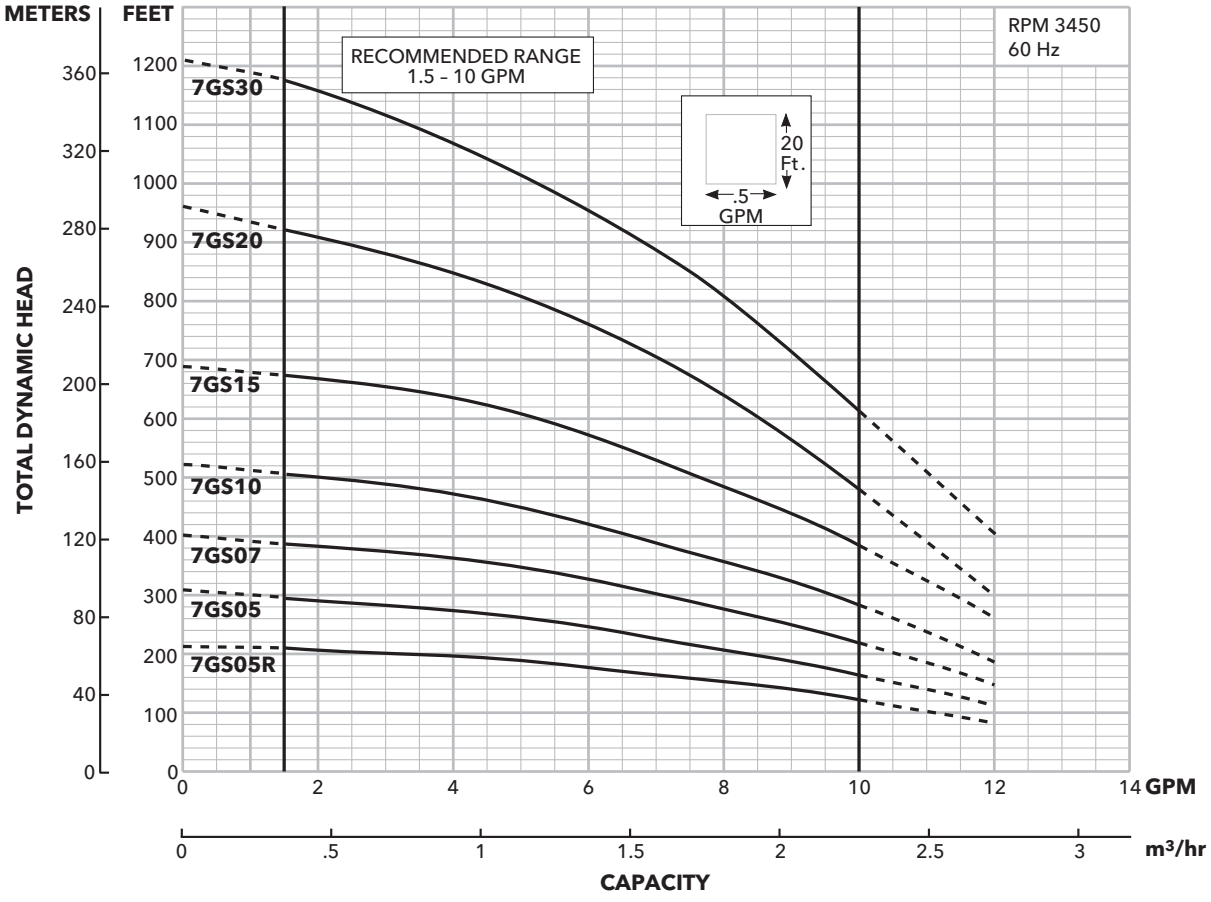
NSF/ANSI 372 – Drinking Water System Components – Lead Content

