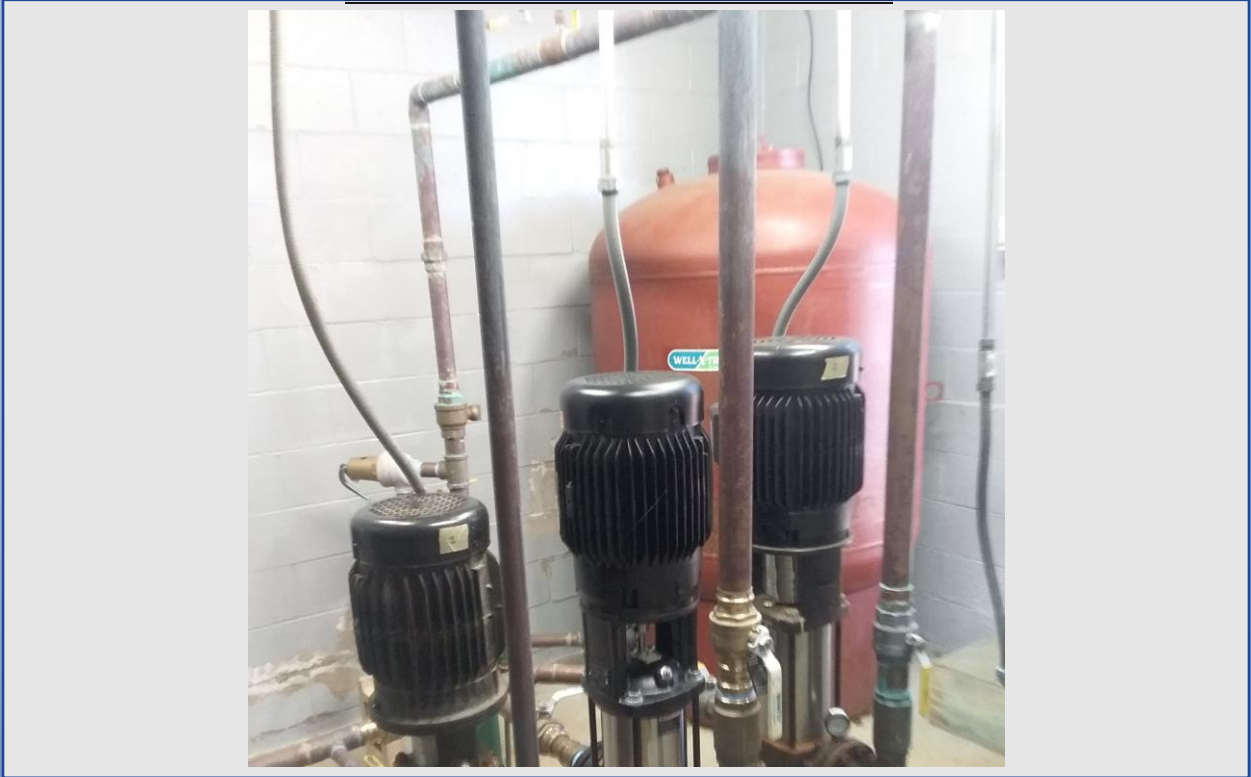


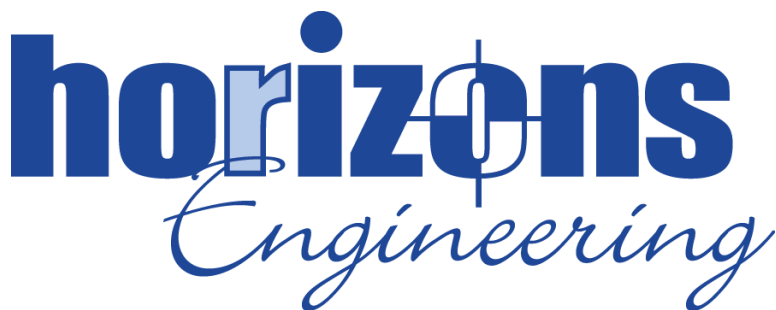
VILLAGE DISTRICT OF EIDELWEISS

ASSET MANAGEMENT PROGRAM



Prepared For: Village District of Eidelweiss

Board of Commissioners and Water Committee



Prepared By: Cathy Furtek Conway, PE

Date: May 2022

Revised June 2022

Table of Contents

- Executive Summary** 1
 - Summary 1
 - Conclusions 1
 - Recommendations 2
- 1. Introduction** 3
 - 1.1. Development of the Plan 3
 - 1.2. Mission Statement 5
 - 1.3. Asset Management Team 5
- 2. Utility Overview** 6
 - 2.1. General 6
 - 2.2. Existing Facilities 7
 - 2.3. Condition of Existing Facilities 8
 - 2.3.1. Source 8
 - 2.3.2. Treatment, Controls and Structures 8
 - 2.3.3. Storage Tanks and Pressure Zones 10
 - 2.3.4. Watermain and Appurtenances 11
 - 2.4 Hydraulic Model and Analysis 13
 - 2.5 GIS Mapping and Interfacing 13
 - 2.6 Asset Valuation 14
- 3. Level of Service Agreement** 15
 - 3.1 Goals 16
- 4. Asset Management Strategy** 18
 - 4.1. General 18
 - 4.2. Condition Assessment 19
 - 4.3. Risk Assessment 19
 - 4.4. Summary of Critical Assets 20
 - 4.5. Operation and Maintenance Strategy 22
 - 4.5.1 Preventive Maintenance 23
 - 4.5.2 Emergency/Reactive Maintenance 23
 - 4.5.3 Deferred Maintenance 23
- 5. Water Quality and Efficiency** 23
 - 5.1 Source Water Assessments and Protection 24

5.2 Water and Energy Efficiency	24
5.3 Best Management Practices (BMPs)	24
6. Capital Improvement Program	25
6.1 Capital Improvement Project Need and Justification	25
6.2 Capital Improvement Project List	26
7. Financial Management Strategy	28
7.1 Financial Forecast.....	28
7.2 Total Expenditure.....	28
7.3 Funding Alternatives	32
7.3.1 User Rates	32
7.3.2 Outside Sources	32
8. Action Plan.....	35
9. Communication Plan	36
10. Conclusions and Recommendations.....	37
11. Appendices	1
Appendix A Financial Data	1
Appendix B Capital Improvement Plan All Assets.....	1
Appendix C Asset Data Tables.....	1
Appendix D System Maps	1
Appendix E Hydraulic Model.....	1
Appendix F Communication Brochure	1
Appendix G Pump House Data Sheets	1
Appendix H Water Use Summary	1
Appendix I Consumer Confidence Report.....	1
Appendix J Customer by Zone.....	1

Executive Summary

Summary

The Village District of Eidelweiss (VDOE) owns and operates a public community water system, PWS ID 1461010. The water system serves a population of approximately 1140 through 480 water service connections. For 2021, the reported average daily water use was approximately 95,502 gallons per day with a peak day demand of 155,570 gallons in May. The water distribution system is supplied by three wells and includes a pump station for caustic soda treatment and controls, six booster pump stations and seven storage tanks (six atmospheric and one hydropneumatic) ranging in size from 5,000 gallons to 120,000 gallons and approximately 16.4 miles of water distribution main plus associated valves and service laterals.

The water system assets included in this program are summarized as follows:

TABLE 1-1
 SUMMARY OF ASSETS

SUMMARY OF ASSETS	
Asset	Inventory (Number)
Wells	3
Pumping Equipment	9
Storage Tanks	7
Distribution Mains	86540 lf
Buildings	7
Booster Stations	6
Treatment Equipment	1
Transportation Equipment (Truck)	
Land	
Hydrants	0
Pressure Reducing Vaults	3
Blowoff / Bleeder	14/11
Meters	0

A map of these assets is included in Appendix D and a detailed summary of each component is included in Appendix B.

Conclusions

The following conclusions are offered based on our investigation:

- Current infrastructure assets have a replacement value estimated at \$23.2 million.
- In general, the system is in fair to good condition.
 - Approximately 19% of the distribution system has exceeded their useful life, of the 86,540 linear feet 16,110 is in poor condition. These lines are the ones that often require emergency repair due to leaks, have bleeders to keep the pipes from freezing during winter months all of which contribute to the unaccounted for or lost water.
 - The wells supply good quality water with only pH adjustment of the DPW well required.

- The booster pump stations have recently had some of the controls and pumps replaced, however many of the buildings have exceeded their useful life and have not been replaced since they were constructed.
- Costs for infrastructure improvements over the next ten to twenty years, in current dollars may approach \$6million. This may vary depending on additional asset inspection and assessments.
- Costs for water system operations and improvements are funded through user rates, flat fee based and as part of property taxes.
- The District will defray increases in water fees and property taxes for water system improvements with State of NH grants.

Recommendations

The utilities action plan for improving the overall management of the system and supporting the identified Level of Service Goals includes the following:

Urgency	Issue	Corrective Action	Target Completion
CAPTIAL IMRPOVEMENTS			
High	Unaccounted-for water and improved operating efficiency	Replacement of watermains in poor condition with a minimum of 4-inch pipe. Replacement should begin on Bergamo, Aspen, Big Loop, Interlaken Circle, Oak Ridge and Appenvel.	2023 to 2036 and ongoing
Medium	Unaccounted-for water	Continue removing bleeders from the system to reduce wasted water	2023 to 2036 and ongoing
Medium	Building Access	Booster Pump Stations should have any deficiency corrected, including Chocorua.	2023 to 2034 and ongoing
Medium	Structural Integrity of Buildings	Booster Pump Station Building Inspections, Repair and Modifications Chocorua, Muddy Beach, Jungfrau and Summit	2023 to 2034 and ongoing
Medium	Operating Efficiency	Improve system control with modifications to the SCADA system	2023 and ongoing
Medium	Improve integrity of storage tanks	Storage tanks should be periodically inspected. The following tanks are a priority, 5000-gallon tanks at Chocorua, 10,000- and 30,000-gallon tanks at Summit, and 5000 gallons at Jungfrau.	2023 to 2036 and ongoing
OPERATIONAL IMPROVEMENTS			
High	Unaccounted-for water and improved operating efficiency	Install zone metering to improve monitoring of and reaction time to potential leaks and lost water. A cost-effective alternative may be ultrasonic meters.	2023 to 2036 and ongoing
High	Unaccounted-for water and improved operating efficiency	Consider installation of flow meters and pressure gauges at zones and pressure reducing vaults.	2023 to 2036 and ongoing
Medium	Unaccounted-for water and improved operating efficiency	Review efficiency of zone operations to determine if zones may be combined or operating pressures improved with changes to or addition of pressure reducing vaults.	2023 to 2036 and ongoing

High	Unaccounted for Water	Initiate leak detection program for distribution system utilizing funding from NHDES sustainability grant program	2023 to 2036 and ongoing
Medium		Inspect all storage tanks every 5 years	2023 to 2036 and ongoing
High	Continue to Improve business operations	Initiate Phase II of the Asset Management Program with additional tools including mobile aps and technology. Apply for funding in the fall of 2022	2022 to 2023
Low	Adequate Rate Structure Fairly Assessed	Consider completing a rate analysis.	2023
Medium	Source Capacity	Determine source requirements to meet future growth	2023 to 2036 and ongoing

1. Introduction

This Asset Management Program is for the Village District of Eidelweiss and describes how the utility will manage the infrastructure assets. Customer service demands and regulations require utilities to actively manage drinking water assets through careful maintenance, repair and replacement decisions. This program is an effective tool for combining technical, management and financial practices to ensure that the level of service required by the community is provided at the appropriate cost.

The program has the following purposes:

- To demonstrate responsible management of the drinking water assets
- To communicate and justify funding requirements indicated by the plan
- To provide a management roadmap for the utility
- To serve as a link between the Village District of Eidelweiss and its customers

The Asset Management Program contains an overview of the utility, mission statement, level of service agreement, critical asset list, operation and maintenance strategy, capital investment program, and financial strategies.

1.1. Development of the Program

The development of the program included the following work items:

Task 1: Data Collection and Condition Assessment

For each system component including source, treatment, distribution and storage Horizons has qualitatively assessed the condition, capacity, consequence of failure, redundancy, useful life and replacement costs. This assessment was based on a review of:

- repair history and expenses over the previous 5 years;
- water use and system loss data;
- well field performance, including yield and water quality for each of the active sources;
- an inspection of visible components; and
- conversations with system staff and contractors.

Using the information gathered and a review of existing mapping, plans and water system records; Horizons developed a base plan of the existing system in AutoCAD format including best available locations and sizes for water distribution main, water supply and storage with estimated elevations of major system components, etc. The system map includes pressure and flow information resulting from the WaterCAD modeling exercise.

Task 2: Hydraulic Model and Analysis

Horizons compiled a computerized hydraulic model of the system utilizing WaterCAD. The WaterCAD model will be used to assess system pressures, flows and zones. The hydraulic model will be a preliminary model based on best available information suitable for general planning purposes (no calibration has been completed at this level).

Task 3: Level of Service, Capital Improvement Planning and Workshop

Horizons coordinated a kick off meeting with NHDES, Commissioners and Customers that discussed the Asset Management program and obtained input on the Level of Service and Mission. Additional meetings will be held with the Commissioners to discuss the results of the assets inventory and to discuss the development of the Capital Improvement Plan

The capital improvement plan includes a prioritized list of short, intermediate and long-term system upgrades required to address deficiencies identified from the inventory and condition assessment along with associated preliminary opinions of cost (for planning purposes).

Task 4: Financial Planning / Long Term Funding Plan

In conjunction with the Village District, Horizons developed a prioritized list of Capital Improvement Projects based on the results of the inventory and condition assessment with a strategy for future funding while maintaining an agreed upon level of service.

The financial management portion of the plan included:

- Existing system users, rates and connection fees and a discussion of projected growth
- Current and historical revenue, operating and maintenance expenses, capital expenditures and capital reserves, debt payments, etc.
- Available funding resources

The final portion of the plan includes a summary of system income and expense along with a summary of available and anticipated funding options for improvements and proposed adjustments to rates to accommodate system upgrade

Task 5: Prepare Asset Management Program, Program Presentation, Implementation, Communication and Training

The completed Horizons plan includes a summary of the data from the previous tasks including the asset inventory, the hydraulic model, the agreed upon Level of Service, the Capital Improvement Plan and the Funding Plan and system financials.

After holding a public informational meeting to review the draft Asset Management Program input was solicited from system customers and other stakeholders and based on input from customers, system staff and leadership; Horizons has made revisions and prepared the final Asset Management Program for adoption by the Village District of Eidelweiss.

Horizons will continue to work with the District to develop an effective Communications and Outreach plan including the development of a brochure.

Horizons Engineering, Inc. will provide training to District staff for the implementation and update the Asset Management Program.

1.2. Mission Statement

The mission statement defines the goals of the Village District of Eidelweiss and is the guide for level of service agreements discussed in section 3. The Village District of Eidelweiss mission statement is as follows:

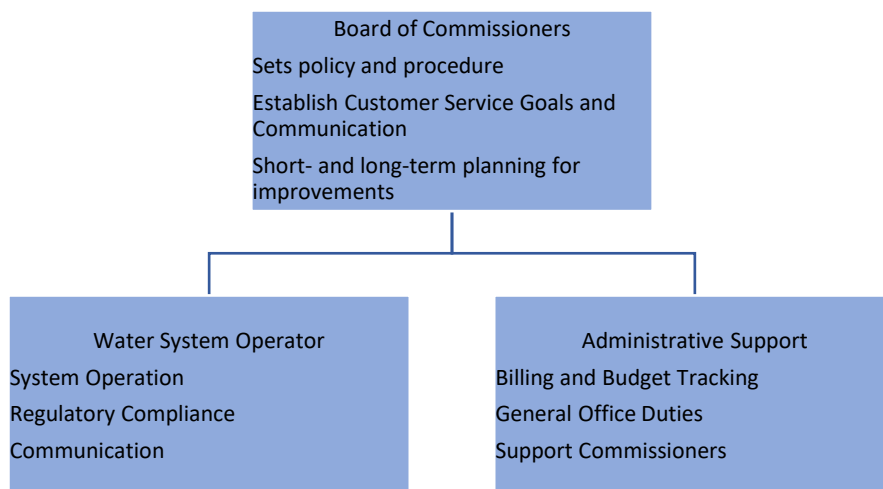
In accordance with the Water System Ordinance adopted by the VDOE Board of Commissioners; its purpose is to provide a continuous supply of drinking water to the residents of the VDOE in accordance with the Safe Drinking Water Act and New Hampshire RSA's 38 and 485 and the administrative rules of the NH Department of Environmental Services. It will also

- Regulate connection to and expansion of the VDOE water system to ensure adequate supply of water to existing and future customers
- Prevent physical and environmental damage to the water system
- Provide a fair system of determining water fees for the system users
- Provide an ordinance that can be enforced by local officials

1.3. Asset Management Team

The Village District of Eidelweiss has a staff who perform day-to-day functions to keep the utility functioning properly. The Asset Management Team is responsible for implementing and updating this program. More specific roles and responsibilities are listed in Figure 1-1 below.

Figure 1-1. SYSTEM NAME Organization Chart



2. Utility Overview

2.1. General

Table 2-1 Village District of Eidelweiss Utility Overview

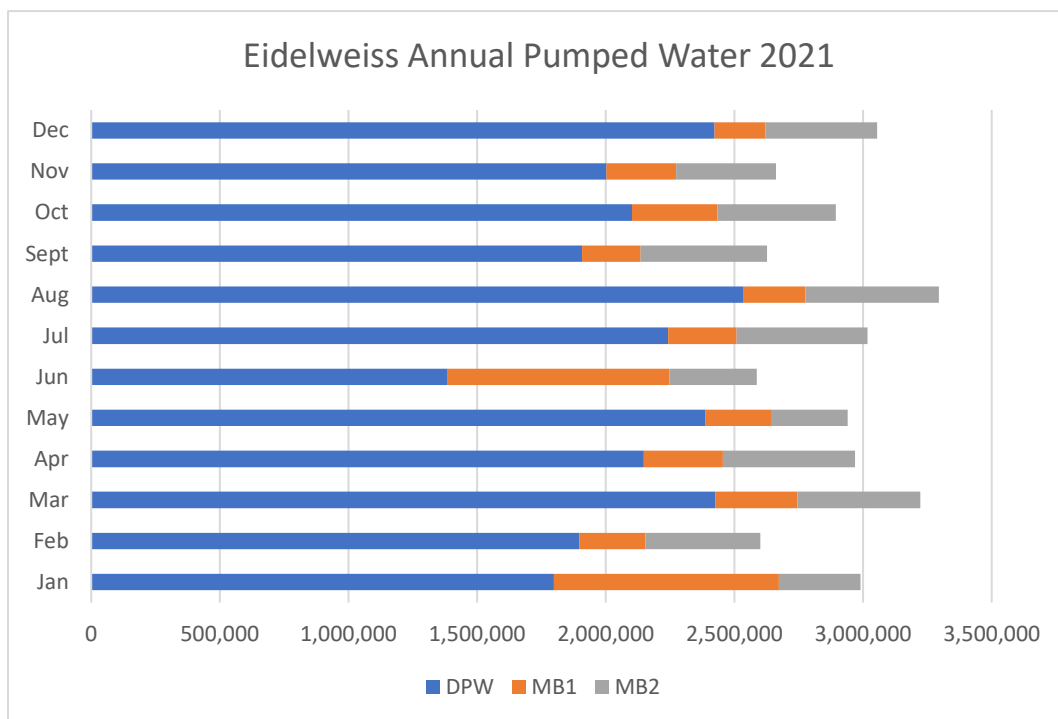
UTILITY OVERVIEW		
	Quantity	Unit of Measure
Water Supply Connection - Customer Breakdown		
Residential Facilities connected to potable water	480	Number
Commercial Facilities connected to potable water	0	Number
Industrial Facilities connected to potable water	0	Number
The Drinking Water Network		
Wells	3	Number
Pumping Equipment	9	Number
Concrete & Metal Storage Tanks	7	Number
Distribution / Collection Mains	86,540	LF
Buildings	7	Number
Booster Stations	6	Number
Treatment Equipment	1	Number
Transportation Equipment (Truck)		Number
Land		Acres
Hydrants	0	Number
Meters		Number
General Water Supply Information		
Number of connections	480	No.
Storage Capacity	180,000	Gallons
Interconnected or Shared with other Drinking Utilities	No	
Total Volume Produced (2021)		34,858,539 Gallons
Total Volume Sold (2021)		Unknown
Total Volume Flushing		Unknown
Water Loss		Unknown
Water Supply Asset Values		
Replacement Value		\$23,199,834

The VDOE includes 1120 residential lots. Currently there are 485 developed lots. Of the remaining lots; 53 are owned by the Town and 119 are owned by the VDOE leaving approximately 500 vacant lots, some of which are not likely to be buildable. Some of these lots have been purchased by the abutting property owner, so may never be developed. In the early 2000's growth was limited to

the development of ten lots per year. Currently growth is continuing at a steady rate of about 15-20 lots per year. The recent pandemic has changed the development pattern, more of the homes are being used year-round instead of as second homes and there is the potential for increased levels of growth.