CLASS 6853 01 - Low Lead Content Certification Program - - Plumbing Products

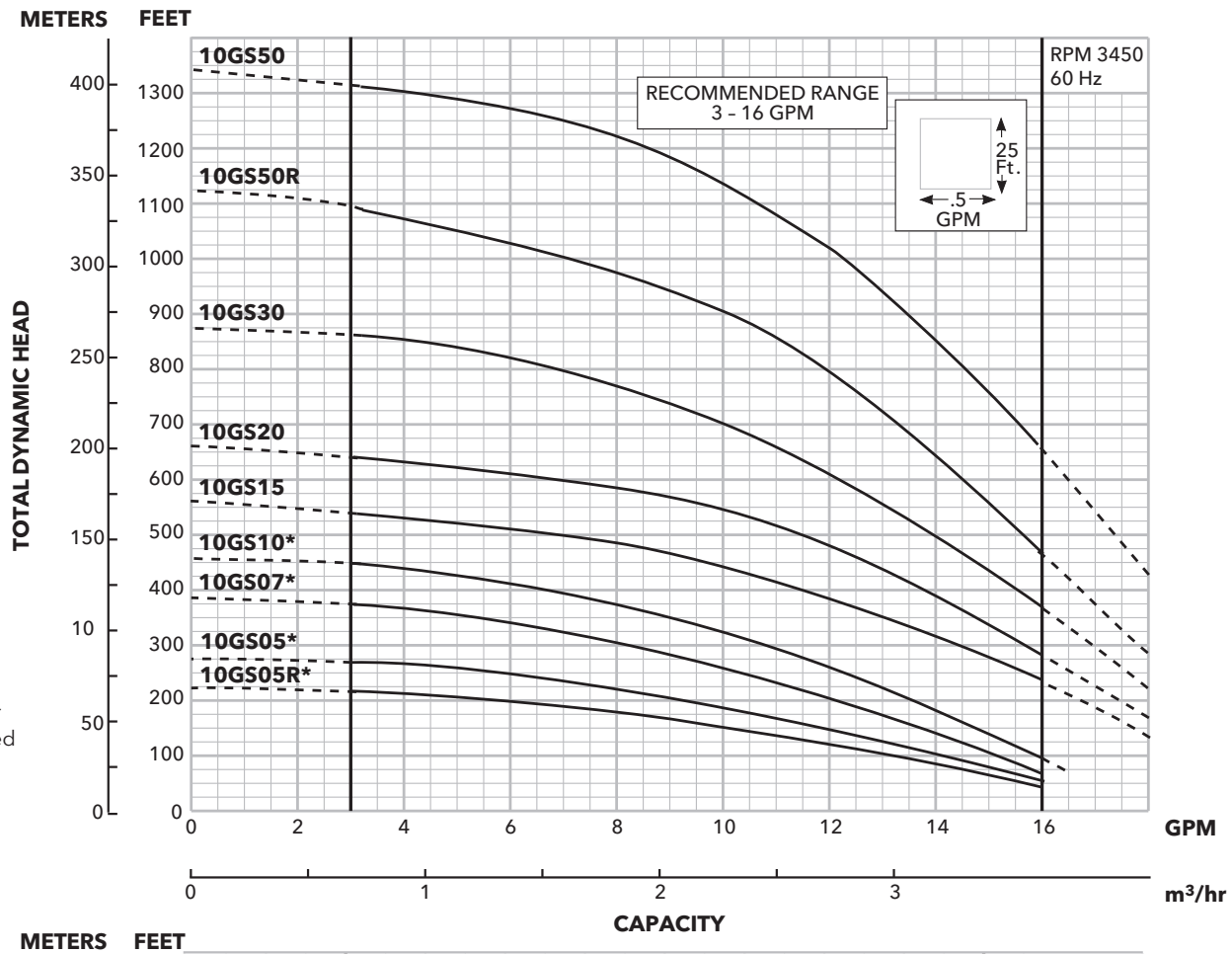
Model 5GS



Model 7GS



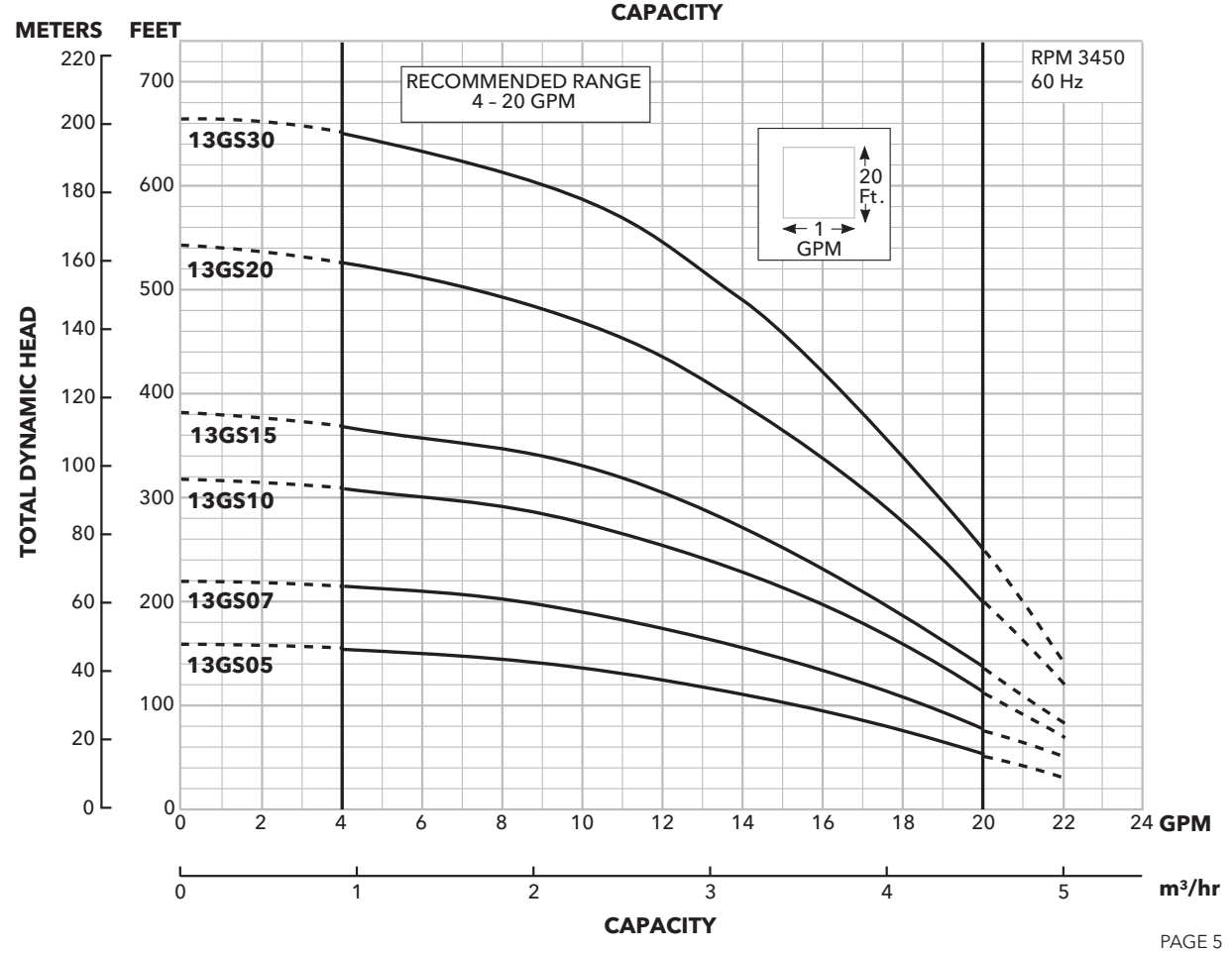
Model 10GS



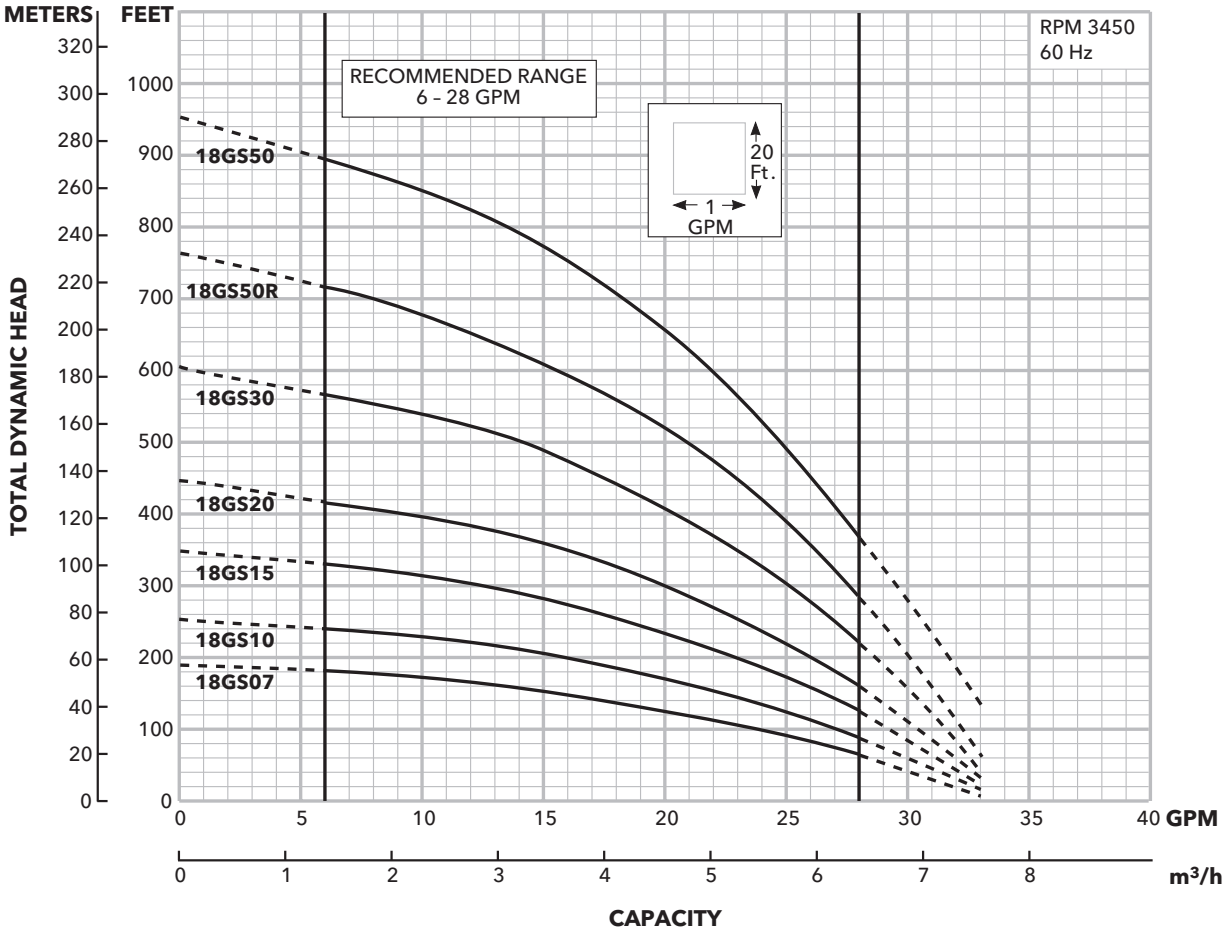
New High Head Hydraulic Design for models manufactured starting 8/2017

* HH Versions

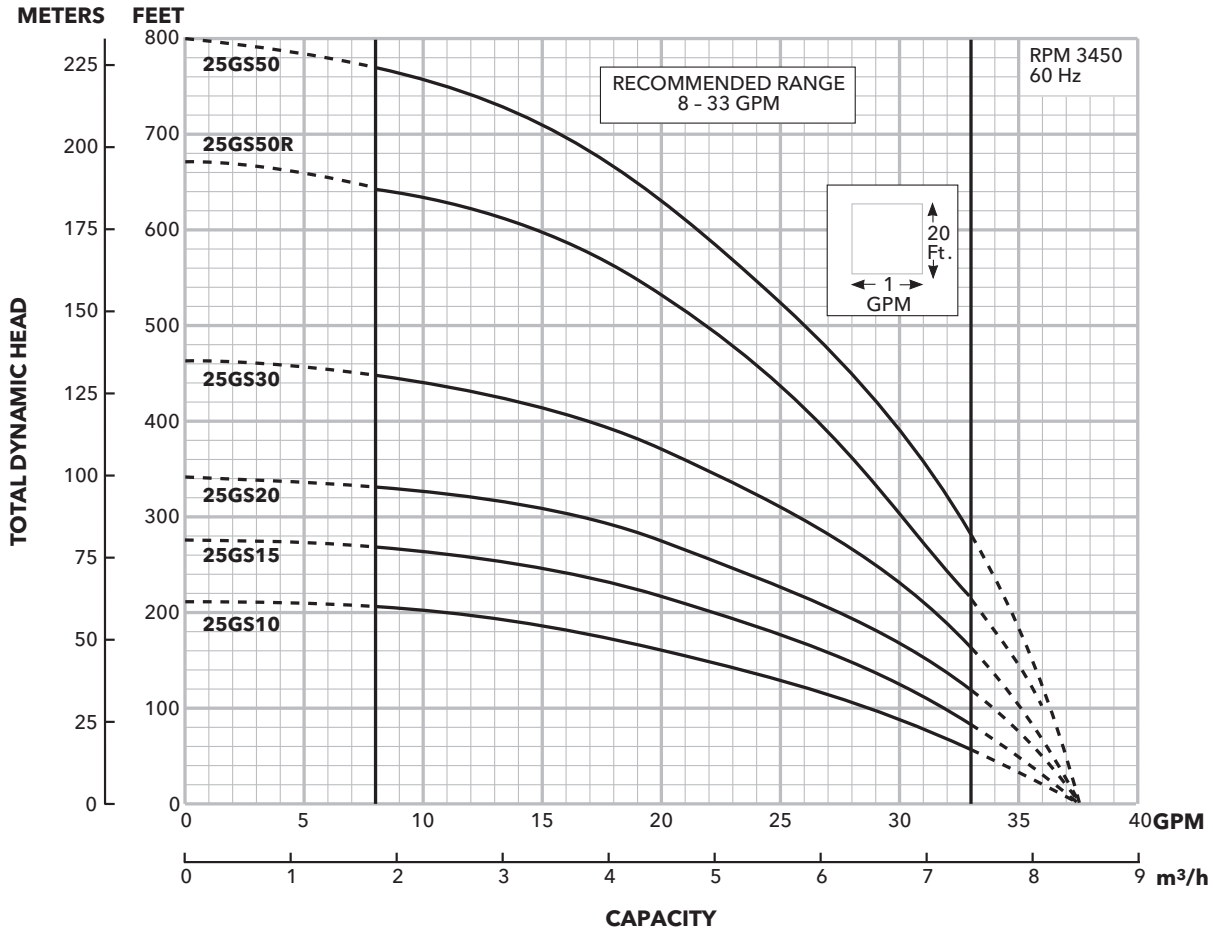
Model 13GS



Model 18GS



Model 25GS



MODEL 5GS

SELECTION CHART

Horsepower Range ½ – 2, Recommended Range 1.2 – 7.5 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																				
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020
5GS05R	½	0						7.4	6.9	6.3	5.8	5.3	4.7	4.0	3.0	1.4																							
		20				7.3	6.7	6.2	5.6	5.1	4.5	3.8	2.6																								
		30			7.2	6.6	6.1	5.6	5.0	4.4	3.6	2.3																								
		40		7.1	6.6	6.0	5.5	4.9	4.3	3.4	2.1																								
		50	7.0	6.5	5.9	5.4	4.9	4.2	3.3	1.8																								
		60	6.4	5.8	5.3	4.8	4.1	3.1	1.6																										
Shut-off PSI			118	109	101	92	83	75	66	57	49	40	31	23	14	5																			
5GS05	½	0							7.7	7.3	6.9	6.4	6.0	5.6	5.1	4.7	4.1	2.6																		
		20					7.5	7.1	6.7	6.3	5.9	5.4	5.0	4.5	3.9	3.2	2.3																				
		30				7.5	7.1	6.7	6.2	5.8	5.4	4.9	4.4	3.8	3.1	2.1																				
		40			7.4	7.0	6.6	6.2	5.7	5.3	4.9	4.3	3.7	2.9	1.9																				
		50	7.7	7.4	6.9	6.5	6.1	5.7	5.2	4.8	4.2	3.6	2.8	1.8																				
		60	7.3	6.9	6.5	6.0	5.6	5.2	4.7	4.2	3.5	2.6	1.6																						
Shut-off PSI			156	147	138	130	121	112	104	95	86	78	69	60	52	43	34	17																	
5GS07	¾	0										7.6	7.3	7.0	6.6	6.3	5.9	5.2	4.4	3.3	1.6														
		20								7.5	7.2	6.9	6.5	6.2	5.8	5.5	5.1	4.2	3.1	1.3															
		30							7.5	7.2	6.8	6.5	6.1	5.8	5.4	5.0	4.6	3.6	2.1																
		40						7.4	7.1	6.8	6.4	6.1	5.7	5.4	5.0	4.6	4.1	2.8																	
		50					7.4	7.1	6.7	6.4	6.0	5.7	5.3	4.9	4.5	4.0	3.4	1.8																	
		60			7.6	7.3	7.0	6.7	6.3	6.0	5.6	5.3	4.9	4.4	3.9	3.3	2.6																	
Shut-off PSI					184	175	167	158	149	141	132	123	115	106	97	89	80	63	45	28	11													
5GS10	1	0															7.5	7.0	6.5	5.9	5.3	4.6	3.8	2.8	1.6									
		20												7.6	7.4	7.2	7.0	6.4	5.9	5.2	4.5	3.7	2.6											
		30											7.6	7.4	7.2	6.9	6.7	6.1	5.5	4.8	4.0	3.1	1.9											
		40										7.6	7.4	7.1	6.9	6.6	6.3	5.8	5.1	4.4	3.5	2.5												
		50									7.5	7.3	7.1	6.8	6.6	6.3	6.0	5.4	4.7	3.9	2.9	1.7												
		60								7.5	7.3	7.1	6.8	6.5	6.3	6.0	5.7	5.0	4.3	3.4	2.3													
Shut-off PSI										214	206	197	188	180	171	162	154	136	119	102	84	67	50	32	15									
5GS15	1½	0																7.5	7.2	6.8	6.3	5.9	5.5	5.1	4.6	4.1	3.5	2.8	1.8					
		20														7.6	7.5	7.1	6.7	6.3	5.8	5.4	5.0	4.5	4.0	3.4	2.6	1.6						
		30													7.6	7.5	7.3	6.9	6.5	6.0	5.6	5.2	4.7	4.2	3.7	3.0	2.1							
		40												7.6	7.4	7.3	7.1	6.6	6.2	5.8	5.3	4.9	4.5	3.9	3.3	2.5	1.4							
		50											7.6	7.4	7.2	7.0	6.8	6.4	6.0	5.5	5.1	4.7	4.2	3.6	2.9	1.9								
		60										7.6	7.4	7.2	7.0	6.8	6.6	6.1	5.7	5.3	4.8	4.4	3.8	3.2	2.4									
Shut-off PSI												274	265	257	248	239	231	213	196	179	162	144	127	110	92	75	58	40	23					
5GS20	2	0																			7.4	7.1	6.8	6.4	6.1	5.7	5.4	5.0	4.7	4.3	3.9	3.3	2.7	
		20																		7.4	7.1	6.7	6.4	6.0	5.7	5.3	5.0	4.6	4.2	3.8	3.3	2.6	1.9	
		30																	7.5	7.2	6.9	6.5	6.2	5.8	5.5	5.1	4.8	4.4	4.0	3.5	2.9	2.2		
		40																	7.3	7.0	6.7	6.3	6.0	5.6	5.3	4.9	4.6	4.2	3.7	3.2	2.5	1.7		
		50																7.5	7.2	6.8	6.5	6.1	5.8	5.4	5.1	4.7	4.3	3.9	3.4	2.8	2.1			
		60															7.6	7.3	7.0	6.6	6.3	5.9	5.6	5.2	4.9	4.5	4.1	3.6	3.1	2.4	1.6			
Shut-off PSI																	328	311	293	276	259	242	224	207	190	172	155	138	120	103	86	68	51		