The following table shows the monthly water usage (pumped water) for 2021. The use is impacted by open bleeders during winter months to prevent pipes from freezing. Typically, December, January and February will see higher volumes of water being pumped. However, many of the homes are only occupied on a seasonal basis with May to August being the months with the most homes occupied. Water use peaks during the month of August.

From 2019 to 2021, annual water use has increased by 2% per year. See Appendix H for data on water use.



The utility will utilize the Capital Improvement Plan to improve the condition of the utility and its financial capacity to continue serving current and future customers.

2.2. Existing Facilities

The Village District of Eidelweiss serves its 480 water customers with three wells located in two different well fields. The primary source is a gravel pack well (DPW1) with a capacity of 200 GPM. The well head is located inside the public works garage and is protected through best management practices. The other wells are located near Big Pea Porridge Pond and are Muddy Well 1 and Muddy Well 2 with capacities of 70 and 50 GPM respectively. These wells were installed in 1987 and 1988 and have provided the district with a reliable good quality water supply since then. In 1994, the DPW well was added to the system. This well is a gravel pack well with a capacity of 200 GPM.

There is one major storage tank, a new (2021) 120,000-gallon concrete atmospheric tank at the Reinach Site. The other five atmospheric tanks combined total is 60,000 gallons of storage, they

primarily provide storage to the various pressure zones and are each associated with a booster pump station. There is one 5000-gallon hydropneumatic tank.

The six booster stations help deliver the water to the customer at adequate pressure and are located at Jungfrau, Reinach, Oak Ridge, Chocorua, Summit, and Muddy well site. In addition, there are Pressure Reducing Valves located on Como, Lakeview, Winnegon and Jung Frau Roads

The distribution system consists of 86,540 linear feet of pipe, most of which was installed in the 1960's and 1970's ranging in size from two-inch to eight-inch diameter pipe. There is no fire protection from the system. There are approximately 16 gate valves that are actively used and 14 blowoffs for system maintenance. In addition, there are 11 bleeders that are kept open during the winter months to prevent shallow buried pipes from freezing.

There are no individual water meters.

Appendix C contains a detailed listing of all system assets and their condition.

2.3. Condition of Existing Facilities

2.3.1. Source

The Muddy Beach wells were installed in the 1980's to supplement the original Grachen site which began having contamination issues in the late 1980's. The Grachen well is no longer in service. In 1994, the DPW well was installed in a stratified drift aquifer and has a safe yield of 200 GPM. This source only requires pH adjustment. In 2021, the DPW well supplied 72% of the system's water and the Muddy Beach wells supply 28%. The pumps have been replaced on a regular basis and the wells have been maintained over the years. However, it is important to note that the Muddy Beach wells cannot meet system demand without the DPW well. The table below provides a summary of each source.

TABLE 2-2 SOURCE SUMMARY

Water Source	Capacity GPM	Daily Production (GPD) 2021	Year Installed	Type	Depth (FT)	Pump (Hp)	Pump Rate (GPM)	Notes
DPW Well 1	200	69,200	1994	Gravel Pack	100	20	175	controlled by Jung Frau Tank Level
Muddy Well 1	70	12,100	1987	Gravel Pack	100	7.5		controlled by Reinach Tank Level
Muddy Well 2	50	14,300	1988	Bedrock	300	2	20	controlled by Reinach Tank Level
Total	320	95,600						

2.3.2. Treatment, Controls and Structures

Treatment: The only treatment required is pH adjustment for the DPW well. Caustic soda is injected directly into the distribution pipe. The equipment is located in the DPW Garage.

Controls: For purposes of this report, the controls include the mechanical and electrical systems which allow the water systems equipment to be operated, devices which collect data, and the communication systems which connect this equipment.

Structures: The booster pump station buildings have not had significant structural upgrades since they were constructed. Some of the buildings still contain dirt floors. However, many of the controls and piping associated with the SCADA system and booster stations has been replaced over the past 10 to 20 years. The table below provides a summary of the booster pump station key control data. Appendix G includes a detailed summary of each station.

Table 2-3 Booster Station Summary

Location / Yr Constructed	Pump Rate GPM	Pump Type	Hp	Avg Daily GPD	Pump From	Pump To	Grd Elev	Static Pressure	# customers (approx)	Distribution to	Notes
Jung frau 1970	145	(2) Vertical Drive Turbine Booster	20	15,000 to 25,000	5000 Gal Tank Filled by DPW Well	Reinach Tank	708	101		Aspen, Jung Frau Zones & Oak Ridge PS	VFD. Upgrade Access and Bldg Maint Needed
Reinach 2020	53	(2) Vertical Turbine Booster	3	70,000 to 106,000	120,000 gal concrete tank	Reinach Pressure zone	930			Gravity to Oak Ridge PS and Como PRV	
Oak Ridge 1975	54	(2) Horizontal Booster Pumps	5	13,000 to 18,000	Reinach station (66psi)	Chocorua PS / Tank	777	60			VFD Upgrade Access
Chocorua 1975	34	(2) Vertical Turbine Booster	5	6,000 to 9,000	5000 Gal Tank Filled by Oak Ridge PS	Summit PS	950	126		Gravity to Chocorua Zone	VFD
Summit 1980	70	(2) Vertical Turbine	5	4,000 to 8,000	(3) Summit Tanks		1242	35-50		Summit Hydro	VFD Bldg Maint Needed, Insulate
Muddy Beach 1985	80	(2) Vertical Turbine	7.5	20,000 to 40,000	MB Wells	Reinach Tank	687	125		System	Bldg Maint, floor, siding

All are controlled with SCADA system

Table Pressure Reducing Valve Summary

Name	Pressure Setting (psi)	Flow	Elev	Size
Jung Frau PRV	55	14	721	2
Klausen PRV	47	6	1069	2
Rigi PRV	50	2	1022	2
Como PRV	58	24	615	2
Bristenstock PRV	35	10	864	4

2.3.3. Storage Tanks and Pressure Zones

The VDOE water system is divided into seven pressure zones with seven storage tanks and six booster stations.

The Reinach tank has recently been installed and is 120,000 gallons.

Jungfrau, Muddy Beach and Chocorua booster stations each have a 5000-gallon atmospheric storage tank installed in 1970, 1985 and 1975 respectively. The Jungfrau tank is fed from the DPW well. The water is then boosted to the Reinach zone and is further boosted by the Oak Ridge and Chocorua pumps to eventually serve the Summit and Rigi zones. The Summit zone includes two atmospheric tanks with a total volume of 40,000 gallons and a 5000-gallon tank to serve the Summit Hydro zone. The following table provides a summary of the available storage.

TABLE 2-4 STORAGE SUMMARY

Tank Name	Volume Gallons	Type	Material	Install Date
JUNGFRAU	5,000	Atmospheric	Steel	1970
REINACH	120,000	Atmospheric	Concrete	2020
MUDDY BEACH	5,000	Atmospheric	Steel	1985
CHOCORUA	5,000	Atmospheric	Steel	1975
SUMMIT	10,000	Atmospheric	Steel	1980
SUMMIT	30,000	Atmospheric	Steel	1980
SUMMIT	5,000	Hydropneumatic	Steel	2001
Total Volume	180,000			

2.3.4 Watermain and Appurtenances

The VDOE water system consists of 86,540 linear feet or approximately 16.39 miles of watermain. It includes watermain ranging in size from 2" to 8" and includes PVC and HDPE pipe.

The water main was first constructed over 50 years ago and some of that water main is still being used today. The following table shows that 97% of the pipe is about 60 years old.

TABLE 2-5

Distribution Pipe by Age		
Age Years	Linear Feet	%
>50	84045.49	97%
2	2493.75	3%
	86539.24	

The following table shows the distribution pipe by size. Most of the pipe is 2" some of which is undersized. Replacement of pipe should be done with a minimum of 4-inch pipe.

TABLE 2-5

Distribution Pipe by Size		
8"	9014.51	10%
6"	17523.91	20%
4"	7985.86	9%
3"	6470.77	7%
2"	45544.19	53%
	86539.24	100%

The District has recently replaced about 3% of the piping. Based on age and leaks, approximately 19% is estimated to be in poor conditions.

TABLE 2-5 BY DISTRIBUTION

Distribution Pipe by Condition		
Excellent	1957.15	2%
Fair/Good	68472.23	79%
Fair/Poor	16109.86	19%
	86539.24	

The District should continue replacement of old leaking watermain in order to continue reducing the lost water, replacing undersized mains and shutoff valves as needed.

Valves: Approximately 16 gate valves are actively used within the distribution system; there are more with unknown location or that do not function properly. Currently there are not enough working valves to effectively isolate the system for repair and maintenance. Valves should be exercised on a regular basis as part of routine operation and maintenance.

Blowoffs and Bleeders: The District has started removal of bleeders. While it is difficult to determine the exact quantity of lost water due to the fact that many of the homes are only used during summer months and the only system meters are located at the well sites to record pumped water, it is easy to visually see the water being lost as it builds into mounds of ice during the winter. A comparison of the 2021 average daily flow for the months of Sept-Oct-Nov with those of Dec-Jan-Feb show that there is an increase of about 6000 GPD when the bleeders are typically open. The flow of water would have to be field measured from the bleeders to determine a more precise volume of lost water.

Streets with Bleeders and Blowoffs

Street	Bleeder	Blowoff	Location
ADELBODEN (4")		Yes	
ALTDORF		Yes	
APPENVEL (2")	Yes	Yes	
APPENVEL (3")	Yes		
ASPEN (BOTTOM - UP)	Yes		at drive #24 near road
ASPEN (TOP-DOWN)	Yes	Yes	at #4 driveway
BERGAMO (6")	Yes		#16 Driveway
BERGDORF (4")		Yes	
BERN		Yes	
BLINDEN (BERGAMO)	Yes		across from #25
BRENNER	Yes		
FORCLAZ	Yes		at dead end
GRANDVAL		Yes	
GRISON		Yes	
JUNGFRAU		Yes	
KLAUSEN		Yes	
LUCERN	Yes		Across from #18
OAK RIDGE (3")	Yes		below Moudsley
REINACH PLACE		Yes	
ST MORITZ (BASAL)		Yes	
UPPER LAKEVIEW	Yes		#33 driveway
WALDSBUT (SHORE DRIVE)		Yes	
WINNINGON (EIDELWEISS)		Yes	

Hydrants: There are no hydrants on the system. The system was not initially designed to provide fire protection and as such the watermains and available storage do not meet the

required minimums. Typically, the watermain must be a minimum of eight-inches to provide fire flow.

Meters: The installation of individual meters should be considered to improve the accuracy of billing for water used and operational efficiency. Understanding it is a costly undertaking. It should be noted that when the District needs a new water source, meters will be required at that time.

In summary while a significant percentage of the distribution system is in good and fair condition, there is a loss during the winter months due to the bleeders and in July of 2020 there was a significant leak that led to over 2.5 million gallons of water being pumped in a two-day period when the average day during that time was around 100,000 GPD. At 100 psi of pressure a small ½' diameter hole can leak up to 44 gallons per minute or 66,000 gallons per day. In addition, some of the two-inch line may be undersized resulting in significant friction loss and added electrical costs for pumping and reduced pressure delivered to some homes. The District should consider replacement of up to 1300 feet of watermain each year.

2.4 Hydraulic Model and Analysis

Horizons Engineering has developed a computerized hydraulic model of the water system using Water Cad. The model provides the system with a tool that can identify system inadequacies and predict system performance such as fire flow and pressure. This model has not been calibrated with field testing. It provides data at a steady state with peak demand. A field calibration should be completed to fully utilize the model. A copy of the water cad report is included in the appendix.

It is our understanding that the District is interested in utilizing the hydraulic model to determine water pressure at proposed new homes. Due to the elevation changes within the water system, some homes require pressure reducers because water is delivered at a pressure that is too high. While the opposite is true in other areas of the system, water cannot be delivered at minimal acceptable pressure of 35 psi

Much of the system grew as the development grew without a significant amount of planning. The District should consider determining if the current 9 pressure zones, 6 booster stations and 3 pressure reducing valves is the most efficient way to operate the system.

2.5 GIS Mapping and Interfacing

The asset management program and database were developed in coordination with the existing system mapping. Efforts were made to clarify and modify the GIS maps based on available drawings, field location of key components and coordination with the system operator. Attributes included in the mapping (either existing or updated) include pipe size, material, pressure zone, condition, remaining useful life, date acquired, consequence of failure, and ID. This data will need to be updated as system improvements and changes are made. The spreadsheet and mapping should remain consistent. This can be done manually or with software that provides support and platforms for municipal infrastructure.

Field survey of the following was completed in the Fall of 2022 and is shown on the system maps in Appendix D. Curb Stops were located on Bern, Hutwell and Oak Ridge Roads. Approximately 16 gate valves were located throughout the system. Five blowoff valves were located at Lucerne, Forclax, Oak Ridge intersection with Presidential View, end of Oak Ridge and St Mortz Roads. In addition, four pressure reducing vaults were located on Klausen, Upper Lakeview, Como and Oak Ridge. All of this data will be provided to the District in electronic format suitable for use in a future GIS System.

In addition to the new data collected, system data for all of the assets inventoried has been provided in an electronic file (shape files) for use with any future GIS systems the District utilizes.

2.6 Asset Valuation

The 2022 estimated replacement cost for the Eidelweiss Village District Water System is \$23.2 million. The table below represents an approximate value of the assets owned by the utility. The value is based on 2022 replacement costs. For a detailed breakdown of assets please see Appendix C.

TABLE 2-6 ASSET VALUATION TABLE

System Component	Description	Replacement Cost	Notes
Source	3 wells, 3 well pumps, 1 building (DPW), treatment, pumps and control	\$ 209,000	
Storage Tanks	7 tanks, 175,000 Gallons Atmospheric and 5,000 hydropneumatic	\$ 365,000	Costs are for steel tank replacement at current volume
Booster Pump Stations	6 buildings, 12 pumps, controls, electrical, piping, misc.	\$ 710,000	
Distribution	86,540 LF Watermain, Valves	\$ 21,815,834	Costs are for 4" main for all existing 2", 3" and 4" and 6" for existing 6" and 8" for existing 8" AND includes valves, services, surface restoration
Other	Office	\$ 100,000	Portion of DPW building
TOTAL SYSTEM VALUATION		\$ 23,199,834	

The previous table includes estimated replacement costs for system components, it should be noted that these unit costs are estimates and can vary greatly by the project size and other site-specific factors such as ledge, wetlands, work within state highways or railroads rights of ways. These costs are intended for general budgeting guidance and as specific projects are developed an opinion of probable construction costs should be completed for the specific project scope.

Estimating the remaining useful life of an asset is difficult at best. There are many variables that affect remaining life including original material, soil conditions, water quality, maintenance, original construction and bedding.

The following table provides average useful life for system components based on AWWA and EPA standards; however, some adjustments may be made in the asset inventory based on current

condition, repair history and operator information. As more information becomes available, the remaining useful life in the inventory data tables may need to be updated.

TABLE 2-7 USEFUL LIFE

Asset Type	Asset Component		Estimated Useful Life (years)
Source	Well		25
	Pump		40
	Pump Motor and Controls		20
Pump Stations and other Facilities	Site / Civil		100
	Process Piping and Equipment		30
	Controls		15
	Building Mechanical and Electrical		30
	Building Structural		50
Storage	Glass Fused to Steel Storage Tank		40
	Concrete Storage Tank		60
	Telemetry		20
	Altitude Valves		20
Distribution	Water Main	Ductile Iron – lined	110
		Cast Iron	115
		PVC	100
		HDPE	50
	Hydrants		40
	Valves		50
	Pressure Valves		30

3. Level of Service Agreement

A level of service (LOS) plan establishes performance goals and achievements for a utility, with consideration to providing services that meet or exceed customer expectations and requirements of State and Federal regulations. The LOS agreement is the standard by which the Village District of Eidelweiss officials operate and maintain the water system. It helps to manage the assets and systems to achieve agreed-upon performance for both the asset and the customer while understanding the risks and consequences of decisions.

Benefits to establishing the LOS agreement include the following:

- Identify strategies to meet level of service targets
- Communicate with the customer on performance of the system
- Identify costs associated with operation and maintenance to meet the agreed upon level of service.

The objectives set the criteria for identifying system improvements and the schedule for maintenance. The costs associated with the desired level of service need to be evaluated. The levels of service determine the amount of funding that is required to maintain, renew and upgrade the water

infrastructure to provide the customers with the levels of service specified. Increased services result in increased costs and ensuing discussions can describe the trade-offs and risks associated with those actions. Decisions can be made based on costs and budgets along with associated rate impacts to meet the agreed upon service level allowing the system to track performance and set strategies to minimize costs while achieving the goals.

This will help Village District of Eidelweiss management and operators set goals that can be measured, tracked, and updated as needed.

3.1 Goals

Level of Service goals should be developed based on SMART principals; goals are Specific, Measurable, Attainable, Realistic/Relevant, and Time-bound. Using the SMART approach, a utility can achieve the goals that they set.

Specific means goals are well defined and clear to anyone who has a basic knowledge of the utility. Measurable tells you if the goal is obtainable and how far away completion is and also when it has been achieved. Attainable means the goal is capable of being reached. Realistic answers the question is the goal within availability of resources, knowledge and time. Time based allows enough time to achieve goal but not too much time.

This SMART method provides a guideline for meeting the goals and expectations outlined in the LOS agreement while maintaining the fiscal responsibility of the Village District of Eidelweiss. Level of service goals may change with time to meet regulatory requirements or customer expectations, to respond to the deterioration of assets, to account for system growth, or to respond to fluctuations in operational costs.

The following table, Table 3-1 outlines the LOS Goals and Performance measures for the Village District of Eidelweiss. The Level of Service goals are defined across the four service areas identified below and a performance target is defined for each goal as a measure for the Level of Service. Changes to the levels of service goals and how the utility addresses the issues will affect funding requirements and how well the utility can provide the proper service to the community. The target levels of service that the utility has chosen to meet are presented in Table 3-1. This table lists the Level of Service goals and measures the success of each goal. It is important to keep these goals reasonable, too many goals will cost time and money by overloading system officials, when the program is reviewed annually, the goals can be updated and added to as appropriate.

In addition to a Level of Service Workshop held with the Commissioners on January 6, 2022 and with the public including customers of May 7, 2022; the District will be planning an online survey to obtain additional input from the customers on their expectations.