MODEL 7GS

SELECTION CHART

Horsepower Range ½ – 1, Recommended Range 1.5 – 10 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	540	580	620
7GS05R	½	0						10.2	8.9	7.5	5.9	3.6																		
		20				9.8	8.5	7.0	5.3	2.5																				
		30			9.6	8.3	6.8	4.9	1.9																					
		40		9.4	8.1	6.5	4.6	1.2																						
		50	9.2	7.8	6.3	4.2	0.5																							
		60	7.6	6.0	3.8																									
Shut-off PSI			85	77	68	59	51	42	33	25	16	7																		
7GS05	½	0								10.1	9.2	8.3	7.4	6.3	5.0	3.4														
		20						9.8	9.0	8.1	7.1	6.0	4.6	2.7																
		30					9.7	8.8	7.9	6.9	5.8	4.3	2.4																	
		40			10.4	9.6	8.7	7.8	6.7	5.6	4.1	2.0																		
		50		10.3	9.4	8.5	7.6	6.6	5.4	3.8	1.7																			
		60	10.2	9.3	8.4	7.5	6.4	5.1	3.5																					
Shut-off PSI			125	116	107	99	90	81	73	64	55	47	38	29	21	12														
7GS07	¾	0											10.0	9.3	8.6	7.9	7.1	6.2	5.2	4.0	2.4									
		20								10.4	9.8	9.1	8.4	7.7	6.9	6.0	4.9	3.5	1.8											
		30							10.3	9.7	9.0	8.3	7.5	6.7	5.8	4.7	3.3	1.5												
		40						10.2	9.5	8.9	8.2	7.4	6.6	5.6	4.5	3.1														
		50					10.1	9.4	8.8	8.1	7.3	6.5	5.5	4.3	2.8															
		60				10.0	9.3	8.7	7.9	7.2	6.3	5.3	4.1	2.5																
Shut-off PSI						140	131	122	114	105	96	88	79	70	62	53	44	36	27	18	10									
7GS10	1	0														10.1	9.6	9.0	8.5	7.9	7.3	6.7	6.0	5.3	4.4	3.4	2.1			
		20											10.4	9.9	9.4	8.9	8.3	7.7	7.1	6.5	5.8	5.0	4.1	3.0	1.6					
		30										10.3	9.9	9.3	8.8	8.2	7.6	7.0	6.4	5.7	4.9	4.0	2.8							
		40									10.3	9.8	9.2	8.7	8.1	7.5	6.9	6.3	5.6	4.8	3.8	2.6								
		50								10.2	9.7	9.2	8.6	8.0	7.4	6.8	6.2	5.4	4.6	3.7	2.4									
		60							10.1	9.6	9.1	8.5	7.9	7.3	6.7	6.0	5.3	4.5	3.5	2.2										
Shut-off PSI									166	158	149	140	132	123	114	106	97	88	80	71	62	54	45	36	28	19	10			

Horsepower Range 1½ – 3, Recommended Range 1.5 – 10 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020	1060	1100	1140	
7GS15	1½	0								10.2	9.3	8.5	7.6	6.8	5.9	4.7	2.6													
		20							10.1	9.2	8.3	7.5	6.7	5.8	4.5	2.1														
		30						10.4	9.6	8.7	7.8	7.0	6.2	5.1	3.3															
		40					10.3	9.9	9.1	8.2	7.4	6.6	5.6	4.2	1.6															
		50				10.3	9.9	9.4	8.6	7.7	6.9	6.0	4.9	2.9																
		60			10.2	9.8	9.4	8.9	8.1	7.2	6.4	5.4	3.9																	
Shut-off PSI					194	186	177	168	151	134	116	99	82	64	47	30	12													
7GS20	2	0											9.8	9.3	8.7	8.4	7.8	7.1	6.3	5.4	4.5	3.5	2.2							
		20										9.8	9.3	8.7	8.4	7.7	6.9	6.2	5.3	4.3	3.2	2.8								
		30									9.9	9.5	9.0	8.5	7.9	7.2	6.4	5.7	4.4	3.7										
		40								10.0	9.7	9.2	8.7	8.3	7.5	6.7	6.0	5.2	4.1	3.0										
		50								9.9	9.4	8.9	8.5	7.8	7.2	6.3	5.5	4.7	3.5											
		60							10.0	9.6	9.1	8.7	8.2	7.4	6.6	5.8	5.0	4.0												
Shut-off PSI									268	251	234	216	199	182	165	147	130	113	95	80	61	43	26							
7GS30	3	0														9.8	9.5	9.2	8.7	8.3	7.9	7.4	6.8	6.2	5.4	4.7	3.9	3.0	2.0	
		20													9.8	9.4	9.2	8.7	8.3	7.8	7.2	6.7	6.2	5.3	4.5	3.7	3.3	1.7		
		30												10.0	9.6	9.2	8.8	8.5	8.0	7.5	6.9	6.3	5.7	4.8	4.1	3.2	2.3			
		40											10.0	9.7	9.4	9.0	8.6	8.2	7.7	7.2	6.6	5.9	5.2	4.4	3.6	2.7	1.7			
		50											9.9	9.5	9.2	8.7	8.4	7.9	7.4	6.8	6.3	5.5	4.8	3.9	3.1	2.2				
		60										10.0	9.7	9.3	9.0	8.6	8.1	7.6	7.0	6.5	5.8	5.1	4.2	3.4	2.5	1.5				
Shut-off PSI												320	303	286	268	251	234	216	199	182	165	147	130	113	95	78	61	43	27	