TABLE 3-1 LEVEL OF SERVICE

<u>Goal</u>	<u>Target</u>	<u>Achieved</u>
-------------	---------------	-----------------

A. PUBLIC HEALTH AND SAFETY		
Meet or Exceed Federal Safe Drinking Water Act Primary Drinking Water Standards	100% of the time water quality standards are met No reporting violations, reports are submitted accurately and on time	Meets
Meet or Exceed state and local health-based drinking water regulations	100% of the time water quality standards are met No reporting violations, reports are submitted accurately and on time	Meets
Maintain quality water from sources	DPW Well - continue implementation of Best Management Practices related to proximity of garage in protective radius	Ongoing

B. FINANCIAL MANAGEMENT		
Maintain operating fund financial health	Review rates annually to verify rates are sufficient to cover costs of annual operations and future improvements Maintain a capital reserve fund (or operating account) balance to fund capital improvements	Ongoing
Review asset management program annually to allocate funds to highest risk assets with a high probability of failure	Annual review of program	Meets

C. OPERATIONS		
Reduce system losses by 3% per year. Currently losses are at approximately 25%	Reduce the number of bleeders on the system by 3 per year	In Process
Reduce unaccounted for water to less than 10%	Replace approximately 2500 linear feet of water main each year Meter private water lines at the connection with the municipal line.	
Ensure long-term viability of water sources	Protect existing wellhead area to maintain capacity Muddy Beach Wells - update SCADA systems to better understand recovery rate and yield	Ongoing

D. CUSTOMER SERVICES		
Adequate customer delivery pressure under all flow conditions	35 psi minimum at 2nd floor of any home during all flow conditions	Ongoing
Fewer than 5 complaints received regarding color, taste and/or odor per month.	80% of the time	Meets
Report testing results to customers annually in the consumer confidence report (CCR).	Annually	Meets
Customer Education	Improve community outreach with regular posting of meeting minutes	Ongoing

	Semi-annual newsletters with billings	
--	---------------------------------------	--

E. EMERGENCY MANAGEMENT		
Respond within 24 hrs to Water Quality or Water Pressure complaint	100 % of time	Ongoing
Notify customers if major water main break occurs	Within 4 hours 90% of the time	currently 3-4/year
Notify customers of equipment failure that impedes water quality or production	Within 8 hours 90% of time	Ongoing
Repair water main breaks within 48 hrs of identification in order to provide continuous service to customers	90 % of time	Ongoing
Create / Review / Update Emergency Action Plan	Every 5 years	Meets

4. Asset Management Strategy

4.1. General

The water system assets that are included in this program are as follows:

- Water distribution and transmission mains
- Hydrants and blow-offs
- Valves
- Water supply wells and buildings
- Booster Pump Station
- Pressure Reducing Valve Vaults
- Water storage structures

Using the best available information from existing mapping, field observation and discussion with water system officials, an inventory of the water system assets was developed and the overall condition of system components quantified.

An excel spreadsheet was developed to summarize and calculate existing inventory, condition, consequence of failure, installation date, useful life, risk and other data points based on the EPA Checkup Program for Small Water Systems principles.

The mapping of existing assets was field located and updated during this project. A GIS based map is provided in Appendix C as well as an electronic file of the data.

The conclusions made in the AMP are directly related to the quality and accuracy of input data. While there are additional methods such as leak detection, c-value testing, hydrant flow tests, visual inspection during repairs and video inspection to obtain more accurate data on the condition of the distribution system, the cost may be prohibitive. This type of system condition assessments is typically not necessary for the entire distribution system; however, it could be helpful in determining the condition in isolated areas. This asset management program relied on existing data and did not utilize additional assessments.

4.2. Condition Assessment

As part of the inventory, the conditions of the assets were determined using a numerical ranking system. The condition of the assets not visible and below ground were based on the type of material, installation date and maintenance history.

The condition assessment is primarily based on the age of the component, physical inspection (if possible) and operator knowledge and is given ratings shown in the table below. The life expectancy is affected by how well the asset is maintained therefore the percentage of remaining useful life varies as shown in the table.

Condition Assessment			
Rating	% Estimated Remaining Useful Life		Description
	If asset is maintained	If asset is NOT maintained	
Excellent	120	110	Asset is newly installed
Good	110	105	Asset has minor defects
Fair (Average)	100	100	Asset requires some maintenance
Poor	95	90	Asset requires significant maintenance
Very Poor	90	80	Asset is in such disrepair it is unserviceable and requires replacement

4.3. Risk Assessment

The risk assessment is determined by assigning values to two key factors:

1. Probability of Failure – the likelihood that an asset will fail
2. Consequence of failure – if the asset were to fail how would it impact the system and the customer
 - a. Consideration is also given to redundancy. If an asset can provide the same or similar service of another asset, the consequence of failure is not as significant and the life of an asset may also be extended.

Probability of Failure is based on the age of the asset, estimated useful life, condition and operator knowledge. Probability of Failure is given a number of 1 to 10 with 10 indicating certain failure. It is calculated as follows:

$$((\text{Estimated Useful Life} - \text{Remaining Useful Life}) / \text{Est Useful Life}) \times (1 - \text{Redundancy}) \times 10$$

Consequence of Failure estimates the degree of impact on the utility service should the asset fail. It answers the question “How bad would it be if this asset failed unexpectedly?” If the system has one water supply and it fails that is catastrophic versus a system that has two sources, a loss of one may only be moderate. It is rated as follows:

Consequence of Failure	
Rating	Consequence
2	Insignificant Disruption
4	Minor Disruption
6	Moderate Disruption
8	Major Disruption
10	Catastrophic Disruption

To determine risk, we have assigned Risk Factors of 1 to 4, which is determined by multiplying the probability of failure by the consequence of failure. The table below graphically depicts the value and their required actions. The high-risk assets are either close to failure or are a significant component of the system and should be ranked as a priority on the capital improvement plan. The medium high-risk assets should also be replaced due to the importance of them to the operation of the system and delivery of water, however they may be in fair condition and have a redundant component. It is important to plan and schedule improvements for the high risk and medium high-risk assets for the operation of the system but also because every emergency repair costs as much as three times the cost of a planned and scheduled repair.

Category	Value	Action
4 High Risk	If CoF > 5 and PoF > 5	Priority Year 1-10 Capital Improvement Plan
3 Medium-High Risk	If CoF < 5 and PoF > 5	Priority Year 10-15 Capital Improvement Plan
2 Low-Medium Risk	If CoF > 5 and PoF < 5	Monitoring
1 Low Risk	If CoF < 5 and PoF < 5	Routine Maintenance

4.4. Summary of Critical Assets

Some assets are more important than others in making sure that customers receive safe drinking water. They may be important due to the social, economic or environmental consequences should the asset fail.

We utilized the principles of the CUPPS (Check UP Program for Small Systems) software developed by the U.S. Environmental Protection Agency to identify and prioritize critical assets. This process includes reviewing all assets and recording their conditions (likelihood of failure), criticality to the utility (consequence of failure) and redundancy (the number of back-up assets to help support each asset). This will ensure that the utility delivers the level of service that is expected by its customers.

Tables 4-1 lists assets critical to maintain the performance of the utility. Table 4-1 provides a snapshot of the high-risk and medium-high risk assets. A complete list of assets and their category is included in Appendix C. Out of the 135 assets that were inventoried, there were 14 that should be considered for replacement over the next ten years and another 16 that should be considered in years 11 to 15.

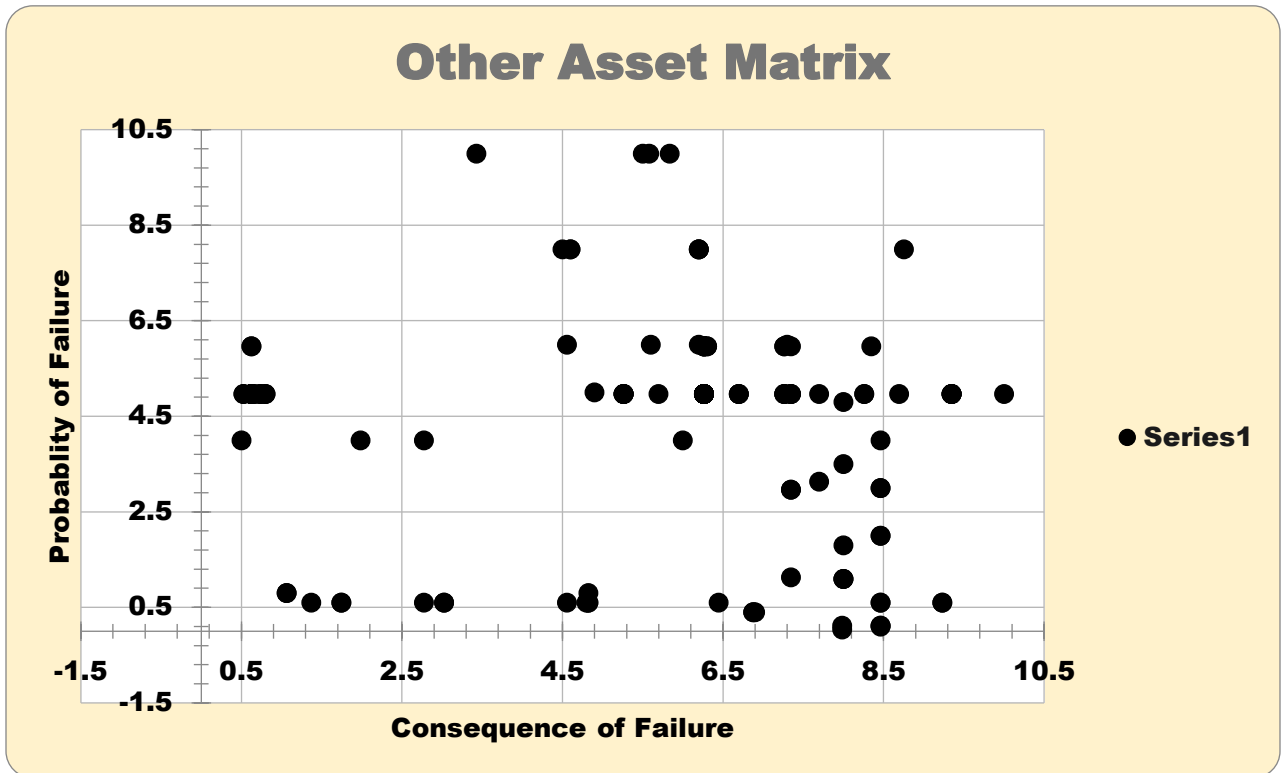
Table 4-1 Village District of Eidelweiss Critical Asset Inventory

Asset Description (Name)	Intersection	Consequence of Failure	Probability of Failure	Risk Level	Urgency
C - Pump Station Building	CHOCORUA	8.8	8.0	4.00	Priority for YR 1-10 Capital Improvement Plan
BERGAMO (6")	Schwyz to Waldsbütt	8.3	6.0	4.00	
ASPEN (TOP-DOWN)	New Line	7.3	6.0	4.00	
BIG LOOP (6")	Altdore to Interlaken	7.3	6.0	4.00	
INTERLAKEN CIRCLE	Porridge Shore to Big Loop	7.3	6.0	4.00	
INTERLAKEN CIRCLE (MIDDLE SHORE)	Middle Shore to Altdore	7.3	6.0	4.00	
OAK RIDGE (3")	Eidelweiss to Oak Ridge PS	6.3	6.0	4.00	
APPENVEL (2")	Deadend West of Aspen to Lugano	6.3	6.0	4.00	
APPENVEL (3")	Lugano towards Thusis	6.3	6.0	4.00	
ASPEN (BOT - UP)		6.3	6.0	4.00	
BLINDEN (BERGAMO)		6.3	6.0	4.00	
BRENNER		6.3	6.0	4.00	
FORCLAZ		6.3	6.0	4.00	
WINNINGON (GRACHEN)	Grachen to the North	6.3	6.0	4.00	Priority for YR 10-15 Capital Improvement Plan
DPW - Electrical/Pump Controls	DPW	6.2	8.0	3.00	
DPW WELL	DPW WELL 1	6.2	8.0	3.00	
DPW WELL PUMP	DPW WELL 1	6.2	8.0	3.00	
S - Storage Tank	SUMMIT	6.2	6.0	3.00	
S - Storage Tank (10,000)	SUMMIT	5.8	10.0	3.00	
S - Electrical/Pump Controls	SUMMIT	5.6	6.0	3.00	
S - Pump Station Building	SUMMIT	5.6	10.0	3.00	
J - Storage Tank	JUNGFRAU	5.5	10.0	3.00	
J - Booster Station Building	JUNGFRAU	4.9	5.0	3.00	
M - Electrical/Pump Controls	MUDDY	4.6	8.0	3.00	
M - Process Piping & Appurtenances	MUDDY	4.6	8.0	3.00	
M - Pump Station Building	MUDDY	4.6	6.0	3.00	
O - Electrical/Pump Controls	OAK	4.5	8.0	3.00	
O - Hydroneumatic Tank	OAK	3.4	10.0	3.00	
LUCERN		0.6	6.0	3.00	
UPPER LAKEVIEW		0.6	6.0	3.00	

This risk assessment is used to identify the highest priority assets and set funding strategies accordingly. The table above identifies the assets for replacement during the planning period due to their estimated useful life, condition and risk rating.

The following graph depicts the risk for each asset. The four quadrants of the graph which looks at probability of failure on one axis and consequence of failure on the other reflects the 1-4 scoring given earlier. Those assets in the second quadrant are the high-risk assets.

Table 4-2 Village District of Eidelweiss Critical Assets Graph



The condition of the asset will change over time therefore it is important to review and adjust the Risk Assessment on a regular basis or as assets are replaced.

4.5. Operation and Maintenance Strategy

O&M consists of preventive and emergency/reactive maintenance. In this section, the strategy for O&M varies by the asset, criticality, condition and operating history. The risk matrix in combination with the prioritized listing of Assets Inventory Summary provides the utility's assets and identifies the risk value for each asset. This risk matrix was used as the basis for establishing the maintenance program as a way to make sure that the utility addresses the highest risk assets. In addition, the maintenance program addresses the level of service performance objectives to ensure that the utility is running at a level acceptable to the customer.

Unexpected incidents could require changing the maintenance schedule for some assets. This is because corrective action must be taken in response to unexpected incidents, including those found during routine inspections and O&M activities. Utility staff will record condition assessments when maintenance is performed, at established intervals, or during scheduled inspections. Maintenance strategies should be developed for each asset rated at the top of the priority ranking. As an asset is

repaired or replaced, its condition will improve and therefore can reduce the overall risk of the asset failing. The maintenance strategy should be revisited annually.

4.5.1 Preventive Maintenance

Preventive maintenance is the day-to-day work necessary to keep assets operating properly, which includes the following:

- Regular and ongoing annual tasks necessary to keep the assets at their required service level
- Day-to-day and general upkeep designed to keep the assets operating at the required levels of service
- Tasks that provide for the normal care and attention of the asset including repairs and minor replacements

Preventive maintenance is carried out because of a planned maintenance program (such as regularly scheduled asset repairs) and historically problematic operations (such as watermain leaks). Equipment must be maintained according to manufacturer's recommendations to achieve maximum return on investment. By simply following the manufacturer's suggested preventive maintenance the useful life of equipment can be increased 2 to 3 times when compared to run till failure. Communities that have eliminated preventive maintenance practices from their operating budget can achieve positive returns from a relatively small additional investment.

4.5.2 Emergency/Reactive Maintenance

Reactive maintenance is often carried out because of customer requests or sudden asset failures. The required service and maintenance to fix the customer's issue(s) is identified by staff inspection. The reactive maintenance is often related to the old distribution system.

4.5.3 Deferred Maintenance

Deferred maintenance is any maintenance, repair, restoration or replacement work that should have been accomplished before now, and that has not been performed.

The utility's plan to reduce overall deferred maintenance over the next 10 years is to replace the distribution main and update the pump stations and tanks as needed over the next 10 years utilizing capital reserve and outside funding resources.

5. Water Quality and Efficiency

This section addresses how the Village District of Eidelweiss addresses water quality and water efficiency issues under the Safe Drinking Water Act (SDWA), the Clean Water Act (CWA), both federal compliance statutes and the New Hampshire State Drinking Water Regulations.

The water is of good quality with no violations. The Consumer Confidence Report is included in Appendix I.

5.1 Source Water Assessments and Protection

The cost of water treatment, as well as the risks to public health, can be reduced by protecting the source water from contamination. The Village District of Eidelweiss potable water division has a source water protection plan in place that is reviewed periodically. The system is committed to ensuring that its potable water customers are provided with safe drinking water. The System complies with all state sampling requirements, which meet or exceed federal water quality standards. The District should take action to help reduce potential sources of contamination and protect drinking water.

5.2 Water and Energy Efficiency

The water and energy sectors are highly interdependent. Water Utilities use enormous amounts of energy to withdraw, treat, and distribute water. Identifying approaches to integrate energy efficient practices into the daily management and long-term planning for our utility also contribute to the long-term sustainability of water infrastructure by reducing operation costs and adding to a utility's bottom line. The Village District of Eidelweiss can initiate the following steps to encourage water and energy efficiency to aid in forestalling future large capital expenditures in infrastructure and have identified several water and energy efficiency capital improvement projects to reduce one of the largest budget line items: energy costs.

- Participating in off-peak pumping
- Securing adequate storage
- Purchasing efficient pumps and motors
- Properly sizing equipment to its intended duty/load requirement
- Using variable speed devices
- Water audits and water loss control programs
- Considering how the utility handles heating, ventilation, and lighting
- Conducting a baseline energy evaluation to assess the utility's energy consumption status.
- Sustainable pricing
- Employing consumer outreach programs (free home water audits, rebate programs, an such)

5.3 Best Management Practices (BMPs)

Adopting BMPs is an emerging trend among the water utility industry. Widespread adoption of better management practices offers great promise to reduce costs and direct system investments using a risk-based approach. BMP's are effective and practical operational, managerial or planning means to deliver safe and sanitary water while also maximizing resources (financial or staff). One such example is for a utility with significant lost water to take a proactive approach to replacing old leaking pipes which is a BMP that saves both money and time and reduces lost water. Other BMP's to consider could include an annual leak detection program or working with the electrical utility to improve energy efficiency of system components.

6. Capital Improvement Program

The Village District of Eidelweiss capital improvement program (CIP) plan is the description of future capital projects. Capital improvement projects generally create a new asset that previously did not exist or they upgrade and improve the capacity of an existing asset. The projects can result from growth or environmental needs, such as the following:

1. Expenditure that purchases or creates a new asset or in any way improves an asset beyond its original design capacity
2. Upgrades that increase the capacity of the asset
3. Construction designed to produce an improvement in the standard operation of the asset beyond its present capacity

In addition to capital improvement projects, the asset management team has reviewed and is establishing a renewal (or rehabilitation) strategy. Renewal expenditure is anything that does not increase the asset's design capacity but restores an existing asset to its original capacity. Any improvement projects that require more than simply restoring an asset to its original capacity are deemed to be a renewal project, such as the following:

1. Activities that do not increase the capacity of the asset (i.e., upgrade and enhance the assets restoring them to their original size, condition, and capacity)
2. Rehabilitation involving improvements and realignment or restores the assets to a new or fresh condition

In making renewal decisions, the utility should consider several categories other than the normally recognized physical, failure or breakage. Such renewal decisions include the following:

1. Structural
2. Capacity
3. Level of service failures
4. Outdated functionality
5. Cost or economic impact

6.1 Capital Improvement Project Need and Justification

As discussed in the Section 2, although the District has made great progress addressing the deficiencies of the system, there is still more to do.

Improvement projects can fall into the following categories:

Health and Sanitation

- Improve system reliability and security
- Reduce leakage
- Ensure adequate pump capacity
- Improve fire protection – undersized mains
- Protect well head areas

System O&M

- Detect and reduce sources of unaccounted for water
- Repair or replace nonfunctional valves
- Rehabilitate or replace obsolete pump houses

- Review rates annually – charge for cost of doing business

A breakdown of improvements by system component follows:

Source

- No issues at this time. However as the community continues to grow, source capacity and requirements should be analyzed.

Treatment Strategies

- Water quality is relatively good, Corrosion control is added to the DPW water.

Structures

- See Booster pump stations below

Storage, Pressure and Booster Pumping

- Inspect all storage tanks every 5 years
- Replace 5000 gallon tanks at Chocorua, 10,000 and 30,000 gallon tanks at Summit, and 5000 gallon at Jungfrau and Oak Ridge.
- Upgrade booster pump stations buildings for Chocorua, Summit, Jungfrau and Muddy sites.

Watermains

- Replace poor condition, aging, and leaking watermain
- See Table 6-1 for the list of recommended streets for replacement

O&M

- Install zone metering, review efficiency of zone operations
- Initiate leak detection program
- Reduce unaccounted for water
- Additional operator for backup

6.2 Capital Improvement Project List

The Village District of Eidelweiss's Capital Improvement Program (CIP) is the description of anticipated and prioritized future capital projects. The projects include construction of some new assets, such as installation of more gate valves, but the majority of the projects are the replacement or upgrading of existing assets. This is a working document dependent on available funding and any unanticipated events.

A listing of all assets and the associated costs and priorities for improvement are listed in Appendix B. Appendix B also contains a breakdown of costs based on linear feet for pipe.

Table 6-1 summarizes the plan for the period for 2023 through 2036. A primary objective was to replace approximately 19% of the system's distribution network in the next ten years. And upgrade the booster stations and storage tanks that were installed in the 1970's. This plan for the first five years includes many of the more critical locations in terms of Consequence of Failure, age of the pipe, and estimated condition.

The priorities were set based on repair history, physical inspection where possible and review with the operator and water committee. The priorities are based on the best information available today and are subject to change as more information becomes available regarding leaks from a leak detection program or other issues that may develop over the next 15 years. Therefore, the plan should be reviewed and updated annually.

TABLE 6-1 CAPITAL IMPROVEMENT PLAN SUMMARY

Capital Improvement Project	Total Cost	Year to Conduct
Chocorua Pump Station Upgrades	\$100,000	2023
BERGAMO (6") Schwyz to Waldsbütt	\$186,464	2023
Subtotal 2023	\$286,464	
ASPEN (TOP-DOWN) New 6" line	\$146,885	2024
BIG LOOP (6") Altdore to Interlaken	\$108,275	2024
Subtotal 2024	\$255,160	
INTERLAKEN CIRCLE Porridge Shore to Big Loop	\$201,015	2025
Subtotal 2025	\$201,015	
INTERLAKEN CIRCLE Middle Shore to Altdore	\$216,400	2026
Subtotal 2026	\$216,400	
OAK RIDGE (3") Eidelweiss to Oak Ridge PS including bleeder removal	\$390,375	2027
Subtotal 2027	\$390,375	
APPENVEL (2") Deadend West of Aspen to Lugano	\$654,328	2028 & 2029
Subtotal 2028 & 2029	\$654,328	
APPENVEL (3") Lugano towards Thusis	\$138,123	2030
ASPEN (BOT - UP)	\$292,423	2030
Subtotal 2030	\$430,545	
BLINDEN (BERGAMO)	\$120,875	2031
BRENNER	\$237,535	2031
Subtotal 2031	\$358,410	
FORCLAZ	\$333,440	2032
Subtotal 2032	\$333,440	
WINNINGON (GRACHEN) Grachen to the North	\$192,280	2033
DPW controls, well and pump	\$100,000	2033
Subtotal 2033	\$292,280	
Summit Building, 2 storage tanks, controls	\$100,000	2034
Jungfrau storage, controls, building	\$100,000	2034
Muddy building, controls, piping,	\$100,000	2034
Oak tank, controls	\$75,000	2034
Subtotal 2034	\$375,000	
LUCERN	\$305,985	2035
Subtotal 2035	\$305,985	
UPPER LAKEVIEW	\$423,033	2036
Subtotal 2036	\$423,033	

TOTAL 2023 TO 2036	\$4,522,434
---------------------------	--------------------

Because the expected needs of the utility will change each year, the CIP plan should be updated to reflect those changes. The complete CIP is included in Appendix B of this report.

7. Financial Management Strategy

This section describes the Village District of Eidelweiss financial condition and its strategy for future financing. Expenses greater than \$25,000 are considered capital costs. Capital costs are onetime expenses (not including labor) used to replace or upgrade, because of capacity, a part of the utility. Capital costs do not include any O&M costs.

Costs for water are funded through general rates and fees. It is important to establish a rate structure with which the utility recovers the total cost of doing business. Short-term, external financing for capital expenses exceeding \$25,000 will be financed through outside funding resources such as loans or grants. However, as we plan for future improvements, the VDOE should continue funding a capital reserve fund to cover the costs of capital improvements necessary in 15 to 20 Years.

If large expenses are required for expansion or upgrades, the System plans to pay for the improvements through user fees, grants and loans. The utility estimates that it will spend an average of \$563,000 per year on water over the next 10 years to accommodate system improvements and operations, compliance with state and federal regulations, and new drinking water requirements.

The recent construction of the new Reinach 120,000-gallon storage tank was completed with a loan for which the repayment is assessed on the tax base of all properties within the Eidelweiss development. This was not just paid for by current water users because it was sized in order to benefit future development within Eidelweiss. Table 7-1 includes the repayment of loans for the annual improvements at 55% of total cost for 30 years. In addition, the District should take advantage of the New Hampshire Department of Environmental Services financial resources for leak detection, energy audits and water audits.

7.1 Financial Forecast

The Financial Forecast shows predicted values of both revenue and expenses for the asset management teams using the values provided in the financial history, see Appendix A. The projections are used to help the utility plan for and predict future expenses and revenue and how to better finance capital improvement projects by acquiring loans or grants or by planned rate changes.

7.2 Total Expenditure

The following table illustrates the forecasted financial needs for the next 10 years. It includes revenue, operational costs and proposed capital expenditures to develop the full cost of operating the system. The actual expenditure in FY 2019, FY 2020 and FY 2021 and budget for FY 2022, is also shown for comparison.

The forecasts are based on a combination of loan and grant funds to make the necessary capital improvements. There is also a 3% annual inflation rate for O&M costs.

Appendix A includes a summary of Financial Data utilized to develop Table 7-1 including income and revenue for the previous three years as well as projections for the next three years.

The plan calls for an investment of \$2,815,000 over ten years in 2022 dollars. The Capital Improvement Plan outlined in table 6-1 is for more than 10 years, however the further out we go, the more difficult it is to predict costs; therefore, the financial analysis was completed for 10 years. The costs for each project were based on current estimates of 2021 construction costs. However, inflation is anticipated and when considering the financial feasibility of the plan an inflation factor needs to be incorporated. Prior to moving forward with construction projects, total project costs including engineering, easements, legal and administration as well as more detailed construction costs should be developed.

Capital funds are also required to respond to emergency conditions, such as water main breaks or the failure of a primary pump. The amount of \$45,000 was included in the plan in each year to respond to those conditions.

The following table, Table 7-1 provides a snapshot of the financial commitment necessary to achieve the 15-year capital improvement plan. While we understand that the capital requirements for the effective operation of the water system are in excess of the financial capacity of the District to fund under current circumstances, it is important to plan for those improvements. A reasonable capital expenditure of approximately \$200,000 per year is a good start to achieving the improvements to the assets but may be inadequate to achieve all of the goals in the level of service agreement.

If the District were to achieve 45% grant funding for the proposed capital improvement plan, rates would increase 2% to 3% per year as shown in table 7-1. If the District was not able to achieve any grant funding and had to cover the cost of the improvements with 100% loan funds, the rates would need to increase 6% to 7% per year.

TABEL 7-1

FY 2019 Actual	FY 2020 Actual	FY 2021 Actual	Expense/Revenue	Typical Year	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
			Eidelweiss Village District Water Supply											
\$0.00	0.00%	\$0.00	Annual Growth			2.08%	2.04%	2.00%	1.96%	1.92%	1.89%	1.85%	1.82%	1.79%
			Number of Customers		480	490	500	510	520	530	540	550	560	570
			Average Customer Bill		\$400	\$410	\$420	\$430	\$440	\$460	\$475	\$490	\$515	\$525
			Rate Increase			3%	2%	2%	2%	5%	3%	3%	5%	2%
			Cash on Hand		\$140,000									
			Interest Rate		2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%
			Average Inflation		3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
			Revenues											
			Taxes											
			Usage											
\$145,127.00	\$170,915		Service		\$192,000	\$200,900	\$210,000	\$219,300	\$228,800	\$243,800	\$256,500	\$269,500	\$288,400	\$299,250
			New Connections											
			Operations Fee											
			Warrant Article											
			Miscellaneous (ie. FEMA, insurance reim)											
			Interest - Account Rec'vble											
			Interest - Banking											
		\$18,266.23	Transfers from Reserves (CRF)					\$2,000	\$4,000	\$5,000	\$7,000	\$9,000	\$8,000	\$13,000
			Transfers from Fund Balance											
			Revenues from Grants			\$130,500	\$117,000	\$94,500	\$99,000	\$177,750	\$146,250	\$146,250	\$193,500	\$162,000
			Revenue from Loans			\$159,500	\$143,000	\$115,500	\$121,000	\$217,250	\$178,750	\$178,750	\$236,500	\$198,000
			Contributions											
\$145,127.00	\$170,915	\$18,266.23	Total Revenues		\$192,000	\$490,900	\$470,000	\$431,300	\$452,800	\$643,800	\$588,500	\$603,500	\$726,400	\$672,250
			Expenses											
\$5,925.65	\$6,766	\$5,379.15	4196.81 · Insurance -Water Svcs-Prop Liab		\$8,000	\$8,240	\$8,487	\$8,742	\$9,004	\$9,274	\$9,552	\$9,839	\$10,134	\$10,438
		\$0.00	4196.83 · Ins - Wtr Svcs - Prop Damage		\$150	\$155	\$159	\$164	\$169	\$174	\$179	\$184	\$190	\$196
		\$0.00	(new) Full Time Admin		\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695	\$8,955	\$9,224	\$9,501	\$9,786
	\$128	\$127.50	4332.07 Water Svcs - Admin Bonus		\$150	\$155	\$159	\$164	\$169	\$174	\$179	\$184	\$190	\$196
	\$3,758	\$240.00	4332.08 Water Svcs - DPW Salary PT		\$500	\$515	\$530	\$546	\$563	\$580	\$597	\$615	\$633	\$652
\$7,350.00	\$2,036	\$2,497.50	4332.09 Water Svcs - Executive - Salary		\$2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898	\$2,985	\$3,075	\$3,167	\$3,262
		\$4,230.10	4332.10 Water Svcs - Fin Admin - Hourly		\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914
\$690.00	\$712	\$750.00	4332.11 Water Svcs - Fin Admin - Audit		\$4,450	\$4,584	\$4,721	\$4,863	\$5,009	\$5,159	\$5,314	\$5,473	\$5,637	\$5,806
\$65.12	\$49	\$514.23	4332.12 Water Svcs -Fin Admin- Supplies		\$550	\$567	\$583	\$601	\$619	\$638	\$657	\$676	\$697	\$718
\$813.37	\$730	\$685.17	4332.13 Water Svc -Fin Admin-Print/Advt		\$650	\$670	\$690	\$710	\$732	\$754	\$776	\$799	\$823	\$848
	\$16	\$0.00	4332.14 Water Svcs-FinAdm-Travel/Traing		\$100	\$103	\$106	\$109	\$113	\$116	\$119	\$123	\$127	\$130
\$104.51		\$0.00	4332.15 Water Svcs -Fin Admin - Telecom		\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
\$282.13	\$487	\$85.92	4332.16 Water Svc-Fin Admin-Equip&Maint		\$120	\$124	\$127	\$131	\$135	\$139	\$143	\$148	\$152	\$157
	\$93	\$21.45	4332.17 Water Services - Admin - Safety		\$100	\$103	\$106	\$109	\$113	\$116	\$119	\$123	\$127	\$130
		\$345.01	4332.19 Water Svcs-Support Svcs/Pyrll		\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159	\$1,194	\$1,230	\$1,267	\$1,305
\$690.62		\$0.00	4332.20 Water Svcs - Ee Ben - FICA		\$450	\$464	\$477	\$492	\$506	\$522	\$537	\$553	\$570	\$587
\$429.59	\$725	\$404.37	4332.21 Water Svcs- Ee Ben- Worker Comp		\$405	\$417	\$430	\$443	\$456	\$470	\$484	\$498	\$513	\$528
		-\$271.56	4332.22 Water Svcs -Ee Ben- UnemployIns		\$300	\$309	\$318	\$328	\$338	\$348	\$358	\$369	\$380	\$391
\$759.04	\$523	\$0.00	4332.23 Water Svcs - Ee Ben - NH Refire		\$1,050	\$1,082	\$1,114	\$1,147	\$1,182	\$1,217	\$1,254	\$1,291	\$1,330	\$1,370
\$6,604.34		\$0.00	4332.24 Water Svcs - Ee Ben - Med/Dis		\$3,150	\$3,245	\$3,342	\$3,442	\$3,545	\$3,652	\$3,761	\$3,874	\$3,990	\$4,110
\$334.63	\$1,959	\$837.50	4332.60 Water Svcs - GG-Bldngs & Grnds		\$1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391	\$1,433	\$1,476	\$1,520	\$1,566

FY 2019 Actual	FY 2020 Actual	FY 2021 Actual	Expense/Revenue	Typical Year	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
\$1,201.40	\$1,254	\$1,013.90	4332.61 · Water Svcs - GG-Heating		\$1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391	\$1,433	\$1,476	\$1,520	\$1,566
\$397.37	\$1,817	\$1,792.75	4332.62 · Water Svcs -GG- Electricity		\$1,900	\$1,957	\$2,016	\$2,076	\$2,138	\$2,203	\$2,269	\$2,337	\$2,407	\$2,479
\$193.71	\$52	\$74.01	4332.63 · Water Svcs -GG-Telephone		\$85	\$88	\$90	\$93	\$96	\$99	\$101	\$105	\$108	\$111
\$249.50	\$250	\$0.00	4332.64 · Water Svcs - GG- Engineering		\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610
		\$316.45	4332.65 · Water Svcs - GG-Misc/Contngcy		\$350	\$361	\$371	\$382	\$394	\$406	\$418	\$430	\$443	\$457
\$181.20	\$37	\$424.85	4332.66 · Water svcs - GG-Region Assoc		\$100	\$103	\$106	\$109	\$113	\$116	\$119	\$123	\$127	\$130
		\$960.00	4332.67 Water Svcs - GG- Equipment Use		\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610
		\$140.00	4332.68 Water Svcs - Gravel		\$300	\$309	\$318	\$328	\$338	\$348	\$358	\$369	\$380	\$391
		\$32.09	4332.69 Water Svcs - Merchant Fees		\$50	\$52	\$53	\$55	\$56	\$58	\$60	\$61	\$63	\$65
\$708.01	\$129	\$782.48	4332.71 · Water svcs - PH-Heating		\$850	\$876	\$902	\$929	\$957	\$985	\$1,015	\$1,045	\$1,077	\$1,109
\$26,063.81	\$27,031	\$24,021.87	4332.72 · Water svcs - PH-Electricity		\$27,500	\$28,325	\$29,175	\$30,050	\$30,951	\$31,880	\$32,836	\$33,822	\$34,836	\$35,881
\$21,571.30	\$15,810	\$0.00	4332.74 · Water svcs -PH-Engineering		\$2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898	\$2,985	\$3,075	\$3,167	\$3,262
\$16,500.00	\$21,300	\$18,150.00	4332.76 · Water Svcs -PH-Monitoring		\$19,800	\$20,394	\$21,006	\$21,636	\$22,285	\$22,954	\$23,642	\$24,352	\$25,082	\$25,835
\$3,766.00	\$6,260	\$5,537.00	4332.78 · Water svcs -PH-Testing		\$5,500	\$5,665	\$5,835	\$6,010	\$6,190	\$6,376	\$6,567	\$6,764	\$6,967	\$7,176
\$62,102.21	\$40,044	\$24,516.04	4332.79 · Water svcs -PH-Repairs		\$45,000	\$46,350	\$47,741	\$49,173	\$50,648	\$52,167	\$53,732	\$55,344	\$57,005	\$58,715
\$2,974.99	\$4,897	\$1,352.84	4332.80 · Water svcs - PH-Telemetry Syste		\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914
		\$15,059.76	4332.81 Water Svcs - New Water Hook-ups											
\$509.87	\$6,929	\$385.77	4332.90 · Water Svcs - Legal		\$750	\$773	\$796	\$820	\$844	\$869	\$896	\$922	\$950	\$979
		\$4,917.23	4332.91 · Asset Management		\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593	\$11,941	\$12,299	\$12,668	\$13,048
		\$0.00	4332.93 · Admin Bonus		\$150	\$155	\$159	\$164	\$169	\$174	\$179	\$184	\$190	\$196
		\$0.00	4332.00 · Water Services - Other		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$2,714.40	\$2,715	\$7,860.34	4335.00 · Water Treatment		\$8,000	\$8,240	\$8,487	\$8,742	\$9,004	\$9,274	\$9,552	\$9,839	\$10,134	\$10,438
\$163,182.77	\$146,507	\$123,183.72	Sub-Total Annual Operating Expenses		\$166,361	\$171,352	\$176,492	\$181,787	\$187,241	\$192,858	\$198,644	\$204,603	\$210,741	\$217,063
			Capital Improvement Projects			\$290,000	\$260,000	\$210,000	\$220,000	\$395,000	\$325,000	\$325,000	\$430,000	\$360,000
			Additional Reserve Fund Contribution											
\$10,600.24	\$9,069	\$12,460.74	Current Annual Debt Payment Water Tank		\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500
			Additional Annual Debt Payment			\$7,877	\$14,939	\$20,643	\$26,618	\$37,347	\$46,174	\$55,002	\$66,681	\$76,459
\$10,600.24	\$9,069	\$12,460.74	Sub-Total Non-Operating Expenses		\$18,500	\$316,377	\$293,439	\$249,143	\$265,118	\$450,847	\$389,674	\$398,502	\$515,181	\$454,959
\$173,783.01	\$155,576	\$135,644.46	Total Cost of Doing Business		\$184,861	\$487,729	\$469,931	\$430,930	\$452,359	\$643,705	\$588,318	\$603,105	\$725,922	\$672,023
-\$28,656.01	\$15,339	-\$117,378.23	Cash Surplus / Deficit		\$7,139	\$3,171	\$69	\$370	\$441	\$95	\$182	\$395	\$478	\$227

Assumptions:

Annual Contribution to Capital Reserve

Interest Rate 2.75% for 30 year loan

3% inflation rate on expense and revenue

2021 actual and 2022 proposed from proposed 2022 budget from profit loss statement

Interest Calculation: <http://www.mycalculators.com/ca/aloanm.html>

7.3 Funding Alternatives

7.3.1 User Rates

Rates are typically charged to the users based on a flat rate or a metered rate or a combination of the two. The income is typically used for repayment of bonds, repairs and management of the system, routine maintenance, and allocation to reserve funds.

User rates should be adjusted in a manner that does not create extreme increases in a given year and should be reviewed on an annual basis.

7.3.2 Outside Sources

Costs for water are typically funded through general rates and fees. If large expenses are required for expansion or upgrades, the System plans to pay for the improvements through user fees, grants and loans.

User rates can be adjusted in the future to fund improvements and some of the future projects can be accomplished with a combination of capital reserve funds and outside funding resources such as those listed below.

Planning Funds:

USDA Rural Development SEARCH (Special Evaluation Assistance for Rural Communities and Households)

- *Low income rural community (<80% of MHI of state) and population <2500*
- *\$25,000 maximum with no match required*
- *Predevelopment feasibility studies, preliminary design and engineering analysis, development of implementation applications*
- *Water, sewer, solid waste, storm water, and other public improvements*

USDA Predevelopment Planning Grant (PPG)

- *Low income rural community with population <10,000*
- *Preliminary Engineering Report / system study and application package for implementation funds to USDA*
- *\$30,000 maximum with 25% match (no in-kind)*

NHDES SRF Drinking Water Asset Management Grant

- *Water systems serving more than 200 customers*
- *Maximum grant and match varies*

- *Asset Inventory, Financial Review and long-term funding strategy, implementation plan and community outreach plan*
- *Typical annual applications due December*

NHDES SRF Drinking Water Leak Detection Grant

NHDES Planning Grant

- *Up to \$50,000*
- *No Match Requirement*

Construction Funds

USDA Rural Development Water and Environmental Programs (WEP)

- *For Necessary and Inevitable Work related to drinking water, sanitary sewer, solid waste and storm drainage*
- *Population < 10,000*
- *Acquisition, construction or improvement of*
 - *Drinking water source, treatment, storage, distribution*
 - *Sewer Collection, transmission, treatment and disposal*
 - *Solid waste collection, disposal, closure*
 - *Stormwater collection, transmission and disposal*
 - *Including engineering, legal, interest cost during construction*
- *Loan with up to 40-year payback with fixed interest rates based on MHI*
- *Grant – Loan combination amount based on user rates and community demographics*
- *Applications due in December for state funds and April for national pool*
- *Town meeting bond vote required*
- *Preliminary Engineering Report is required*

NHDES Drinking Water SRF

- *Public water systems*
- *Uses include*
 - *Infrastructure improvement source development, distribution main rehab or replacement, treatment and storage facilities*
- *Pre-applications are competitively ranked*
 - *Based on violations, deficiencies, affordability, asset management in place etc*
- *Loan forgiveness for disadvantaged communities*
- *Competitive loan rates*
- *Typical projects are greater than \$200,000*
- *Town bond vote required*

NHDES Drinking Water and Groundwater Trust Fund (DWGTF)

- *Public water systems*
- *Uses include*
 - *Planning, design, construction of aging water infrastructure*
 - *Treatment or replacement of water source*
 - *Extension of public water system*

- *Permanent protection of water supply land*
- *Pre-application competitively ranked*
- *Long term loans with some principal forgiveness*
- *Planning grants available*
- *Town bond vote required*

Community Development Block Grant

- *All municipalities are eligible to apply*
- *Public Facilities and Economic Development Grants Available*
- *Up to \$500,000 per year competitively scored*
- *Public Facilities – typically January and July applications – NHDES violation and low income benefit*
- *Economic Development – accepted year-round, must have business committed to creating jobs, 1:1 match required*
- *Feasibility Study up to \$12,000 for preliminary design and income surveys, typically October and April Applications*

Northern Border Regional Commission

- *Purpose is to revitalize and modernize essential infrastructure in communities in support of economic development*
- *Eligible counties in NH include*
 - *Coos and Sullivan Counties up to 80% grant eligible*
 - *Grafton and Carroll Counties up to 50% grant eligible*
- *Uses include engineering and construction of infrastructure*
- *Typically, \$250,000 award (\$1,000,000 may be available in certain circumstances)*
- *Applications due in May or June of each year*

US Department of Commerce Economic Development Administration Public Works Program

- *Construction funds for infrastructure in support of economic development including road, water, sewer, electrical.*
- *Must have the likelihood of business growth*
- *1:1 match typically required*
- *Year-round applications*
- *Average awards are \$1 million depending on benefits of project*

ARPA American Rescue Plan Act

- *Additional grant funding for Construction and Planning*
- *Similar process and funding priorities as SRF and DWGTF*
- *Limited time availability*
- *Grant funds based on need and current rate structure*

Municipal bond bank and traditional local banks are also a resource for capital improvement loans.