MODEL 10GS

SELECTION CHART Horsepower Range ½ – 3, Recommended Range 3 – 16 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																						
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460
10GS05R*	½	0			15.3	14.2	13.1	12.0	10.9	9.8	8.4	6.1	2.1												
		20	15.0	13.9	12.8	11.6	10.6	9.4	7.8	5.1	0.3														
		30	13.7	12.6	11.5	10.4	9.2	7.5	4.6																
		40	12.4	11.3	10.2	9.0	7.2	3.9																	
		50	11.1	10.1	8.8	6.8	3.2																		
		60	9.9	8.5	6.4	2.5																			
Shut-off PSI			89	80	72	63	54	46	37	28	20	11	2												
10GS05*	½	0			15.7	14.9	14.1	13.3	12.4	11.4	10.4	9.3	8.0	6.3	3.9										
		20	15.4	14.7	13.9	13.0	12.1	11.1	10.1	8.9	7.5	5.7	2.9												
		30	14.6	13.8	12.9	12.0	11.0	9.9	8.7	7.3	5.3	2.3													
		40	13.6	12.8	11.8	10.8	9.7	8.5	7.0	4.9	1.7														
		50	12.6	11.7	10.6	9.5	8.3	6.8	4.5	1.0															
		60	11.5	10.5	9.3	8.1	6.5	4.1	0.2																
Shut-off PSI			113	105	96	87	79	70	61	53	44	35	27	18	9	1									
10GS07*	¾	0				15.7	15.2	14.6	14.0	13.4	12.7	12.0	11.4	10.8	10.1	9.5	8.7	7.7	6.4	4.6	2.1				
		20	16.0	15.5	15.0	14.5	13.8	13.2	12.5	11.8	11.2	10.6	9.9	9.2	8.4	7.3	5.9	3.9	1.2						
		30	15.5	15.0	14.4	13.7	13.1	12.4	11.7	11.1	10.5	9.8	9.1	8.3	7.1	5.6	3.5	0.7							
		40	14.9	14.3	13.6	12.9	12.3	11.6	11.0	10.4	9.7	9.0	8.1	6.9	5.3	3.1	0.2								
		50	14.2	13.5	12.8	12.2	11.5	10.9	10.3	9.6	8.9	8.0	6.7	5.0	2.7										
		60	13.4	12.7	12.1	11.4	10.8	10.2	9.5	8.7	7.8	6.5	4.7	2.3											
Shut-off PSI			161	152	143	135	126	118	109	100	92	83	74	66	57	48	40	31	22	14	5				
10GS10*	1	0					15.7	15.2	14.8	14.4	14.0	13.6	13.2	12.7	12.1	11.4	10.7	10.0	9.3	8.6	7.9	7.0	5.7	3.8	0.6
		20		16.0	15.5	15.0	14.6	14.3	13.9	13.5	13.0	12.5	11.9	11.2	10.5	9.8	9.1	8.4	7.6	6.7	5.2	2.9			
		30	16.0	15.4	15.0	14.6	14.2	13.9	13.4	13.0	12.4	11.8	11.1	10.4	9.7	9.0	8.3	7.5	6.5	4.9	2.5				
		40	15.3	14.9	14.5	14.2	13.8	13.4	12.9	12.3	11.6	11.0	10.3	9.6	8.9	8.2	7.4	6.3	4.6	2.0					
		50	14.8	14.5	14.1	13.7	13.3	12.8	12.2	11.5	10.9	10.1	9.5	8.8	8.1	7.2	6.1	4.3	1.5						
		60	14.4	14.1	13.7	13.2	12.7	12.1	11.4	10.7	10.0	9.4	8.7	7.9	7.1	5.8	3.9	0.9							
Shut-off PSI			192	184	175	166	158	149	140	132	123	114	106	97	88	80	71	62	54	45	36	28	19	10	2

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																										
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820
10GS15	1½	0												15.7	15.3	14.8	14.4	13.3	12.2	10.9	9.3	7.1	3.0							
		20									16.0	15.6	15.2	14.7	14.3	13.7	13.2	11.9	10.6	9.0	6.5									
		30								15.9	15.5	15.2	14.6	14.2	13.5	13.1	12.6	11.3	9.7	7.6	4.0									
		40							15.8	15.5	15.1	14.6	14.2	13.5	13.0	12.5	11.8	10.3	8.8	6.0										
		50						15.7	15.4	14.9	14.5	14.0	13.4	12.8	12.3	11.7	11.0	9.4	7.4	3.4										
		60					15.7	15.3	14.8	14.4	13.9	13.3	12.8	12.2	11.6	10.9	10.1	8.1	5.6											
Shut-off PSI							197	188	180	171	162	154	144	136	128	119	110	93	76	58	41	24	6							
10GS20	2	0														16.0	15.7	14.9	14.2	13.4	12.4	11.4	10.0	8.2	5.8					
		20												15.9	15.5	15.3	14.8	14.1	13.2	12.2	11.0	9.9	8.0	5.2						
		30											15.8	15.4	15.1	14.7	14.4	13.5	12.7	11.7	10.3	8.8	6.5							
		40										15.8	15.4	15.1	14.7	14.4	14.0	12.9	12.2	10.9	9.5	7.8	3.9							
		50								16.1	15.7	15.3	15.0	14.6	14.2	14.0	13.4	12.5	11.5	10.1	8.5	6.0								
		60							16.0	15.7	15.3	14.9	14.5	14.2	13.8	13.4	12.8	11.8	10.7	9.1	7.2	3.4								
Shut-off PSI									225	216	208	199	190	182	173	164	156	139	121	104	87	69	52	35	17					
10GS30	3	0																	15.8	15.2	14.6	14.0	13.3	12.6	11.9	11.0	10.0	9.0	7.5	5.8
		20																15.7	15.1	14.5	13.9	13.2	12.5	11.8	10.9	9.9	8.8	7.2	5.4	
		30															15.9	15.4	14.8	14.2	13.4	12.8	12.0	11.3	10.3	9.3	8.1	6.2	3.8	
		40														15.9	15.6	15.0	14.4	13.8	13.1	12.4	11.5	10.8	9.7	8.6	7.1	4.7		
		50												16.0	15.8	15.6	15.3	14.7	14.1	13.3	12.7	11.9	11.0	10.2	9.1	7.8	6.0	3.0		
		60											16.0	15.8	15.5	15.2	14.8	14.3	13.7	12.9	12.3	11.4	10.6	9.6	8.3	6.8	4.5			
Shut-off PSI													284	275	267	258	249	232	215	197	180	163	145	128	111	94	76	59	42	24

Horsepower Range 5, Recommended Range 3 – 16 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																	
			340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020	1060
10GS50R	5	0					15.6	15.1	14.6	14.2	13.7	13.3	12.8	12.3	11.7	11.0	10.2	9.2	7.9	6.3	4.3
		20			16.0	15.5	15.0	14.6	14.1	13.6	13.2	12.7	12.2	11.6	10.9	10.1	9.0	7.6	6.0	3.9	
		30			15.7	15.3	14.8	14.3	13.8	13.4	12.9	12.4	11.9	11.2	10.4	9.5	8.2	6.7	4.9		
		40		16.0	15.5	15.0	14.5	14.0	13.6	13.1	12.6	12.1	11.5	10.8	9.9	8.8	7.4	5.7	3.6		
		50		15.7	15.2	14.7	14.2	13.8	13.3	12.9	12.4	11.8	11.1	10.3	9.3	8.0	6.5	4.5			
		60	15.9	15.4	14.9	14.4	14.0	13.5	13.0	12.6	12.0	11.4	10.7	9.7	8.6	7.2	5.4	3.2			
Shut-off PSI			341	324	306	289	272	255	237	220	203	185	168	151	133	116	99	81	64	47	29

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																						
			440	480	520	560	600	640	680	720	760	800	840	880	920	960	1000	1040	1080	1120	1160	1200	1240	1280	1320
10GS50	5	0						16	15.5	15.2	14.9	14.5	14	13.5	13	12.5	12	11.5	10.8	10.2	9.5	8.5	7	5.2	
		20					15.9	15.4	15.1	14.8	14.5	13.9	13.4	12.9	12.4	11.9	11.3	10.7	10.1	9.4	8.2	6.8	4.3		
		30					15.6	15.2	14.9	14.6	14.2	13.7	13.1	12.6	12.1	11.6	11.0	10.4	9.8	8.8	7.5	6.0	3.0		
		40				15.8	15.3	15.1	14.7	14.4	13.8	13.3	12.8	12.3	11.8	11.2	10.6	10.0	9.2	7.9	6.6	4.1			
		50				15.5	15.2	14.9	14.6	14.1	13.6	13.0	12.5	12.1	11.5	10.9	10.3	9.7	8.6	7.3	5.6				
		60			15.7	15.3	15.0	14.7	14.3	13.7	13.2	12.7	12.2	11.7	11.1	10.5	9.9	9.0	7.7	6.5	3.2				
Shut-off PSI					346	329	312	294	277	260	242	225	208	191	173	156	139	121	104	87	69	52	35	17	