8. Action Plan

The Village District of Eidelweiss Asset Management Plan refers to many objectives, targets, maintenance and improvements for the utility. The following table brings all these items together to clearly identify the actions required to successfully implement the Asset Management Plan.

Table 8-1 Action Plan Table

Urgency	Issue	Corrective Action	Target Completion
CAPTIAL IMRPOVEMENTS			
High	Unaccounted-for water and improved operating efficiency	Replacement of watermains in poor condition with a minimum of 4-inch pipe. Replacement should begin on Bergamo, Aspen, Big Loop, Interlaken Circle, Oak Ridge and Appenvel.	2023 to 2036 and ongoing
Medium	Unaccounted-for water	Continue removing bleeders from the system to reduce wasted water	2023 to 2036 and ongoing
Medium	Building Access	Booster Pump Stations should have any deficiency corrected, including Chocorua.	2023 to 2034 and ongoing
Medium	Structural Integrity of Buildings	Booster Pump Station Building Inspections, Repair and Modifications Chocorua, Muddy Beach, Jungfrau and Summit	2023 to 2034 and ongoing
Medium	Operating Efficiency	Improve system control with modifications to the SCADA system	2023 and ongoing
Medium	Improve integrity of storage tanks	Storage tanks should be periodically inspected. The following tanks are a priority, 5000-gallon tanks at Chocorua, 10,000- and 30,000-gallon tanks at Summit, and 5000 gallons at Jungfrau.	2023 to 2036 and ongoing
OPERATIONAL IMPROVEMENTS			
High	Unaccounted-for water and improved operating efficiency	Install zone metering to improve monitoring of and reaction time to potential leaks and lost water. A cost-effective alternative may be ultrasonic meters.	2023 to 2036 and ongoing
High	Unaccounted-for water and improved operating efficiency	Consider installation of flow meters and pressure gauges at zones and pressure reducing vaults.	2023 to 2036 and ongoing
Medium	Unaccounted-for water and improved operating efficiency	Review efficiency of zone operations to determine if zones may be combined or operating pressures improved with changes to or addition of pressure reducing vaults.	2023 to 2036 and ongoing
High	Unaccounted for Water	Initiate leak detection program for distribution system utilizing funding from NHDES sustainability grant program	2023 to 2036 and ongoing
Medium		Inspect all storage tanks every 5 years	2023 to 2036 and ongoing
High	Continue to Improve business operations	Initiate Phase II of the Asset Management Program with additional tools including mobile aps and technology. Apply for funding in the fall of 2022	2022 to 2023

Low	Adequate Rate Structure Fairly Assessed	Consider completing a rate analysis.	2023
Medium	Source Capacity	Determine source requirements to meet future growth	2023 to 2036 and ongoing

The System should review this program annually as part of the effort to prepare the annual budget and to adjust the goals and objectives as projects are completed. This document is not just a plan but a program.

9. Communication Plan

The purpose of this communication plan is for the Village District of Eidelweiss to provide information on the operation of the water system to its customers in order to establish customer expectations and to allow the System to recover the full cost of doing business.

The Communication plan will provide the following information as part of the plan:

- Current and proposed rate structure
- Condition of the system components
- Explanation of the true cost of doing business including capital improvements to highlight the message that “water is not free”
- Status of meeting the goals established as part of the Asset Management Program

This information will be provided utilizing the following outlets

- Public Informational Meeting
- Annual Meeting
- Board meetings are always open to the public
- Social media including Website and Facebook
- Mailing FAQ flyers with the bi-annual billing

The system information will be provided at least annually at the Annual Meeting as well as at least annually with the billings and the website will be updated at least monthly.

It is important to the customer and the commissioners that everyone understand the importance of maintaining and efficiently operating the \$23.2 million asset known as the Village District of Eidelweiss Water System.

In addition, it is important to continue to educate the customers with Frequently Asked Questions sheets regarding issues such as the need for every home to have a backflow preventer, an explanation of recovery time after a watermain break especially for those customers that are not at their homes during the break. This type of communication will reduce the customer concerns with air in their system due to a previous watermain break.

10. Conclusions and Recommendations

The Village District of Eidelweiss has been working to make improvements to its infrastructure that is past its useful life. Recent improvements include:

- 1994 Installation of DPW well to replace contaminated Grachen well field. Including connection to Jung Frau and the installation of a 5000-gallon atmospheric storage tank and upgrades to the Booster Station
- 2016 Updated controls and SCADA equipment in pump stations
- 2020 Installation of approximately 2500 linear feet of watermain on Interlaken Circle, Altdorf Road and Adelbaden Road
- 2021 Installation of at 120,000-gallon storage tank at the Reinach Site – Under Construction
- 2021 Installation of Pressure Reducing vaults
- Removal of 3 bleeders

However, there is more work to be done. The System should plan for future improvements as follows:

Operational Improvements

- Install zone metering to improve monitoring of and reaction time to potential leaks and lost water. A cost-effective alternative may be ultrasonic meters.
- Consider installation of flow meters and pressure gauges at the pressure reducing vaults as well.
- Review efficiency of zone operations to determine if zones may be combined or operating pressures improved with changes to or addition of pressure reducing vaults.
- Initiate leak detection program for distribution system utilizing funding from NHDES sustainability grant program
- Inspect all storage tanks every 5 years
- Initiate Phase II of the Asset Management Program with additional tools including mobile aps and technology. Apply for funding in the fall of 2022
- Consider completing a rate analysis.
- Determine source requirements to meet future growth.

Capital Improvements

- Continue improvements to the distribution system including
 - Replacement of watermains in poor condition (based on repair history) or that are susceptible to water loss due to bleeders and shallow burial of pipe.
 - Watermain should be replaced with a minimum of four-inch diameter pipe.
 - Replacement should begin on the following streets; Bergamo, Aspen, Big Loop, Interlaken, Oak Ridge and Appenvel based on condition and the potential for growth
 - Continue removing bleeders from the system to reduce wasted water
- Booster Pump Stations should have any deficiency corrected and general structure upgrades should be completed.
- Although the controls for the booster stations have been maintained over the years, the structures themselves have not been replaced since installation and some are beyond their

- useful life
 - Consider upgrading the following buildings Chcorua, Summit, Jungfrau and Muddy Booster Stations
 - Consider Backup power at booster stations
- Improve SCADA system.
- Storage tanks that are in fair condition and should be replaced include 5000-gallon tanks at Chocorua, 10,000- and 30,000-gallon tanks at Summit, and 5000 gallons at Jungfrau.

Rate Increases should be considered at 2-3% per year to cover the cost of loan repayments. This will cover a 3% inflation increase in the operating budget along with the expenditure of approximately \$200,000 per year for capital projects from reserve funds, to be supplemented with grant funds.

This program should be used as a guide to keep moving the improvement work forward and keep the rates at an appropriate level to complete necessary improvements and maintenance rather than allow components to outlive their useful life and fall into deferred maintenance. It is important to manage the system as a business that strives to satisfy its customers and implement rates that cover the true cost of operating the \$23.2 million asset.

11. Appendices

Appendix A Financial Data

Appendix B Capital Improvement Plan All Assets

Appendix C Asset Data Tables

Appendix D System Maps

Appendix E Hydraulic Model

Appendix F Communication Brochure

Appendix G Pump House Data Sheets

Appendix H Water Use Summary

Appendix I Consumer Confidence Report

Appendix J Customer by Zone

Appendix A Financial Data

**** PRE-AUDIT ****

VDOE 2020 Proposed

Page 1 of 3

	Operations/Hwy Budget			Water Budget			Combined Water/Hwy				
	Budget 2019	Expended 2019	2020 Proposed	Budget 2019	Expended 2019	2020 Proposed	Budget 2019	Expended 2019	Combined Proposed	% Change To Budget	
EXECUTIVE											
Salaries -Officers	12,200	4,375.00	12,200	2,160	375	2,160	14,360	4,750.00	14,360	0%	
ADMINISTRATION											
Salary	42,812	44,717.10	34,000	7,555	6,975.50	6,000	50,367	51,692.60	40,000	-21%	
Bonus	2,125	10,000	850	375		150	2,500	10,000.00	1,000	-60%	
Supplies	1,367	480.25	510	240	65.12	90	1,607	545.37	600	-63%	
Printing/Dues/Ads	3,400	4,989.29	4,675	600	813.37	825	4,000	5,802.66	5,500	38%	
Equipment & Maint.	305	1,863.70	425	55	282.13	75	360	2,145.83	500	39%	
Travel/Conference	25		85	5		15	30	0.00	100	233%	
Audit	4,250	3,910.00	4,250	750	690	750	5,000	4,600.00	5,000	0%	
Telecommunications	1,372	592.2	850	243	104.51	150	1,615	696.71	1,000	-38%	
Safety	500	266.66	2,550			450	500	266.66	3,000	500%	
Totals	56,156	66,819.20	48,195	9,823	8,930.63	8,505	65,979	75,749.83	56,700	-14%	
LEGAL EXPENSE											
	3,060	2,889.26	4,250	540	509.87	750	3,600	3,399.13	5,000	39%	
EMPLOYEE BENEFITS											
Med/diabil Insurance	48,990	46,155.46	34,000	8,645	6,604.34	-	57,635	52,759.80	34,000	-41%	
Soc Security	12,768	14,349.74	10,200	2,253	690.62	1,800	15,021	15,040.36	12,000	-20%	
Workers Comp	4,231	2,434.33	4,250	749	429.59	750	4,980	2,863.92	5,000	0%	
Unemploy Insurance	1,471		-	259		-	1,730	0.00	-	-100%	
NH Retirement	15,450	25,939.08	13,000	824	759.04	-	16,274	26,698.12	13,000	-20%	
subtotals	82,910	88,878.61	61,450	12,730	8,483.59	2,550	95,640	97,362.20	64,000	-33%	
GEN GOV BLDGS											
Bldgs & Grounds	3,825	7,119.80	7,950	675	334.63	1,200	4,500	7,454.43	9,150	103%	
Heating (Propane)	9,225	8,179.29	8,500	1,275	1,201.40	1,500	10,500	9,380.69	10,000	-5%	
Electricity	2,975	2,251.75	3,400	525	397.37	600	3,500	2,649.12	4,000	14%	
Telephone	1,339	1097.57	510	236	193.71	90	1,575	1,291.28	600	-62%	
Engineering	510		2,250	90	249.5	750	600	249.45	3,000	400%	
subtotals	17,874	18,648.41	22,610	2,801	2,376.56	4,140	20,675	21,024.97	26,750	29%	

Operations/Hwy Budget

Water Budget

Combined Water/Hwy

	Budget 2019	Expended 2019	2020 Proposed		Budget 2019	Expended 2019	2020 Proposed		Budget 2019	Expended 2019	Combined Proposed	Change to 2019
INSURANCE												
Prop- Liability Ins	35,700	33,578.70	37,400		6,300	5,925.65	6,600		42,000	39,504.35	44,000	5%
Prop Damage Ded	1,000	0.00	850		-		150		1,000	0.00	1,000	0%
subtotals	36,700	33,578.70	38,250		6,300	5,925.65	6,750		43,000	39,504.35	45,000	5%

BONDS -Principal

Oak Ridge	29,264	29,980.43	32,000		-		-		29,264	29,980.43	32,000	9%
Jung Frau Main	7,341	7,622.38	4000		7,341	7,622.38	4,000		14,682	15,244.76	8,000	-46%
Grader Lease	24,492	25,222.95	26,000		-		-		24,492	25,222.95	26,000	6%
Terra Star	21,906	11,219.00							21,906	11,219.00		-100%
Reinach Tank			50,000		-	0	-				50,000	
Water Tank Loan	-						-				-	
subtotals	83,003	74,044.76	112,000		7,341	7,622.38	4,000		90,344	81,667.14	116,000	28%

BONDS -Interest

Oak Ridge	4,736	3,697.65	3,300		-		-		4,736	3,697.65	3,300	-30%
Jung Frau Main	720	435.66	300		720	435.66	300		1,440	871.32	600	-58%
Grader Lease	4,736	4,003.17	3,300		-		-		4,736	4,003.17	3,300	-30%
Terra Star	2,092	779.63							2,092	779.63		-100%
Reinach Tank			19,000		-		-		19,000		19,000	0%
2018-Water Tank Loan					7,000	2542.20	7,500		7,000	2,542.20	7,500	7%
subtotals	12,284	8,916.11	25,900		7,720	2977.86	7,800		20,004	11,893.97	33,700	68%

REGION ASSOC

	1,020	1,026.80	1,020		180	181.2	180		1,200	1,208.00	1,200	0%
--	-------	----------	-------	--	-----	-------	-----	--	-------	----------	-------	----

MISC/TRNG/CKLIST

	1,020	988.55	1,020		180		180		1,200	988.55	1,200	0%
--	-------	--------	-------	--	-----	--	-----	--	-------	--------	-------	----

HWYS & STREETS

Full Time Staff	85,490	89,649.78	95,000		0	0	-		85,490	89,649.78	95,000	11%
Bonus	3,500	73.34	3,500		0	0	-		3,500	73.34	3,500	0%
Part Time Staff	12,000	19,687.50	20,000		0	0	-		12,000	19,687.50	20,000	67%
On Call Comp	2,600	3,150.00	2,600		0	0	-		2,600	3,150.00	2,600	0%
Overtime	13,000	11,352.82	13,000		0	0	-		13,000	11,352.82	13,000	0%
subtotals	116,590	123,913.44	134,100						116,590	123,913.44	134,100	15%

EQUIP & MAINT

Repairs/Maint/Supplies	29,000	82,049.92	40,000		0	0			29,000	82,049.92	40,000	38%
Fuel	16,775	14,149.86	18,000		0	0			16,775	14,149.86	18,000	7%
Tools & Equipment	830	1509.59	1000		0	0			830	1,509.59	1,000	20%
Comm Equip/Repairs	1,200	1058.91	1200		0	0			1,200	1,058.91	1,200	0%
subtotals	47,805	98,768.28	60,200						47,805	98,768.28	60,200	26%

	Operations/Hwy Budget			Water Budget			Combined Water/Hwy			
	Budget 2019	Expended 2019	2020 Proposed	Budget 2019	Expended 2019	2020 Proposed	Budget 2019	Expended 2019	Combined Proposed	Change to 2019

ROADS

Salt	24,000	10,681.62	22,000	0	0		24,000	10,681.62	22,000	-8%
Sand	17,000	14,400.00	17,000	0	0		17,000	14,400.00	17,000	0%
Culverts	3,000	932.54	6,000	0	0		3,000	932.54	6,000	100%
Gravel(maintnce)	15,000	13,594.37	15,000	0	0		15,000	13,594.37	15,000	0%
Asphalt(maint)	5,000	5820.4	17,000	0	0		5,000	5,820.40	17,000	240%
Engineer/Consultant	1,000	0	5,000	0	0		1,000	0.00	5,000	400%
Dust Control/Other	1,500	2116.62	2,200	0	0		1,500	2,116.62	2,200	47%
Line Painting	300	335	-	0	0		300	335.00	-	-100%
Subcontract Equipmnt	3,000	3320.62	3,000	0	0		3,000	3,320.62	3,000	0%
subtotals	69,800	51,201.17	87,200				69,800	51,201.17	87,200	25%

Street Lighting	1,600	1,580.75	2,000	0	0		1,600	1,580.75	2,000	25%
Parks & Recreation	10,500	4,547.91	10,000	0	0		10,500	4,547.91	10,000	-5%
TAN Interest	595	406.71	350	105	0		700	406.71	350	-50%
Asset Mngmnt	425			75	0		500	0.00	-	-100%

WaterServices

Electricity	0	0		27,000.00	26,063.81	30,000	27,000	26,063.81	30,000	11%
Testing	0	0		6,500.00	3,766.00	6500	6,500	3,766.00	6,500	0%
Repairs	0	0		45,000.00	62,102.21	50,000	45,000	62,102.21	50,000	11%
Treatment	0	0		5,000.00	2,714.40	5000	5,000	2,714.40	5,000	0%
Engineering	0	0		25,000.00	21,571.30	15,000	25,000	21,571.30	15,000	-40%
Water Monitoring	0	0		18,000.00	16,500.00	19800	18,000	16,500.00	19,800	10%
Heat (propane)	0	0		1,600.00	708.01	1600	1,600	708.01	1,600	0%
Telemetry SCADA	0	0		5,700.00	2,974.99	6000	5,700	2,974.99	6,000	5%
subtotals	0	0		133,800.00	136,400.72	133,900	133,800	136,400.72	133,900	0%

GRAND TOTALS

Operations/Highway Budget			Water Budget			Combined Water/Highway/Operations			
Budget 2019	Expended 2019	2020 Proposed	Budget 2019	Expended 2019	2020 Proposed	Budget 2019	Expended 2019	2020 Proposed	2020 Proposed Increase
553,542.00	580,583.66	620,745.00	183,755.00	173,783.46	170,915.00	737,297.00	754,367.12	791,660.00	7%

**** PRE-AUDIT ****

Proposed 2021 Budgets

2020 Actual

12/31/2020

Page 1 of 3

		Operations/Hwy Budget				Water Budget				Combined Water/Hwy			
		Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended
EXECUTIVE													
1	Salaries -Officers	12,200	12,089	12,200	111	2,160	2,036	2,160	124	14,360	14,125	14,360	235
ADMINISTRATION													
2	Salary	32,300	26,855	27,200	345	6,000	3,758	4,800	1,042	38,300	30,613	32,000	1,387
3	Bonus	850	723	850	128	150	128	150	22	1,000	851	1,000	150
	Acct Consultant/payroll			3,400	3,400			600	600			4,000	4,000
4	Supplies/Merc Fees	1,500	672	1,200	528	90	49	80	31	1,590	721	1,280	559
5	Printing/Dues/Ads	4,983	3,871	1,700	(2,171)	825	730	300	(430)	5,808	4,601	2,000	(2,601)
6	Equipment & Maint.	425	2,775	680	(2,095)	75	487	120	(367)	500	3,262	800	(2,462)
7	Travel/Conference	85	93	85	(8)	15	16	15	(1)	100	109	100	(9)
8	Audit	4,250	4,037	5,800	1,763	750	712	1,100	388	5,000	4,749	6,900	2,151
9	Telecommunications	850	0	500	500	150		150	150	1,000	0	650	650
10	Safety	1,200	204	200	(4)	450	93	100	7	1,650	297	300	3
11	subtotals	46,443	39,230	41,615	2,386	8,505	5,973	7,415	1,442	54,948	45,203	49,030	3,828
12	LEGAL EXPENSE	6,450	9,008	6,450	(2,558)	750	6,929	750	(6,179)	7,200	15,937	7,200	(8,737)
EMPLOYEE BENEFITS													
13	Med/diabil Insurance	34,000	28,324	39,600	11,276	-	-	-	-	34,000	28,324	39,600	11,276
14	Soc Security	11,300	13,394	13,645	251	1,800	523	540	17	13,100	13,917	14,185	268
15	Workers Comp	4,250	4,111	4,900	789	750	725	200	(525)	5,000	4,836	5,100	264
16	Unemploy Insurance	-	-5,301	1,600	6,901	-	-	-	-	0	-5,301	1,600	6,901
17	NH Retirement	14,000	12,632	17,328	4,696	-	-	-	-	14,000	12,632	17,328	4,696
18	subtotals	63,550	53,160	77,073	23,913	2,550.00	1,248.00	740.00	(508.00)	66,100	54,408	77,813	23,405
GEN GOV BLDGS													
19	Bldgs & Grounds	15,000	9,470	15,000	5,530	1,200	1,959	3,500	1,541	16,200	11,429	18,500	7,071
20	Heating (Propane)	8,500	5,583	7,500	1,917	1,500	1,254	1,200	(54)	10,000	6,837	8,700	1,863
21	Electricity	3,000	2,714	2,500	(214)	600	1,817	1,800	(17)	3,600	4,531	4,300	(231)
22	Telephone	510	294	350	56	90	52	60	8	600	346	410	64
23	Engineering	2,250		2,000	2,000	750	250	750	500	3,000	250	2,750	2,500
24	subtotals	29,260	18,061	27,350	9,289	4,140.00	5,332	7,310	1,978	33,400.00	23,393	34,660	11,267
INSURANCE													
25	Prop- Liability Ins	37,400	38,339	39,100	761	6,600	6,766	6,900	134	44,000	45,105	46,000	895
26	Prop Damage Ded	850	0	850	850	150		150	150	1,000	0	1,000	1,000
	subtotals	38,250	38,339	39,950	1,611	6,750	6,766	7,050	284	45,000	45,105	47,000	1,895

		Operations/Hwy Budget				Water Budget				Combined Water/Hwy			
		Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended
BONDS -Principal													
27	Oak Ridge	32,000	30,545	30,545	-	-	-	-	-	32,000	30,545	30,545	-
28	Jung Frau Main	4,000	3,946	0	(3,946)	4,000	3,946	0	(3,946)	8,000	7,892	-	(7,892)
29	Grader Lease	26,000	25,977	25,977	-	-	-	-	-	26,000	25,977	25,977	-
30	Truck 2019	-	0	7,300	7,300	-	-	-	-	0	0	7,300	7,300
31	Reinach Tank	-	-	10,143	10,143	-	-	-	-	0	-	10,143	10,143
32	Water Tank Loan	-	-	0	-	-	-	12,485	12,485	0	-	12,485	12,485
33	subtotals	62,000	60,468	73,965	13,497	4,000	3,946.00	12,485	8,539	66,000	64,414	86,450	22,036
BONDS -Interest													
34	Oak Ridge	3,300	3,133	3,133	-	-	-	-	-	3,300	3,133	3,133	-
35	Jung Frau Main	300	34	0	(34)	300	34.00	0	(34)	600	68	-	(68)
36	Grader Lease	3,300	3,249	3,249	-	-	-	-	-	3,300	3,249	3,249	-
37	Truck 2019	1,212	0	4,200	4,200	-	-	-	-	1,212	0	4,200	4,200
38	Reinach Tank	-	-	7,345	7,345	-	-	-	-	0	-	7,345	7,345
39	2018-Water Tank Loan	-	-	-	-	7,500	5,089.00	4,715	(374)	7,500	5,089	4,715	(374)
40	subtotals	8,112	6,416	17,927	11,511	7,800	5,123.00	4,715	(408)	15,912	11,539	22,642	11,103
41	Region Assoc	1,020	1,877	1,900	23	180	37	50	13	1,200	1,914	1,950	36
42	Misc/Traing/Ckllst	1,020	921	1,000	79	180		100	100	1,200	921	1,100	179
HWYS & STREETS													
43	Full Time Staff	98,000	97,799	99,000	1,201	0	0	-	-	98,000	97,799	99,000	1,201
44	Bonus	3,500	4,000	3,500	(500)	0	0	-	-	3,500	4,000	3,500	(500)
45	Part Time Staff	18,000	17,337	18,000	663	0	0	-	-	18,000	17,337	18,000	663
46	On Call Comp	2,600	3,250	3,000	(250)	0	0	-	-	2,600	3,250	3,000	(250)
47	Overtime	13,750	11,959	13,750	1,791	0	0	-	-	13,750	11,959	13,750	1,791
48	subtotals	135,850	134,345	137,250	2,905					135,850	134,345	137,250	2,905
EQUIP & MAINT													
49	Repairs/Maint/Supplies	45,840	26,603	32,000	5,397	0	0	-	-	45,840	26,603	32,000	5,397
50	Fuel	15,000	8,861	12,000	3,139	0	0	-	-	15,000	8,861	12,000	3,139
51	Tools & Equipment	4,000	9,201	3,000	(6,201)	0	0	-	-	4,000	9,201	3,000	(6,201)
52	Comm Equip/Repairs	1,200	938	1,000	62	0	0	-	-	1,200	938	1,000	62
53	subtotals	66,040	45,603	48,000	2,397					66,040	45,603	48,000	2,397
Roads													
54	Salt	18,000	12,269	15,000	2,731	0	0	-	-	18,000	12,269	15,000	2,731
55	Sand	17,000	6,492	8,000	1,508	0	0	-	-	17,000	6,492	8,000	1,508
56	Culverts	6,000	3,922	6,000	2,078	0	0	-	-	6,000	3,922	6,000	2,078
57	Gravel(maintnce)	15,000	10,941	15,000	4,059	0	0	-	-	15,000	10,941	15,000	4,059
58	Asphalt(maint)	17,000	16,000	17,000	1,000	0	0	-	-	17,000	16,000	17,000	1,000
59	Engineer/Consultant	5,000	655	5,000	4,345	0	-	-	-	5,000	655	5,000	4,345
60	Dust Control/Other	2,200	5,133	4,400	(733)	0	0	-	-	2,200	5,133	4,400	(733)
61	Line Painting	-	15	15	-	0	0	-	-	0	15	15	-
62	Subcontract Equipmnt	3,000	1,091	3,000	1,909	0	0	-	-	3,000	1,091	3,000	1,909
63	subtotals	83,200	56,518	73,415	16,897					83,200	56,518	73,415	16,897

	Operations/Hwy Budget				Water Budget				Combined Water/Hwy			
	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended
64 Street Lighting	2,000	1,718	1,600	(118)	0	0			2,000	1,718	1,600	(118)
65 Parks & Recreation	4,995	4,723	5,000	277	0	0			4,995	4,723	5,000	277
66 TAN Interest	350	0		-	0	0			350	0	-	-
67 Asset Mngmnt	-	0	-	-	0	0	0	-	0	0	-	-

WaterServices												
	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended
68 Electricity	0	0			30,000	27,031	27,500	469	30,000	27,031	27,500	469
69 Testing	0	0			6,500	6,260	7,900	1,640	6,500	6,260	7,900	1,640
70 Repairs	0	0			50,000	40,044	45,000	4,956	50,000	40,044	45,000	4,956
71 Treatment	0	0			5,000	2,715	5,000	2,285	5,000	2,715	5,000	2,285
72 Engineering	0	0			15,000	15,810	7,500	(8,310)	15,000	15,810	7,500	(8,310)
73 Water Monitoring	0	0			19,800	21,300	19,800	(1,500)	19,800	21,300	19,800	(1,500)
74 Heat (propane)	0	0			1,600	129	1,600	1,471	1,600	129	1,600	1,471
75 Telemetry SCADA	0	0			6,000	4,897	6,000	1,103	6,000	4,897	6,000	1,103
subtotals	0	0			133,900	118,186	120,300	2,114	133,900	118,186	120,300	2,114

GRAND TOTALS												
Operations/Highway Budget				Water Budget				Combined Water/Highway/Operations				
Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff from Expended	Budget 2020	Expended 2020	2021 Proposed	Diff From Expended	
560,740	482,476	564,695	82,220	170,915	155,576	163,075	7,499	731,655	638,052	727,770	89,719	

2020 Warrant Articles	Appropriated	Spent
Tight Tank	17,153	17,648
Summit Electrical	30,400	13,384
DPWI Electrical	77,448	37,417
Chocorua PH	31,000	26,782
New Truck	108,000	101,003
Burgdorf Culvert	13,000	11,022
Eidelweiss Paving	5,000	0

Other Offsetting Income	
RHM Dust Control	1875
Property Owner Culvert	950
TOTAL	2,825

Village District of Edelweiss
Water Budget Profit & Loss Budget vs. Actual

		January 1 through December 13, 2021		
Proposed Budget for 2022		Jan 1 - Dec 13, 21	Budget	2022 Budget
Expense				
4196.00 · Insurance				
	4196.81 · Insurance -Water Svcs-Prop Liab	5,379.15	6,900.00	8,000.00
	4196.83 · Ins - Wtr Svcs - Prop Damage	0.00	150.00	150.00
Total 4196.00 · Insurance		5,379.15	7,050.00	8,150.00
4332.00 · Water Services				
	(new) Full Time Admin		0.00	7,500.00
	4332.07 Water Svcs - Admin Bonus	127.50	150.00	150.00
	4332.08 Water Svcs - DPW Salary PT	240.00	0.00	500.00
	4332.09 · Water Svcs - Executive - Salary	2,497.50	2,160.00	2,500.00
	4332.10 · Water Svcs - Fin Admin - Hourly	4,230.10	4,800.00	3,000.00
	4332.11 · Water Svcs - Fin Admin - Audit	750.00	1,100.00	4,450.00
	4332.12 · Water Svcs -Fin Admin- Supplies	514.23	80.00	550.00
	4332.13 · Water Svc -Fin Admin-Print/Advt	685.17	300.00	650.00
	4332.14 · Water Svcs-FinAdm-Travel/Traing	0.00	15.00	100.00
	4332.15 · Water Svcs -Fin Admin - Telecom	0.00	150.00	1.00
	4332.16 · Water Svc-Fin Admin-Equip&Maint	85.92	120.00	120.00
	4332.17 · Water Services - Admin - Safety	21.45	100.00	100.00
	4332.19 · Water Svcs-Support Svcs/Pyrll	345.01	600.00	1,000.00
	4332.20 · Water Svcs - Ee Ben - FICA	0.00	540.00	450.00
	4332.21 · Water Svcs- Ee Ben- Worker Comp	404.37	200.00	405.00
	4332.22 · Water Svcs -Ee Ben- UnemployIns	-271.56	0.00	300.00
	4332.23 · Water Svcs - Ee Ben - NH Retire	0.00	0.00	1,050.00
	4332.24 · Water Svcs - Ee Ben - Med/Dis	0.00	0.00	3,150.00
	4332.60 · Water Svcs - GG-Bldngs & Grnds	837.50	3,500.00	1,200.00
	4332.61 · Water Svcs - GG-Heating	1,013.90	1,200.00	1,200.00
	4332.62 · Water Svcs -GG- Electricity	1,792.75	1,800.00	1,900.00
	4332.63 · Water Svcs -GG-Telephone	74.01	60.00	85.00
	4332.64 · Water Svcs - GG- Engineering	0.00	750.00	2,000.00
	4332.65 · Water Svcs - GG-Misc/Contngcy	316.45	100.00	350.00
	4332.66 · Water svcs - GG-Region Assoc	424.85	50.00	100.00
	4332.67 Water Svcs - GG- Equipment Use	960.00	0.00	2,000.00
	4332.68 Water Svcs - Gravel	140.00	0.00	300.00
	4332.69 Water Svcs - Merchant Fees	32.09	0.00	50.00
	4332.71 · Water svcs - PH-Heating	782.48	1,600.00	850.00
	4332.72 · Water svcs - PH-Electricity	24,021.87	27,500.00	27,500.00
	4332.74 · Water svcs -PH-Engineering	0.00	7,500.00	2,500.00
	4332.76 · Water Svcs -PH-Monitoring	18,150.00	19,800.00	19,800.00
	4332.78 · Water svcs -PH-Testing	5,537.00	7,900.00	5,500.00
	4332.79 · Water svcs -PH-Repairs	24,516.04	45,000.00	45,000.00
	4332.80 · Water svcs - PH-Telemetry Syste	1,352.84	6,000.00	3,000.00
	4332.81 Water Svcs - New Water Hook-ups	15,059.76	0.00	
	4332.90 · Water Svcs - Legal	385.77	750.00	750.00

Village District of Edelweiss
Water Budget Profit & Loss Budget vs. Actual

		January 1 through December 13, 2021		
Proposed Budget for 2022		Jan 1 - Dec 13, 21	Budget	2022 Budget
	4332.91 · Asset Managment	4,917.23	0.00	10,000.00
	4332.93 · Admin Bonus	0.00	150.00	150.00
	4332.00 · Water Services - Other	0.00	0.00	0.00
Total 4332.00 · Water Services		109,944.23	133,975.00	142,061.00
	4335.00 · Water Treatment	7,860.34	5,000.00	8,000.00
	4711.00 · Principal - Long Term Bonds			
	4711.09 · Water Tank LOC 2018 Principal	5,614.65	12,485.00	13,000.00
Total 4711.00 · Principal - Long Term Bonds		5,614.65	12,485.00	13,000.00
	4721.00 · Interest - Long Term Bonds			
	4721.09 · Water Tank LOC 2018 Interest	6,846.09	4,715.00	5,500.00
Total 4721.00 · Interest - Long Term Bonds		6,846.09	4,715.00	5,500.00
	4904.00 · Other Improvements			
	4904.05 · Extension Fund Expenses	0.00	0.00	0.00
	4904.14 · WA 16 2018 Muddy Beach Phase 2	0.00	0.00	0.00
	4904.16 · WA 3 2019 Reinach Tank replace	0.00	0.00	0.00
	4904.17 · WA 15 2019 Upper Lakeview PRV	0.00	0.00	0.00
	4904.00 · Other Improvements - Other	0.00	0.00	0.00
Total 4904.00 · Other Improvements		0.00	0.00	0.00
Total Expense		135,644.46	163,225.00	176,711.00
	CRF Withdrawal to offset Hook-ups	(13,349.00)		
	CRF Withdrawal for Asset Management	(4,917.23)		
	2021 Expenditures as of 1-12-2022	117,378.23		

Appendix B Capital Improvement Plan All Assets



**Village District of Eidelweiss
Capital Improvement Plan All Assets
May 2022**

Asset Description (Name)	Intersection	Consequence of Failure	Probability of Failure	Risk Level	Urgency	Replacement Cost	Asset Type	Length	Unit Cost
C - Pump Station Building	CHOCORUA	8.8	8.0	4.00	Priority for YR 1-10 Capital Improvement Plan	\$30,000.00	Pump Station		
BERGAMO (6")	Schwyz to Waldsbütt	8.3	6.0	4.00		\$216,777.50	Distribution	867.11	250
ASPEN (TOP-DOWN)	New Line	7.3	6.0	4.00		\$146,885.00	Distribution	587.54	250
BIG LOOP (6")	Altdore to Interlaken	7.3	6.0	4.00		\$174,640.00	Distribution	698.56	250
INTERLAKEN CIRCLE	Porridge Shore to Big Loop	7.3	6.0	4.00		\$201,015.00	Distribution	804.06	250
INTERLAKEN CIRCLE (MIDDLE SHO	Middle Shore to Altdore	7.3	6.0	4.00		\$216,367.50	Distribution	865.47	250
OAK RIDGE (3")	Eidelweiss to Oak Ridge PS	6.3	6.0	4.00		\$390,372.50	Distribution	1561.49	250
WINNINGON (GRACHEN)	Grachen to the North	6.3	6.0	4.00		\$192,280.00	Distribution	769.12	250
APPENVEL (2")	Deadend West of Aspen to L	6.3	6.0	4.00		\$654,327.50	Distribution	2617.31	250
APPENVEL (3")	Lugano towards Thusis	6.3	6.0	4.00		\$138,122.50	Distribution	552.49	250
ASPEN (BOT - UP)		6.3	6.0	4.00		\$292,422.50	Distribution	1169.69	250
BLINDEN (BERGAMO)		6.3	6.0	4.00		\$120,875.00	Distribution	483.5	250
BRENNER		6.3	6.0	4.00		\$237,535.00	Distribution	950.14	250
FORCLAZ		6.3	6.0	4.00		\$333,440.00	Distribution	1333.76	250
DPW - Electrical/Pump Controls	DPW	6.2	8.0	3.00	Priority for YR 10-15 Capital Improvement Plan	\$40,000.00	Source		
DPW WELL	DPW WELL 1	6.2	8.0	3.00		\$40,000.00	Source		
DPW WELL PUMP	DPW WELL 1	6.2	8.0	3.00		\$10,000.00	Source		
S - Storage Tank	SUMMIT	6.2	6.0	3.00		\$10,000.00	Storage		
S - Storage Tank (10,000)	SUMMIT	5.8	10.0	3.00		\$20,000.00	Storage		
S - Electrical/Pump Controls	SUMMIT	5.6	6.0	3.00		\$50,000.00	Pump Station		
S - Pump Station Building	SUMMIT	5.6	10.0	3.00		\$60,000.00	Pump Station		
J - Storage Tank	JUNGFRAU	5.5	10.0	3.00		\$10,000.00	Storage		
J - Booster Station Building	JUNGFRAU	4.9	5.0	3.00		\$45,000.00	Pump Station		
M - Electrical/Pump Controls	MUDDY	4.6	8.0	3.00		\$50,000.00	Pump Station		
M - Process Piping & Appurtenanc	MUDDY	4.6	8.0	3.00		\$5,000.00	Pump Station		
M - Pump Station Building	MUDDY	4.6	6.0	3.00		\$45,000.00	Pump Station		
O - Electrical/Pump Controls	OAK	4.5	8.0	3.00		\$50,000.00	Pump Station		
O - Hydroneumatic Tank	OAK	3.4	10.0	3.00		\$5,000.00	Storage		
LUCERN		0.6	6.0	3.00	\$305,985.00	Distribution	1223.94	250	
UPPER LAKEVIEW		0.6	6.0	3.00	\$423,032.50	Distribution	1692.13	250	
EIDELWEISS		10.0	5.0	2.00	\$1,781,785.00	Distribution	7127.14	250	
ASPEN-REINACH(CC)		9.3	5.0	2.00	\$107,182.50	Distribution	428.73	250	
JUNGFRAU (THUSIS-DOWN)		9.3	5.0	2.00	\$140,675.00	Distribution	562.7	250	
LINE FROM RT 113 TO		9.3	5.0	2.00	\$1,853,380.00	Distribution	7413.52	250	