* HH Versions

MODEL 13GS

SELECTION CHART

Horsepower Range ½ – 3, Recommended Range 4 – 20 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																												
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820
13GS05	½	0			19.0	17.5	15.3	12.5	8.2																					
		20	18.8	16.5	14.5	12.0	8.0																							
		30	16.0	13.4	11.0	4.1																								
		40	13.3	10.6	4.0																									
		50	9.8																											
		60																												
Shut-off PSI			60	52	43	35	26	17	9																					
13GS07	¾	0				19.7	18.5	17.0	15.0	13.2	11.5	8.5																		
		20		19.4	18.0	16.4	14.8	12.9	10.5	6.0																				
		30	18.9	17.5	16.0	14.6	12.5	10.0	5.0																					
		40	17.4	15.9	14.4	12.4	9.7	4.0																						
		50	15.4	13.8	12.0	9.5																								
		60	13.2	11.5	8.5																									
Shut-off PSI			86	78	69	61	52	43	35	26	17	8																		
13GS10	1	0						19.6	18.4	17.6	16.6	15.4	14.1	12.8	11.4	9.5	6.0													
		20			20.0	19.4	18.5	17.2	16.3	15.0	13.8	12.5	11.0	8.5	4.0															
		30		20.0	19.2	18.2	17.1	15.8	14.7	13.6	12.2	10.5	7.5																	
		40	19.9	19.0	18.0	17.0	15.7	14.6	13.5	12.0	10.1	7.3																		
		50	18.8	17.8	16.8	15.5	14.5	13.0	11.6	9.9	7.0																			
		60	17.6	16.6	15.4	14.1	12.8	11.4	9.5	6.0																				
Shut-off PSI			128	119	110	102	93	84	76	67	58	50	41	32	24	15	6													
13GS15	1½	0							19.7	18.9	18.2	17.3	16.3	15.2	14.2	13.2	12.1	8.7												
		20					19.5	18.4	17.9	17.0	16.0	15.1	14.1	12.9	11.8	10.2	8.8													
		30			20.2	19.4	18.6	17.6	16.8	15.8	14.9	14.0	12.6	11.5	9.9	7.9	4.0													
		40		20.0	19.3	18.5	17.5	16.6	15.7	14.8	13.9	12.5	11.4	9.5	7.3	4.0														
		50	20.0	19.1	18.3	17.4	16.4	15.5	14.5	13.6	12.3	11.0	9.2	6.3																
		60	18.9	18.2	17.3	16.3	15.2	14.2	13.3	12.1	11.0	8.7	5.6																	
Shut-off PSI			156	147	139	130	121	113	104	95	87	78	69	61	52	43	35	17												
13GS20	2	0										20.0	19.5	19.0	18.3	17.9	17.2	15.8	14.4	12.6	10.5	7.7								
		20								19.8	19.4	18.8	18.2	17.6	17.0	16.3	15.6	14.1	12.4	10.2	6.8									
		30							19.7	19.3	18.7	18.2	17.4	16.8	16.2	15.5	14.8	13.1	11.1	8.8										
		40						19.6	19.2	18.6	18.1	17.3	16.7	16.1	15.4	14.7	13.8	12.0	9.8	6.0										
		50				20.1	19.5	19.1	18.4	18.0	17.2	16.6	16.0	15.2	14.6	13.7	12.9	10.8	8.5											
		60			20.0	19.5	19.0	18.3	17.9	17.2	16.5	15.8	15.1	14.4	13.6	12.6	11.5	9.2	5.0											
Shut-off PSI					206	198	189	180	172	163	155	146	137	129	120	111	103	85	68	51	33	16								
13GS30	3	0													19.8	19.4	18.9	18.0	17.1	16.0	14.6	13.5	11.9	10.0	7.3					
		20											19.6	19.2	18.9	18.3	17.9	17.0	15.9	14.7	13.3	11.8	9.7	6.9						
		30									20.0	19.5	19.1	18.8	18.2	17.8	17.4	16.4	15.2	13.9	12.3	10.5	8.3	4.0						
		40								20.0	19.4	19.1	18.7	18.2	17.8	17.3	16.8	15.6	14.5	13.0	11.4	9.5	6.0							
		50							19.9	19.5	19.0	18.6	18.1	17.7	17.2	16.7	16.1	14.9	13.7	12.0	10.1	7.9								
		60						19.8	19.4	18.9	18.5	18.0	17.5	17.1	16.6	16.0	15.4	14.2	12.9	11.0	9.0	5.0								
Shut-off PSI								235	226	217	209	200	191	183	174	165	157	139	122	104	87	70	53	35	18					

MODEL 18GS

SELECTION CHART

Horsepower Range ¾ – 5, Recommended Range 6 – 28 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																														
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860
18GS07	¾	0			28.2	26.5	24.0	21.0	17.9	13.5																					
		20	27.7	25.9	23.0	20.0	16.5	10.8																							
		30	25.0	22.0	18.8	15.7	9.5																								
		40	22.2	18.9	15.1	9.0																									
		50	18.4	15.0	7.5																										
		60	13.5	5.0																											
Shut-off PSI			74	66	58	49	40	32	23	14																					
18GS10	1	0					27.0	25.5	23.6	21.2	18.8	15.9	12.0																		
		20		28.0	26.6	25.1	22.7	20.0	17.6	14.0	10.0																				
		30	27.9	26.1	24.3	22.2	19.8	17.1	13.8	8.3																					
		40	26.0	24.1	22.0	19.7	17.0	13.1	8.0																						
		50	24.0	22.0	19.1	16.5	13.0	7.1																							
		60	21.0	18.6	15.8	12.0																									
Shut-off PSI			103	94	86	77	68	60	51	42	34	25	16																		
18GS15	1½	0						28.4	27.2	26.0	24.8	23.0	21.4	19.6	17.5	15.0	12.1														
		20				27.8	26.8	25.4	24.0	22.2	20.6	18.8	16.7	14.0	10.0																	
		30			27.7	26.5	25.3	23.8	22.0	20.2	18.5	16.1	13.5	10.0																	
		40		27.5	26.3	25.0	23.6	22.0	20.1	18.1	16.0	13.1	9.5																		
		50	27.6	26.4	25.0	23.4	21.8	20.0	18.0	15.5	13.0	9.2																			
		60	26.0	24.6	23.0	21.2	19.5	17.5	15.0	12.0	7.9																				
Shut-off PSI			143	134	126	117	108	100	91	82	74	65	56	48	39	30	22														
18GS20	2	0								28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	16.8	12.8												
		20						27.8	26.8	25.8	24.6	23.7	22.6	21.0	19.5	18.0	16.0	11.6														
		30					27.5	26.5	25.5	24.5	23.3	22.1	20.6	19.0	17.5	15.8	13.6	6.5													
		40			28.5	27.4	26.4	25.4	24.4	23.2	22.0	20.5	18.9	17.4	15.7	13.5	11.0														
		50		28.0	27.2	26.2	25.3	24.3	23.0	21.8	20.3	18.7	17.0	15.3	13.1	10.5	6.0														
		60	28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	18.3	16.8	14.8	12.8	9.5																
Shut-off PSI			183	174	165	157	148	139	131	122	113	105	96	87	79	70	61	44	27												
18GS30	3	0											28.0	27.4	26.7	26.0	25.0	23.5	21.5	19.2	16.9	14.2	10.5								
		20									27.7	27.0	26.3	25.8	24.9	24.0	23.0	21.0	18.9	16.5	13.5	9.0									
		30								27.6	26.9	26.2	25.5	24.8	23.9	22.9	21.9	19.8	17.5	14.9	11.2										
		40							27.5	26.9	26.2	25.4	24.6	23.8	22.8	21.8	20.9	18.5	16.0	13.3	8.0										
		50						27.4	26.8	26.0	25.2	24.5	23.6	22.6	21.7	20.6	19.5	17.3	14.5	11.0											
		60				28.0	27.4	26.7	26.0	25.0	24.3	23.5	22.5	21.5	20.5	19.2	18.0	15.7	12.8	7.0											
Shut-off PSI						225	216	208	199	190	182	173	164	156	147	139	130	113	95	78	61	43	26								
18GS50R	5	0															27.7	26.6	25.4	24.0	22.5	20.8	19.0	16.9	14.5	11.7	8.1				
		20													27.6	27.0	26.4	25.2	23.8	22.2	20.5	18.7	16.6	14.1	11.2	7.4					
		30											28.0	27.5	26.9	26.3	25.7	24.4	22.9	21.3	19.5	17.5	15.2	12.5	9.1						
		40										27.9	27.4	26.8	26.2	25.6	25.0	23.5	22.0	20.3	18.4	16.2	13.7	10.6	6.7						
		50									27.9	27.3	26.7	26.1	25.5	24.8	24.1	22.7	21.0	19.2	17.2	14.8	12.0	8.5							
		60								27.8	27.2	26.7	26.1	25.4	24.7	24.0	23.3	21.7	20.0	18.1	15.9	13.3	10.1	6.0							
Shut-off PSI										261	252	244	235	226	218	209	200	183	166	148	131	114	96	79	62	44	27				
18GS50	5	0																	27.9	26.8	25.8	24.8	23.7	22.6	21.2	19.9	18.4	16.8	14.8	12.4	9.7
		20																27.5	26.6	25.6	24.5	23.3	22.2	21.0	19.8	18.0	16.2	14.3	12.0	8.8	
		30															28.0	26.9	26.0	25.0	23.9	22.9	21.6	20.3	18.6	17.0	15.0	13.0	10.2	6.2	
		40														28.0	27.4	26.3	25.3	24.4	23.2	22.1	20.1	19.4	17.9	16.0	14.0	11.6	8.0		
		50													27.9	27.3	26.8	25.9	24.9	23.8	22.7	21.3	20.1	18.5	16.9	14.9	12.8	10.0	6.0		
		60												27.9	27.2	26.8	26.2	25.2	24.1	23.0	21.9	20.7	19.2	17.5	15.8	13.6	11.0	7.8			
Shut-off PSI														307	298	290	281	264	246	229	212	195	177	160	143	125	108	91	73	56	39