Asset Description (Name)	Intersection	Consequence of Failure	Probability of Failure	Risk Level	Urgency	Replacement Cost	Asset Type	Length	Unit Cost
REINACH PLACE		9.3	5.0	2.00	Monitor	\$164,505.00	Distribution	658.02	250
REINACH-ASPEN (CC)		9.3	5.0	2.00		\$234,965.00	Distribution	939.86	250
S - Air Compressor	SUMMIT	9.2	0.6	2.00		\$2,000.00	Pump Station		
S - Booster Pump 2	SUMMIT	9.2	0.6	2.00		\$4,000.00	Pump Station		
LINE FROM RT 113 TO		8.7	5.0	2.00		\$284,175.00	Distribution	1136.7	250
DPW - Heater	DPW	8.5	4.0	2.00		\$2,000.00	Source		
MUDDY WELL 2	MUDDY WELL FIELD	8.5	3.0	2.00		\$40,000.00	Source		
MUDDY WELL 2 PUMP	MUDDY WELL FIELD	8.5	3.0	2.00		\$3,000.00	Source		
DPW - Chemical Feed Piping & A	DPW	8.5	2.0	2.00		\$3,000.00	Source		
DPW - Containment Pallet	DPW	8.5	2.0	2.00		\$500.00	Source		
O - Booster Pump 2	OAK	8.5	0.6	2.00		\$4,000.00	Pump Station		
O - Process Piping & Appurtenand	OAK	8.5	0.6	2.00		\$5,000.00	Pump Station		
DPW - Chemical Day Tank	DPW	8.5	0.1	2.00		\$500.00	Source		
MUDDY WELL 1 PUMP	MUDDY WELL FIELD	8.5	0.1	2.00		\$10,000.00	Source		
DPW - Chemical Bulk Tank (Caus	DPW	8.5	0.1	2.00		\$2,000.00	Source		
OAK HILL (SUMMIT)		8.3	5.0	2.00		\$141,282.50	Distribution	565.13	250
OAK RIDGE (SUMMIT)		8.3	5.0	2.00		\$83,127.50	Distribution	332.51	250
O - Booster Pump 1	OAK	8.0	4.8	2.00		\$4,000.00	Pump Station		
DPW - SCADA	DPW	8.0	3.5	2.00		\$10,000.00	Source		
C - Storage Tank	CHOCORUA	8.0	1.8	2.00		\$10,000.00	Storage		
C - Electrical/Pump Controls	CHOCORUA	8.0	1.1	2.00		\$50,000.00	Pump Station		
R - Booster Pump	REINACH	8.0	1.1	2.00		\$25,000.00	Pump Station		
R - Process Piping & Appurtenand	REINACH	8.0	1.1	2.00		\$5,000.00	Pump Station		
S - Storage Tank (30,000)	SUMMIT	8.0	0.1	2.00		\$60,000.00	Storage		
S - Booster Pump 1	SUMMIT	8.0	0.0	2.00		\$4,000.00	Pump Station		
LAKEVIEW		7.7	5.0	2.00		\$184,245.00	Distribution	736.98	250
ADELBODEN (4")	Bristenstock to Binsca	7.7	3.1	2.00		\$134,150.00	Distribution	536.6	250
BERGDORF (6")	Grandval to Konstanz	7.3	5.0	2.00		\$55,520.00	Distribution	222.08	250
BIASCA		7.3	5.0	2.00		\$58,170.00	Distribution	232.68	250
GRANDVAL		7.3	5.0	2.00		\$99,710.00	Distribution	398.84	250
BRISTENSTOCK		7.3	3.0	2.00		\$146,934.40	Distribution	459.17	320
BRISTENSTOCK		7.3	3.0	2.00		\$680,601.60	Distribution	2126.88	320
ALTDORF		7.3	1.1	2.00		\$71,905.00	Distribution	287.62	250
KLAUSEN		7.3	5.0	2.00		\$505,065.00	Distribution	2020.26	250
KONSTANZ		7.3	5.0	2.00		\$100,010.00	Distribution	400.04	250
OAK RIDGE (CLEMENS)		7.3	5.0	2.00		\$213,857.50	Distribution	855.43	250
C - Booster Pump 1	CHOCORUA	6.9	0.4	2.00		\$4,000.00	Pump Station		
C - Booster Pump 2	CHOCORUA	6.9	0.4	2.00		\$4,000.00	Pump Station		
C - Process Piping & Appurtenand	CHOCORUA	6.9	0.4	2.00		\$5,000.00	Pump Station		
BERGDORF (4")	Midway between Konstanz a	6.7	5.0	2.00		\$137,090.00	Distribution	548.36	250
GENEVA		6.7	5.0	2.00	\$184,642.50	Distribution	738.57	250	

Asset Description (Name)	Intersection	Consequence of Failure	Probability of Failure	Risk Level	Urgency	Replacement Cost	Asset Type	Length	Unit Cost
GRACHEN (4")	Aspen to Winnigon	6.7	5.0	2.00	High	\$333,555.00	Distribution	1334.22	250
M - Booster Pump 1	MUDDY	6.4	0.6	2.00		\$10,000.00	Pump Station		
ADELBODEN (2")	Binsca to Deadend	6.3	5.0	2.00		\$129,450.00	Distribution	517.8	250
ALPENHOF		6.3	5.0	2.00		\$128,720.00	Distribution	514.88	250
BERGAMO (2")	Dorfli to Porridge Shore	6.3	5.0	2.00		\$145,675.00	Distribution	582.7	250
BERGDORF (2")	Konstanz towards Aspen	6.3	5.0	2.00		\$106,930.00	Distribution	427.72	250
BLINDEN (INTERLAKEN)		6.3	5.0	2.00		\$327,817.50	Distribution	1311.27	250
CHOCORUA VIEW		6.3	5.0	2.00		\$466,375.00	Distribution	1865.5	250
DIESSBACH		6.3	5.0	2.00		\$254,415.00	Distribution	1017.66	250
GRACHEN (2")	Winnigon to Eidelweiss	6.3	5.0	2.00		\$239,965.00	Distribution	959.86	250
GRISON		6.3	5.0	2.00		\$470,087.50	Distribution	1880.35	250
ISLAND		6.3	5.0	2.00		\$154,660.00	Distribution	618.64	250
JUNGFRAU		6.3	5.0	2.00		\$296,005.00	Distribution	1184.02	250
LITTLE LOOP (LEFT)		6.3	5.0	2.00		\$163,077.50	Distribution	652.31	250
LITTLE LOOP (RIGHT)		6.3	5.0	2.00		\$62,545.00	Distribution	250.18	250
OAK RIDGE (PORIDGE VIEW)		6.3	5.0	2.00		\$172,135.00	Distribution	688.54	250
PORRIDGE VIEW		6.3	5.0	2.00		\$104,327.50	Distribution	417.31	250
PRESIDENTAIL VIEW		6.3	5.0	2.00		\$289,812.50	Distribution	1159.25	250
ST MORITZ (BASAL)		6.3	5.0	2.00		\$191,292.50	Distribution	765.17	250
ST MORITZ (COMO)		6.3	5.0	2.00		\$302,445.00	Distribution	1209.78	250
J - Electrical/Pump Controls	JUNGFRAU	6.0	4.0	2.00		\$50,000.00	Pump Station		
WINNINGON (EIDELWEISS)	Eidelweiss to the South	5.7	5.0	2.00		\$126,835.00	Distribution	507.34	250
RT 113		5.3	5.0	2.00		\$32,905.00	Distribution	131.62	250
SHORE DRIVE		5.3	5.0	2.00		\$177,380.00	Distribution	709.52	250
THUSIS (2")	Eidelweiss to Appenvel	5.3	5.0	2.00	\$76,850.00	Distribution	307.4	250	
VISP		5.3	5.0	2.00	\$61,497.50	Distribution	245.99	250	
WALDSBUT (SHORE DRIVE)		5.3	5.0	2.00	\$70,107.50	Distribution	280.43	250	
R - Storage Tank	REINACH	4.8	0.8	1.00	Low	\$240,000.00	Storage		
J - Booster Pump 2	JUNGFRAU	4.8	0.6	1.00		\$10,000.00	Pump Station		
J - Process Piping & Appurtenanc	JUNGFRAU	4.8	0.6	1.00		\$5,000.00	Pump Station		
J - Booster Pump 1	JUNGFRAU	4.8	0.6	1.00		\$10,000.00	Pump Station		
M - Storage Tank	MUDDY	4.6	0.6	1.00		\$10,000.00	Storage		
DPW - Chemical Feed Pump 1	DPW	3.0	0.6	1.00		\$1,500.00	Source		
DPW - Chemical Feed Pump 2	DPW	3.0	0.6	1.00		\$1,500.00	Source		
M - Booster Pump 2	MUDDY	2.8	4.0	1.00		\$10,000.00	Pump Station		
MUDDY WELL 1	MUDDY WELL FIELD	2.8	0.6	1.00		\$40,000.00	Source		
J - VFD	JUNGFRAU	2.0	4.0	1.00		\$5,000.00	Pump Station		
R - Booster Pump	REINACH	1.7	0.6	1.00		\$25,000.00	Pump Station		
R - Electrical/Pump Controls	REINACH	1.7	0.6	1.00		\$50,000.00	Pump Station		
M - VFD	MUDDY	1.4	0.6	1.00		\$5,000.00	Source		
O - Pump Station Building	OAK	1.1	0.8	1.00		\$35,000.00	Pump Station		

Asset Description (Name)	Intersection	Consequence of Failure	Probability of Failure	Risk Level	Urgency	Replacement Cost	Asset Type	Length	Unit Cost
R - Booster Station Building	REINACH	1.1	0.8	1.00	Routine Mainten	\$45,000.00	Pump Station		
BIG LOOP (8")	Eidelweiss to Altdore	0.8	5.0	1.00		\$84,590.00	Distribution	338.36	250
LITTLE SHORE (8")	Bergamo to Eidelweiss	0.8	5.0	1.00		\$489,067.50	Distribution	1956.27	250
MIDDLE SHORE (6")	Geneva to Interlaken	0.7	5.0	1.00		\$183,972.50	Distribution	735.89	250
THUSIS (6")	Eidelweiss to Jungfrau	0.7	5.0	1.00		\$96,655.00	Distribution	386.62	250
OAK RIDGE (4")	Oak Ridge PS to Presidentia	0.7	5.0	1.00		\$501,062.50	Distribution	2004.25	250
BARDEN		0.6	5.0	1.00		\$367,762.50	Distribution	1471.05	250
BASAL		0.6	5.0	1.00		\$76,647.50	Distribution	306.59	250
BERN		0.6	5.0	1.00		\$1,014,387.50	Distribution	4057.55	250
COMO		0.6	5.0	1.00		\$73,442.50	Distribution	293.77	250
HUTWILL		0.6	5.0	1.00		\$1,170,770.00	Distribution	4683.08	250
LITTLE SHORE (2")	Bergamo to Geneva	0.6	5.0	1.00		\$297,202.50	Distribution	1188.81	250
LUGANO		0.6	5.0	1.00		\$106,745.00	Distribution	426.98	250
MIDDLE SHORE (2")	Little Shore to Geneva	0.6	5.0	1.00		\$423,237.50	Distribution	1692.95	250
SCHWYZ		0.6	5.0	1.00		\$394,425.00	Distribution	1577.7	250
SALINS		0.5	5.0	1.00		\$143,965.00	Distribution	575.86	250
SARNEN		0.5	5.0	1.00		\$99,980.00	Distribution	399.92	250
DPW - Office Space	DPW	0.5	4.0	1.00		\$100,000.00	Other / Office		
						\$23,195,833.50			

Appendix C Asset Data Tables

Basic Information												Status and Condition				Cost and Maintenance			
Asset Description (Name)	Intersections	Asset Category	Asset Type	Main Size	Material	Linear Feet	Dead End	Blow-Off	Bleeder	AVG. Depth	Condition	Redundancy	Asset Status	Capacity	CoF	Can It Be Repaired?	Can It Be Rehabilitated?	Date (MM/DD/Y)	Expected Useful Life
ADELBODEN (2")	Binsca to Deadend	Other	Distribution/Collection Mains	2	PVC	517.8	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
ADELBODEN (4")	Bristenstock to Binsca	Other	Distribution/Collection Mains	4	PVC	536.6	Yes	Yes			Fair (Average)	0% - .0	Active	Fullsized	Major (8)	Yes	Yes	1/1/2020	90
ALPENHOF		Other	Distribution/Collection Mains	2		514.88	No				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
ALTDORF		Other	Distribution/Collection Mains	6	HDPE	287.62	Yes	Yes			Excellent	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/2020	90
APPENVEL (2")	Deadend West of Aspen to Lugano	Other	Distribution/Collection Mains	2	PVC	2617.31	Yes	Yes	Yes		Poor	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
APPENVEL (3")	Lugano towards Thusis	Other	Distribution/Collection Mains	3	PVC	552.49	Yes		Yes		Poor	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
ASPEN (BOT - UP)		Other	Distribution/Collection Mains	2		1169.69	Yes	Yes			Poor	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
ASPEN (TOP-DOWN)		Other	Distribution/Collection Mains	6	HDPE	587.54	Yes	Yes	Yes		Poor	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
ASPEN-REINACH(CC)		Other	Distribution/Collection Mains	6	HDPE	428.73	No				Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
BARDEN		Other	Distribution/Collection Mains	2		1471.05	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BASAL		Other	Distribution/Collection Mains	2		306.59	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BERGAMO (6")	Schwyz to Waldsbütt	Other	Distribution/Collection Mains	6	HDPE	582.7	No		Yes		Poor	0% - .0	Active	Fullsized	Major (8)	Yes	Yes	1/1/1987	90
BERGAMO (2")	Dorfli to Porridge Shore	Other	Distribution/Collection Mains	2		867.11	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BERGDORF (6")	Grandval to Konstanz	Other	Distribution/Collection Mains	6	PVC	427.72	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BERGDORF (2")	Konstanz towards Aspen	Other	Distribution/Collection Mains	2	PVC	548.36	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BERGDORF (4")	Midway between Konstanz and Aspen	Other	Distribution/Collection Mains	4	PVC	222.08	Yes	Yes			Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BERN		Other	Distribution/Collection Mains	2		4057.55	No	Yes			Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BIASCA		Other	Distribution/Collection Mains	6	PVC	232.68	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BIG LOOP (8")	Eidelweiss to Altdore	Other	Distribution/Collection Mains	8		698.56	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BIG LOOP (6")	Altdore to Interlaken	Other	Distribution/Collection Mains	6	HDPE	338.36	No				Poor	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BLINDEN (BERGAMO)		Other	Distribution/Collection Mains	2		483.5	Yes		Yes		Poor	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BLINDEN (INTERLAKEN)		Other	Distribution/Collection Mains	3		1311.27	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BRENNER		Other	Distribution/Collection Mains	2		950.14	Yes		Yes		Poor	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BRISTENSTOCK		Other	Distribution/Collection Mains	6	HDPE	459.17	Yes		Yes		Excellent	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
BRISTENSTOCK		Other	Distribution/Collection Mains	6	HDPE	2126.88	Yes		Yes		Excellent	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
CHOCORUA VIEW		Other	Distribution/Collection Mains	2		1865.5	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
COMO		Other	Distribution/Collection Mains	2		293.77	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
DIESSBACH		Other	Distribution/Collection Mains	2		1017.66	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
EIDELWEISS		Other	Distribution/Collection Mains	8		7127.14	No				Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
FORCLAZ		Other	Distribution/Collection Mains	2		1333.76	Yes		Yes		Poor	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
GENEVA		Other	Distribution/Collection Mains	4		738.57	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
GRACHEN (2")	Winnigon to Eidelweiss	Other	Distribution/Collection Mains	2		959.86	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
GRACHEN (4")	Aspen to Winnigon	Other	Distribution/Collection Mains	4		1334.22	No				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
GRANDVAL		Other	Distribution/Collection Mains	6	PVC	398.84	Yes	Yes			Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
GRISON		Other	Distribution/Collection Mains	2	PVC	1880.35	Yes	Yes			Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
HUTWILL		Other	Distribution/Collection Mains	2		4683.08	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
INTERLAKEN CIRCLE	Porridge Shore to Big Loop	Other	Distribution/Collection Mains	2		804.06	No				Poor	0% - .0	Active	Fullsized	Major (8)	Yes	Yes	1/1/1987	90
INTERLAKEN CIRCLE (MIDDLE)	Middle Shore to Altdore	Other	Distribution/Collection Mains	3		865.47	No				Poor	100% - .90	Active	Fullsized	Major (8)	Yes	Yes	1/1/1987	90
ISLAND		Other	Distribution/Collection Mains	2		618.64	No				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
JUNGFRAU		Other	Distribution/Collection Mains	2		1184.02	Yes	Yes			Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
JUNGFRAU (THUSIS-DOWN)		Other	Distribution/Collection Mains	6	HDPE	562.7	No				Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
KLAUSEN		Other	Distribution/Collection Mains	2		2020.26	No	Yes			Fair (Average)	0% - .0	Active	Fullsized	Major (8)	Yes	Yes	1/1/1987	90
KONSTANZ		Other	Distribution/Collection Mains	2		400.04	0%				Fair (Average)	0% - .0	Active	Fullsized	Major (8)	Yes	Yes	1/1/1987	90
LAKEVIEW		Other	Distribution/Collection Mains	4		736.98	No				Fair (Average)	0% - .0	Active	Fullsized	Major (8)	Yes	Yes	1/1/1987	90
LINE FROM RT 113 TO		Other	Distribution/Collection Mains	6		7413.52	No				Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
LINE FROM RT 113 TO		Other	Distribution/Collection Mains	4		1136.7	No				Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
LITTLE LOOP (LEFT)		Other	Distribution/Collection Mains	2		652.31	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
LITTLE LOOP (RIGHT)		Other	Distribution/Collection Mains	2		250.18	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
LITTLE SHORE (8")	Bergamo to Eidelweiss	Other	Distribution/Collection Mains	8		1188.81	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
LITTLE SHORE (2")	Bergamo to Geneva	Other	Distribution/Collection Mains	2		1956.27	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
LUCERN		Other	Distribution/Collection Mains	2		1223.94	No		Yes		Poor	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
LUGANO		Other	Distribution/Collection Mains	3		426.98	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
MIDDLE SHORE (6")	Geneva to Interlaken	Other	Distribution/Collection Mains	6	HDPE	1692.95	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
MIDDLE SHORE (2")	Little Shore to Geneva	Other	Distribution/Collection Mains	2		735.89	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
OAK HILL (SUMMIT)		Other	Distribution/Collection Mains	3		565.13	No				Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
OAK RIDGE (3")	Eidelweiss to Oak Ridge PS	Other	Distribution/Collection Mains	3		1561.49	No		Yes		Poor	100% - .90	Active	Fullsized	Major (8)	Yes	Yes	1/1/1987	90
OAK RIDGE (4")	Oak Ridge PS to Presidential View	Other	Distribution/Collection Mains	4		2004.25	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
OAK RIDGE (CLEMENS)		Other	Distribution/Collection Mains	3		855.43	No				Fair (Average)	0% - .0	Active	Fullsized	Major (8)	Yes	Yes	1/1/1987	90
OAK RIDGE (SUMMIT)		Other	Distribution/Collection Mains	2		688.54	No				Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
OAK RIDGE (PORIDGE VIEW)		Other	Distribution/Collection Mains	3		332.51	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
PORRIDGE VIEW		Other	Distribution/Collection Mains	2		417.31	No				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
PRESIDENTIAL VIEW		Other	Distribution/Collection Mains	2		1159.25	No				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
REINACH PLACE		Other	Distribution/Collection Mains	6		658.02	No	Yes			Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
REINACH-ASPEN (CC)		Other	Distribution/Collection Mains	6		939.86	No				Fair (Average)	0% - .0	Active	Fullsized	Catastrophic (10)	Yes	Yes	1/1/1987	90
RT 113		Other	Distribution/Collection Mains	2		131.62	Yes				Fair (Average)	0% - .0	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90
SALINS		Other	Distribution/Collection Mains	2		575.86	No				Fair (Average)	100% - .90	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90
SARNEN		Other	Distribution/Collection Mains	2		399.92	No				Fair (Average)	100% - .90	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90
SCHWYZ		Other	Distribution/Collection Mains	2		1577.7	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
SHORE DRIVE		Other	Distribution/Collection Mains	2		709.52	Yes				Fair (Average)	0% - .0	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90
ST MORITZ (BASAL)		Other	Distribution/Collection Mains	2		765.17	Yes	Yes			Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
ST MORITZ (COMO)		Other	Distribution/Collection Mains	2		1209.78	Yes				Fair (Average)	0% - .0	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
THUSIS (2")	Eidelweiss to Appenvel	Other	Distribution/Collection Mains	2		307.4	Yes				Fair (Average)	0% - .0	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90
THUSIS (6")	Eidelweiss to Jungfrau	Other	Distribution/Collection Mains	6		386.62	No				Fair (Average)	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
UPPER LAKEVIEW		Other	Distribution/Collection Mains	2		1692.13	No		Yes		Poor	100% - .90	Active	Fullsized	Moderate (6)	Yes	Yes	1/1/1987	90
VISP		Other	Distribution/Collection Mains	2		245.99	Yes				Fair (Average)	0% - .0	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90
WALDSBUT (SHORE DRIVE)		Other	Distribution/Collection Mains	2		280.43	Yes	Yes			Fair (Average)	0% - .0	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90
WINNINGON (GRACHEN)	Grachen to the North	Other	Distribution/Collection Mains	4		769.12	Yes	Yes	Yes		Poor	0% - .0	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90
WINNINGON (EIDELWEISS)	Eidelweiss to the South	Other	Distribution/Collection Mains	4		507.34	Yes	Yes			Fair (Average)	0% - .0	Active	Fullsized	Minor (4)	Yes	Yes	1/1/1987	90