MODEL 25GS

SELECTION CHART

Horsepower Range 1 – 5, Recommended Range 8 – 33 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740		
25GS10	1	0			32.8	30.8	28.6	26.2	23.5	20.0	16.2	11.0																		
		20	31.8	30.0	27.5	25.2	22.0	19.0	15.0	8.0																				
		30	29.6	27.2	25.0	21.6	18.0	14.0																						
		40	27.1	24.9	21.5	17.9	13.9																							
		50	24.3	21.0	17.5	13.0																								
		60	20.0	16.2	11.0																									
Shut-off PSI			82	74	65	56	48	39	30	22	13	4																		
25GS15	1½	0				33.0	31.8	30.3	28.8	26.9	24.8	22.0	19.8	16.5	11.0															
		20		32.6	31.2	29.6	28.0	26.0	23.8	21.0	18.1	14.8	8.0																	
		30	32.5	31.0	29.5	27.6	25.6	23.2	20.9	17.9	14.0																			
		40	30.9	29.4	27.5	25.5	23.1	20.8	17.7	13.6																				
		50	29.0	27.2	25.1	22.9	20.4	17.2	13.0																					
		60	26.9	24.8	22.0	19.8	16.5	11.0																						
Shut-off PSI			111	103	94	85	77	68	59	51	42	33	25	16	7															
25GS20	2	0						33.0	31.8	30.4	29.0	27.4	25.7	22.6	21.5	19.3	15.4													
		20				32.7	31.3	30.0	28.6	26.8	25.0	22.9	20.9	18.3	14.3	9.0														
		30			32.3	31.0	29.6	28.5	26.4	24.5	22.6	20.5	18.0	14.0	8.0															
		40			30.9	29.5	28.2	26.3	24.3	22.4	20.4	17.8	13.6	8.0																
		50		30.5	29.4	28.0	26.0	24.1	22.1	20.0	17.2	13.2																		
		60	30.4	29.0	27.4	25.7	22.6	21.5	19.3	15.4	12.2																			
Shut-off PSI			139	130	121	113	104	95	87	78	69	61	52	43	35	26	17													
25GS30	3	0								33.0	32.2	31.5	30.5	29.6	28.3	27.1	25.8	22.6	19.0	14.0										
		20						32.8	32.0	31.0	30.0	29.0	27.9	26.6	25.0	23.8	21.9	20.0	12.6											
		30					32.6	31.8	30.9	30.0	28.8	27.6	26.5	24.9	23.4	21.6	19.9	15.2	8.0											
		40				32.5	31.7	30.9	29.9	28.8	27.5	26.2	24.7	23.3	21.5	19.9	17.8	11.9												
		50			32.3	31.6	30.8	29.8	28.5	27.3	26.0	24.5	23.0	21.2	19.5	17.4	11.5													
		60	33.0	32.2	31.5	30.5	29.6	28.3	27.1	25.8	24.1	22.6	20.9	19.0	16.9	14.0	10.0													
Shut-off PSI			191	183	174	165	157	148	139	131	122	113	105	96	87	79	70	53	35	18										
25GS50R	5	0											32.7	32.2	31.7	31.2	30.5	29.1	27.3	25.3	23.3	21.4	19.3	16.5	11.7					
		20								33.0	32.5	32.1	31.5	31.0	30.3	29.6	28.8	27.0	25.0	23.0	21.1	18.9	15.9	10.6						
		30							32.9	32.5	32.0	31.5	30.9	30.2	29.5	28.7	27.8	25.9	23.9	21.9	19.9	17.4	13.3							
		40						32.9	32.4	31.9	31.4	30.8	30.1	29.4	28.5	27.6	26.7	24.7	22.7	20.8	18.6	15.3								
		50					32.8	32.3	31.8	31.3	30.7	30.0	29.2	28.4	27.5	26.5	25.6	23.6	21.6	19.6	16.9									
		60				32.7	32.2	31.7	31.2	30.6	29.9	29.1	28.3	27.4	26.4	25.4	24.4	22.4	20.4	18.2	14.6									
Shut-off PSI						252	243	234	226	217	208	200	191	182	174	165	156	139	122	104	87	70	52	35	18					
25GS50	5	0														33.0	32.5	31.5	30.2	29.0	27.6	26.0	24.2	22.4	20.5	18.3	15.8	12.0		
		20												32.9	32.3	31.8	31.3	30.0	28.8	27.2	25.8	23.9	22.0	20.0	17.8	15.0	11.0			
		30											32.8	32.2	31.8	31.2	30.5	29.3	27.9	26.4	24.8	22.9	21.0	18.9	16.2	13.0	8.0			
		40										32.7	32.1	31.7	31.1	30.4	29.9	28.5	27.1	25.4	23.7	21.9	19.9	17.5	14.5	10.5				
		50									32.6	32.1	31.6	31.0	30.3	29.9	29.2	27.8	26.3	24.5	22.6	21.8	18.7	16.0	12.7					
		60							33.0	32.5	32.0	31.5	30.8	30.2	29.8	29.0	28.3	26.9	25.1	23.3	21.5	19.5	17.0	14.0	9.5					
Shut-off PSI									286	277	268	260	251	242	234	225	216	199	182	165	147	130	113	95	78	61	43	26		

xylem
Let's Solve Water

Xylem Inc.
2881 East Bayard Street Ext., Suite A
Seneca Falls, NY 13148
Phone: (866) 325-4210
Fax: (888) 322-5877
www.gouldswatertechnology.com

COLORADO WATER WELL PUMP

PUMP INSTALLATION REPORT

CUSTOMER	IDLEDALE WATER & SAN	CONTACT	
ADDRESS		PHONE	
CITY			
STATE & ZIP			
		WELL #	RIDGEWAY WELL
		PERMIT #	
		DATE INSTALLED	5-Oct-20

PUMP INFORMATION

PUMP TYPE	Submersible
PUMP MFG	Sta Rite
PUMP MODEL #	L20P4JH
PUMP SERIAL #	"7946011
DATE CODE	001G20D
RATED GPM	20
RATED HEAD	700
RATED HORSEPOWER	5

WELL INFORMATION

WELL DEPTH	498' 10"
CASING SIZE	4"
STATIC LEVEL	
PUMPING LEVEL	
PITLESS ADAPTER	2
PICK SUB SIZE	2

START UP DATA

RESISTANCE L1 to GRD	inf
RESISTANCE L2 to GRD	inf
RESISTANCE L3 to GRD	inf
RESISTANCE L1 to L2	5
RESISTANCE L1 to L3	4.9
RESISTANCE L2 to L3	4.9
VOLTAGE L1 to L2	
VOLTAGE L1 to L3	
VOLTAGE L2 to L3	
AMPERAGE L1	
AMPERAGE L2	
AMPERAGE L3	

MOTOR INFORMATION

MOTOR TYPE	Submersible
MOTOR MFG	Pentair
MOTOR HORSEPOWER	5
MOTOR VOLTAGE	460
PHASE	3
MOTOR MODEL #	P43B0050A4
MOTOR SERIAL #	E30202310107
DATE CODE	
NAME PLATE AMPS	7.6
SF AMPERAGE	8.5
RPM	3450

SETTING INFORMATION

PUMP SETTING	481' 6"
COLUMN PIPE SIZE	1.25 inch
COLUMN PIPE MTL.	PVC Sch 120
COLUMN PIPE LENGTHS	20 ft
TREAD PATTERN	NPT
PICK UP SUBS	2 inch
CHANGE OVER NIPPLES	2 x 1.25 inch
CHECK VALVE	461 ft
KNOCK OUT (yes/no)	no
CHECK VALVE DEPTHS	
CHANGE OVER NIPPLES	
AIRLINE	no
WIRE SZE	#10/3g
PROBES SETTING	

ELECTRICAL CONTOLS

VOLTAGE	
PHASE	

		FUSE SIZE & TYPE	
GPM		MOTOR STARTER MFG	
PWL		MOTOR STARTER SIZE	
DISCHARGE PRESSURE		HEATER SIZE	
		CONTROL VOLTAGE	
		CONTROL FUSE SIZE	
		PHASE PROTECTION	

COLORADO WATER SYSTEMS
2001 E. 58th AVE.
DENVER, CO. 80216
(303) 892-9053
FAX 303-892-1924

September 22, 2020

AJ Beckman
Public Alliance
Idledale Water and Sanitation District Manager
3159 N. Speer
Denver, CO. 80211
Tel: (303) 877-6284

Dear AJ:

Below please find details of the well video logs performed on September 1, 2020 at Idledale Ridgeway and Sawmill Gulch Wells:

Ridgeway Well – September 1, 2020

Depth	Description
0’	Top of Casing – 6” steel casing
4.2’	Joint in Steel
5.4’	Pitless discharge
6.4’	Joint in Steel
8.9’	Top of PVC
10.2’	Hole Cut in PVC – Likely cut for pitless window
18.4’	Joint PVC
38.5’	Joint PVC
58.6	Joint PVC
78.7’	Joint PVC
18.4’	Joint PVC
99.1’	Joint PVC
18.4’	Joint PVC
104.1’	Static Water Level
119.3’	Joint PVC
139.6’	Joint PVC
159.7’	Joint in PVC
176.2’	Dark spot on casing – tape?
180.0’	Joint PVC

119.3’	Joint PVC
200.2’	Joint PVC
220.3’	Joint PVC
240.6’	Joint PVC – Top Screen – more iron color staining
260.8’	Joint PVC – End Screen
281.0’	Joint PVC
301.1’	Joint PVC
321.3’	Joint PVC
341.4’	Joint PVC
361.7’	Joint PVC
381.9’	Joint PVC
402.1’	Joint PVC- Start Screen
422.3’	Joint Screen
442.4’	Joint Screen
462.7’	Joint Screen
483.0’	Joint – end Screen
493-496’	Rub Marks – Possible pump set depth
502’	Broken PVC casing
502.2’	Total Depth

Video was clean and clear. Minimal staining on PVC casing and screen.

Sawmill Gulch Well – September 1, 2020

Depth	Description
0’	Top of Manhole
5.0’	Pitless discharge
4.8’	Top of Steel Casing
22.5’	Static Water level – Heavy Buildup above screens
111.3	Joint – Slots begin
132’	Joint – Slotted
152’	Joint – Slotted
172’	Joint – Slotted
182’	large buildup in slot
193’	Joint – Slotted
213’	Begin Open Hole
249’	Total Borehole Depth
451’	Total Depth (TD)

Video was clear. Open Hole appears stable to 249’

Bob Orsatti has one copy of the video logs and I have one additional copy for you. Please let me know how you would like it delivered.

If you have any questions regarding this report, please don't hesitate to call me.

Sincerely,

Thomas M. Dea P.E.
Secretary / Treasurer

We Move Water

COLORADO WATER SYSTEMS

2001 E. 58th AVE.
DENVER, CO. 80216
(303) 892-9053
FAX 303-892-1924

March 29, 2021

Public Alliance
AJ Beckman,
Idledale District Manager
3159 N. Speer
Denver, CO. 80211

Re: Well Modification – Upgrade and Lowering of Idledale Well No. 1A Pump Equipment

Dear AJ,

Thank you for allowing Colorado Water Well (CWW) the opportunity to provide this proposal for installing a larger pump to a lower depth at the Idledale Well No. Well 1A.

We recommend the following scope of work be completed, with price estimates included:

1. Prepare in shop, mobilize/demobilize and remove all existing pump equipment and reinstall new equipment.

   Estimate 12 hours @ $275.00/hour -- $3,800.00

2. Supply and install new pump (Grundfos 10S30-34), new 5HP motor (Grundfos 230 volt, three phase VFD rated) and 680' of new submersible pump cable and 200' of additional column pipe and PVC transducer pipe, Dynotek slimline transducer, and materials necessary to lower the new pump and motor to a setting depth of approximately 680' below ground level.

   Lump Sum -- $12,484.00

3. Reinstall new Dynotek slimline transducer + programming, start up and test well.

   Lump Sum -- $2,000.00

4. File permanent installation reports with the State of Colorado

   No Charge

Total This Proposal - $17,924.00

Clarifications:

Colorado Water Well will remove the existing equipment and send the motor in for factory evaluation to determine if it is a warrantable failure. If warrantable, Colorado Water Well will credit Idledale for the materials that are warrantable

Idledale will be responsible for ensuring adequate power exists at the well building, through the existing VFD and to the wellhead. We propose installing a 5HP motor even though the max load will be equivalent to a 3HP motor for Well No. 1A.

Idledale will be responsible for providing adequate cable, conduit and junction boxes to run power from building to well head and a separate conduit with a pull box to run the transducer cable from the building to the well head. NOTE – Transducer may be spliced at the wellhead if desired by Idledale.

Idledale will pull electrical cable from the building to the well head. Idledale staff will work with CWW staff to program the existing VFD and set parameters prior to testing. Idledale is responsible for ensuring adequate wire size and filters (as necessary) from the VFD to the well head.

We will also need a signed approval and signed waiver (attached) to schedule this work.

If you have any questions or wish to discuss this proposal, please call me. We look forward to working with you on this important project.

Sincerely,

Approved By:_____

Thomas M. Dea

Tom Dea
Colorado Water Systems

Date:_____

We Move Water

COLORADO WATER WELL
2001 E. 58th AVE.
DENVER, CO. 80216