Asset Description (Name)	Replacement Cost per Foot	Replacement Cost (Length x Cost/FT)
ADELBODEN (2")	\$75.00	\$38,835.00
ADELBODEN (4")	\$85.00	\$45,611.00
ALPENHOF	\$75.00	\$38,616.00
ALTDORF	\$100.00	\$28,762.00
APPENVEL (2")	\$75.00	\$196,298.25
APPENVEL (3")	\$75.00	\$41,436.75
ASPEN (BOT - UP)	\$75.00	\$87,726.75
ASPEN (TOP-DOWN)	\$100.00	\$58,754.00
ASPEN-REINACH(CC)	\$100.00	\$42,873.00
BARDEN	\$75.00	\$110,328.75
BASAL	\$75.00	\$22,994.25
BERGAMO (6")	\$100.00	\$58,270.00
BERGAMO (2")	\$75.00	\$65,033.25
BERGDORF (6")	\$100.00	\$42,772.00
BERGDORF (2")	\$75.00	\$41,127.00
BERGDORF (4")	\$85.00	\$18,876.80
BERN	\$75.00	\$304,316.25
BIASCA	\$100.00	\$23,268.00
BIG LOOP (8")	\$115.00	\$80,334.40
BIG LOOP (6")	\$100.00	\$33,836.00
BLINDEN (BERGAMO)	\$75.00	\$36,262.50
BLINDEN (INTERLAKEN)	\$75.00	\$98,345.25
BRENNER	\$75.00	\$71,260.50
BRISTENSTOCK	\$100.00	\$45,917.00
BRISTENSTOCK	\$100.00	\$212,688.00
CHOCORUA VIEW	\$75.00	\$139,912.50
COMO	\$75.00	\$22,032.75
DIESSBACH	\$75.00	\$76,324.50
EIDELWEISS	\$115.00	\$819,621.10
FORCLAZ	\$75.00	\$100,032.00
GENEVA	\$85.00	\$62,778.45
GRACHEN (2")	\$75.00	\$71,989.50
GRACHEN (4")	\$85.00	\$113,408.70
GRANDVAL	\$100.00	\$39,884.00
GRISON	\$75.00	\$141,026.25
HUTWILL	\$75.00	\$351,231.00
INTERLAKEN CIRCLE	\$75.00	\$60,304.50
INTERLAKEN CIRCLE (MIDDLE	\$75.00	\$64,910.25
ISLAND	\$75.00	\$46,398.00
JUNGFRAU	\$75.00	\$88,801.50
JUNGFRAU (THISIS-DOWN)	\$100.00	\$56,270.00
KLAUSEN	\$75.00	\$151,519.50
KONSTANZ	\$75.00	\$30,003.00
LAKEVIEW	\$85.00	\$62,643.30
LINE FROM RT 113 TO	\$100.00	\$741,352.00
LINE FROM RT 113 TO	\$85.00	\$96,619.50
LITTLE LOOP (LEFT)	\$75.00	\$48,923.25
LITTLE LOOP (RIGHT)	\$75.00	\$18,763.50
LITTLE SHORE (8")	\$115.00	\$136,713.15
LITTLE SHORE (2")	\$75.00	\$146,720.25
LUCERN	\$75.00	\$91,795.50
LUGANO	\$75.00	\$32,023.50
MIDDLE SHORE (6")	\$100.00	\$169,295.00
MIDDLE SHORE (2")	\$75.00	\$55,191.75
OAK HILL (SUMMIT)	\$75.00	\$42,384.75
OAK RIDGE (3")	\$75.00	\$117,111.75
OAK RIDGE (4")	\$85.00	\$170,361.25
OAK RIDGE (CLEMENS)	\$75.00	\$64,157.25
OAK RIDGE (SUMMIT)	\$75.00	\$51,640.50
OAK RIDGE (PORIDGE VIEW)	\$75.00	\$24,938.25
PORRIDGE VIEW	\$75.00	\$31,298.25
PRESIDENTAIL VIEW	\$75.00	\$86,943.75
REINACH PLACE	\$100.00	\$65,802.00
REINACH-ASPEN (CC)	\$100.00	\$93,986.00
RT 113	\$75.00	\$9,871.50
SALINS	\$75.00	\$43,189.50
SARNEN	\$75.00	\$29,994.00
SCHWYZ	\$75.00	\$118,327.50
SHORE DRIVE	\$75.00	\$53,214.00
ST MORITZ (BASAL)	\$75.00	\$57,387.75
ST MORITZ (COMO)	\$75.00	\$90,733.50
THISIS (2")	\$75.00	\$23,055.00
THISIS (6")	\$100.00	\$38,662.00
UPPER LAKEVIEW	\$75.00	\$126,909.75
VISP	\$75.00	\$18,449.25
WALDSBUT (SHORE DRIVE)	\$75.00	\$21,032.25
WINNINGON (GRACHEN)	\$85.00	\$65,375.20
WINNINGON (EIDELWEISS)	\$85.00	\$43,123.90

Manufacturer and Supplier

	Basic Information						Status and Condition				
	Asset Location	Asset Description	Notes	Asset Category	Asset Type	Capacity (Volume)	Associated Asset	Asset Condition	Redundancy	Asset Status	Capacity Rating
	DPW	DPW - Chemical Bulk Tank (Caustic)	HDPE Tank	Treatment	Treatment Eq.	1,100-gallon	DPW - Chemical Bulk Tank (Caustic)	Good	0% - .0	Active	Fullsized
	DPW	DPW - Chemical Feed Pump 1	LMI	Treatment	Treatment Eq.	1gph	DPW - Chemical Feed Pump 1	Good	100% - .90	Active	Fullsized
	DPW	DPW - Chemical Feed Pump 2	LMI	Treatment	Treatment Eq.	1gph	DPW - Chemical Feed Pump 2	Good	100% - .90	Active	Fullsized
	DPW	DPW - Chemical Day Tank	HDPE Tank	Treatment	Treatment Eq.	25-gallon	DPW - Chemical Day Tank	Good	200% - .98	Active	Fullsized
	DPW	DPW - Containment Pallet		Treatment	Treatment Eq.		DPW - Containment Pallet	Good	0% - .0	Active	Fullsized
	DPW	DPW - Chemical Feed Piping & Appurtenances		Treatment	Treatment Eq.		DPW - Chemical Feed Piping & Appurtenances	Good	0% - .0	Active	Fullsized
	DPW	DPW - Chemical Bulk Tank (Soda Ash)		Treatment	Treatment Eq.		DPW - Chemical Bulk Tank (Soda Ash)	Fair	0% - .0	Abandoned	Fullsized
	DPW	DPW - Chemical Feed Pump		Treatment	Treatment Eq.		DPW - Chemical Feed Pump	Fair	0% - .0	Abandoned	Fullsized
	DPW	DPW - Chemical Mixer		Treatment	Treatment Eq.		DPW - Chemical Mixer	Fair	0% - .0	Abandoned	Fullsized
	DPW	DPW - Heater		Pumping Facility	Other		DPW - Heater	Good	0% - .0	Active	Fullsized
	DPW	DPW - Eye Wash/Shower		Pumping Facility	Treatment Eq.		DPW - Eye Wash/Shower	Good	0% - .0	Active	Fullsized
	DPW	DPW - Electrical/Pump Controls		Pumping Facility	Transformers/Gear/Wiring		DPW - Electrical/Pump Controls	Good	0% - .0	Active	Fullsized
	DPW	DPW - Office Space		Other	Buildings		DPW - Office Space	Good	0% - .0	Active	Fullsized
	DPW	DPW - SCADA		Pumping Facility	Transformers/Gear/Wiring		DPW - SCADA	Good	0% - .0	Active	Fullsized
	DPW WELL 1	DPW WELL	100' deep	Other	Source	200 gpm	DPW WELL	Good	50% - .50	Active	Oversized
	DPW WELL 1	DPW WELL PUMP	20 hp, Grundfos	Other	Source	175 GPM	DPW WELL PUMP	Good	50% - .50	Active	Fullsized
	JUNGFRUAU	J - Booster Station Building		Pumping Facility	Buildings		J - Booster Station Building	Good	0% - .0	Active	Fullsized
	JUNGFRUAU	J - Storage Tank		Storage	Concrete and Metal Storage Tanks	5000	J - Storage Tank	Fair	0% - .0	Active	Fullsized
	JUNGFRUAU	J - Electrical/Pump Controls		Pumping Facility	Transformers/Gear/Wiring		J - Electrical/Pump Controls	Good	0% - .0	Active	Fullsized
	JUNGFRUAU	J - Booster Pump 1	20 hp, Grundfos	Pumping Facility	Pumping Eq.	175 gpm	J - Booster Pump 1	Good	100% - .90	Active	Fullsized
	JUNGFRUAU	J - Booster Pump 2	20 hp, Grundfos	Pumping Facility	Pumping Eq.	175 gpm	J - Booster Pump 2	Good	100% - .90	Active	Fullsized
	JUNGFRUAU	J - Process Piping & Appurtenances	3 & 4" PVC	Pumping Facility	Process Piping		J - Process Piping & Appurtenances	Good	0% - .0	Active	Fullsized
	JUNGFRUAU	J - VFD		Pumping Facility	Motor Controls and Drivers		J - VFD	Good	100% - .90	Active	Fullsized
	REINACH	R - Storage Tank		Storage	Concrete and Metal Storage Tanks	120000	R - Storage Tank	Good	0% - .0	Active	Fullsized
	REINACH	R - Process Piping & Appurtenances		Pumping Facility	Process Piping		R - Process Piping & Appurtenances	Good	0% - .0	Active	Fullsized
	REINACH	R - Booster Pump	30 hp	Pumping Facility	Pumping Eq.	53.3 gpm	R - Booster Pump	Good	100% - .90	Active	Fullsized
	REINACH	R - Booster Pump	30 hp	Pumping Facility	Pumping Eq.	53.3 gpm	R - Booster Pump	Good	100% - .90	Active	Fullsized
	REINACH	R - Electrical/Pump Controls		Pumping Facility	Transformers/Gear/Wiring		R - Electrical/Pump Controls	Good	100% - .90	Active	Fullsized
	REINACH	R - Booster Station Building		Pumping Facility	Buildings		R - Booster Station Building	Good	0% - .0	Active	Fullsized
	OAK	O - Pump Station Building		Pumping Facility	Buildings		O - Pump Station Building	Good	0% - .0	Active	Fullsized
	OAK	O - Hydroneumatic Tank		Storage	Concrete and Metal Storage Tanks		O - Hydroneumatic Tank	Good	0% - .0	Active	Fullsized
	OAK	O - Booster Pump 1	5 hp, Grundfos	Pumping Facility	Pumping Eq.	54 gpm	O - Booster Pump 1	Good	100% - .90	Active	Fullsized
	OAK	O - Booster Pump 2	5 hp, Grundfos	Pumping Facility	Pumping Eq.	54 gpm	O - Booster Pump 2	Good	100% - .90	Active	Fullsized
	OAK	O - Process Piping & Appurtenances		Pumping Facility	Process Piping		O - Process Piping & Appurtenances	Good	0% - .0	Active	Fullsized
	OAK	O - Electrical/Pump Controls		Pumping Facility	Transformers/Gear/Wiring		O - Electrical/Pump Controls	Good	0% - .0	Active	Fullsized
	CHOCORUA	C - Storage Tank	Atmospheric	Storage	Concrete and Metal Storage Tanks	5,000	C - Storage Tank	Fair	0% - .0	Active	Fullsized
	CHOCORUA	C - Booster Pump 1	Grundfos 5 HP	Pumping Facility	Pumping Eq.	34 gpm	C - Booster Pump 1	Good	100% - .90	Active	Fullsized
	CHOCORUA	C - Booster Pump 2	Grundfos 5 HP	Pumping Facility	Pumping Eq.	34 gpm	C - Booster Pump 2	Good	100% - .90	Active	Fullsized
	CHOCORUA	C - Process Piping & Appurtenances	2" PVC	Pumping Facility	Process Piping		C - Process Piping & Appurtenances	Good	0% - .0	Active	Fullsized
	CHOCORUA	C - Electrical/Pump Controls		Pumping Facility	Transformers/Gear/Wiring		C - Electrical/Pump Controls	Fair	0% - .0	Active	Fullsized
	CHOCORUA	C - Pump Station Building		Pumping Facility	Buildings		C - Pump Station Building	Good	0% - .0	Active	Fullsized
	SUMMIT	S - Pump Station Building		Pumping Facility	Buildings		S - Pump Station Building	Fair	0% - .0	Active	Fullsized
	SUMMIT	S - Storage Tank (10,000)	Atmospheric	Storage	Concrete and Metal Storage Tanks	10,000	S - Storage Tank (10,000)	Fair	200% - .98	Active	Fullsized
	SUMMIT	S - Storage Tank (30,000)	Atmospheric	Storage	Concrete and Metal Storage Tanks	30,000	S - Storage Tank (30,000)	Fair	50% - .50	Active	Fullsized
	SUMMIT	S - Storage Tank (5,000)	hydropneumatic	Storage	Concrete and Metal Storage Tanks	5,000	S - Storage Tank (5,000)	Fair	200% - .98	Abandoned	Fullsized
	SUMMIT	S - Booster Pump 1	5 hp	Pumping Facility	Pumping Eq.	70 gpm	S - Booster Pump 1	Fair	100% - .90	Active	Fullsized
	SUMMIT	S - Booster Pump 2	5 hp	Pumping Facility	Pumping Eq.	70 gpm	S - Booster Pump 2	Fair	100% - .90	Active	Fullsized
	SUMMIT	S - Air Compressor		Pumping Facility	Treatment Eq.		S - Air Compressor	Fair	0% - .0	Active	Fullsized
	SUMMIT	S - Storage Tank	hydropneumatic	Storage	Concrete and Metal Storage Tanks	5,000	S - Storage Tank	Good	0% - .0	Active	Fullsized
	SUMMIT	S - Electrical/Pump Controls		Pumping Facility	Transformers/Gear/Wiring		S - Electrical/Pump Controls	Select Condition	0% - .0	Active	Fullsized
	MUDDY	M - Pump Station Building		Pumping Facility	Buildings		M - Pump Station Building	Good	100% - .90	Active	Fullsized
	MUDDY	M - Storage Tank	Atmospheric	Storage	Concrete and Metal Storage Tanks	5,000-gallon	M - Storage Tank	Good	100% - .90	Active	Fullsized
	MUDDY	M - Booster Pump 1	7.5 hp	Pumping Facility	Pumping Eq.	80 gpm	M - Booster Pump 1	Good	0% - .0	Active	Fullsized
	MUDDY	M - Booster Pump 2	7.5 hp	Pumping Facility	Pumping Eq.	80 gpm	M - Booster Pump 2	Good	0% - .0	Active	Fullsized
	MUDDY	M - Electrical/Pump Controls		Pumping Facility	Transformers/Gear/Wiring		M - Electrical/Pump Controls	Good	0% - .0	Active	Fullsized
	MUDDY	M - Process Piping & Appurtenances		Pumping Facility	Process Piping		M - Process Piping & Appurtenances	Good	100% - .90	Active	Fullsized
	MUDDY	M - VFD		Pumping Facility	Motor Controls and Drivers		M - VFD	Good	100% - .90	Active	Fullsized
	MUDDY WELL FIELD	MUDDY WELL 1		Other	Source	125 gpm	MUDDY WELL 1	Good	50% - .50	Active	Fullsized
	MUDDY WELL FIELD	MUDDY WELL 2		Other	Source	20 gpm	MUDDY WELL 2	Good	200% - .98	Active	Fullsized
	MUDDY WELL FIELD	MUDDY WELL 1 PUMP	7.5 hp	Other	Source	70 gpm	MUDDY WELL 1 PUMP	Good	50% - .50	Active	Fullsized
	MUDDY WELL FIELD	MUDDY WELL 2 PUMP	2 hp	Other	Source	50 gpm	MUDDY WELL 2 PUMP	Good	200% - .98	Active	Fullsized

Asset Description	CoF	Installation Date (MM/DD/YYYY)	Expected Useful Life	Remaining Life	Replacement Cost
DPW - Chemical Bulk Tank (Caustic)	Major (8)	6/30/1996	20	-6	\$2,000.00
DPW - Chemical Feed Pump 1	Moderate (6)	1/1/2018	15	11	\$1,500.00
DPW - Chemical Feed Pump 2	Moderate (6)	1/1/2018	15	11	\$1,500.00
DPW - Chemical Day Tank	Moderate (6)	6/30/1996	20	-6	\$500.00
DPW - Containment Pallet	Insignificant (2)	6/30/1996	20	-6	\$500.00
DPW - Chemical Feed Piping & Appurtenances	Insignificant (2)	06/30/1996	15	-11	\$3,000.00
DPW - Chemical Bulk Tank (Soda Ash)	Insignificant (2)	06/30/1996	20	-6	\$2,000.00
DPW - Chemical Feed Pump	Insignificant (2)	06/30/1996	15	-11	\$1,500.00
DPW - Chemical Mixer	Insignificant (2)	06/30/1996	10	-16	\$1,000.00
DPW - Heater	Minor (4)	06/30/1996	20	-6	\$2,000.00
DPW - Eye Wash/Shower	Moderate (6)	06/30/1996	50	24	\$1,000.00
DPW - Electrical/Pump Controls	Catastrophic (10)	06/30/2020	50	48	\$40,000.00
DPW - Office Space	Major (8)	01/01/1996	75	49	\$100,000.00
DPW - SCADA	Major (8)	01/01/2018	30	26	\$10,000.00
DPW WELL	Catastrophic (10)	07/01/1993	30	1	\$40,000.00
DPW WELL PUMP	Catastrophic (10)	06/30/2018	15	11	\$10,000.00
J - Booster Station Building	Catastrophic (10)	06/30/1970	75	23	\$45,000.00
J - Storage Tank	Major (8)	06/30/1970	50	-2	\$10,000.00
J - Electrical/Pump Controls	Major (8)	06/30/1970	50	-2	\$50,000.00
J - Booster Pump 1	Moderate (6)	06/30/2014	15	7	\$10,000.00
J - Booster Pump 2	Moderate (6)	06/30/2014	15	7	\$10,000.00
J - Process Piping & Appurtenances	Major (8)	06/30/2014	50	42	\$5,000.00
J - VFD	Major (8)	6/30/2014	15	7	\$5,000.00
R - Storage Tank	Catastrophic (10)	6/30/2020	50	48	\$240,000.00
R - Process Piping & Appurtenances	Major (8)	6/30/2020	50	48	\$5,000.00
R - Booster Pump	Moderate (6)	6/30/2020	15	13	\$25,000.00
R - Booster Pump	Moderate (6)	6/30/2020	15	13	\$25,000.00
R - Electrical/Pump Controls	Major (8)	6/30/2020	50	48	\$50,000.00
R - Booster Station Building	Catastrophic (10)	6/30/2020	75	73	\$45,000.00
O - Pump Station Building	Catastrophic (10)	6/30/1996	75	49	\$35,000.00
O - Hydroneumatic Tank	Major (8)	6/30/1996	50	24	\$5,000.00
O - Booster Pump 1	Moderate (6)	6/30/1996	15	-11	\$4,000.00
O - Booster Pump 2	Moderate (6)	6/30/1996	15	-11	\$4,000.00
O - Process Piping & Appurtenances	Major (8)	6/30/1996	50	24	\$5,000.00
O - Electrical/Pump Controls	Catastrophic (10)	6/30/2015	50	43	\$50,000.00
C - Storage Tank	Major (8)	6/30/1975	50	3	\$10,000.00
C - Booster Pump 1	Minor (4)	6/30/2010	15	3	\$4,000.00
C - Booster Pump 2	Minor (4)	6/30/2010	15	3	\$4,000.00
C - Process Piping & Appurtenances	Major (8)	6/30/2020	50	48	\$5,000.00
C - Electrical/Pump Controls	Major (8)	6/30/1975	50	3	\$50,000.00
C - Pump Station Building	Catastrophic (10)	6/30/1975	75	28	\$30,000.00
S - Pump Station Building	Catastrophic (10)	6/30/1980	75	33	\$60,000.00
S - Storage Tank (10,000)	Moderate (6)	6/30/1980	50	8	\$20,000.00
S - Storage Tank (30,000)	Moderate (6)	6/30/1980	50	8	\$60,000.00
S - Storage Tank (5,000)	Insignificant (2)	6/30/1980	50	8	\$10,000.00
S - Booster Pump 1	Moderate (6)	6/30/2001	15	-6	\$4,000.00
S - Booster Pump 2	Moderate (6)	6/30/2001	15	-6	\$4,000.00
S - Air Compressor	Moderate (6)	6/30/2001	10	-11	\$2,000.00
S - Storage Tank	Moderate (6)	6/30/2001	50	29	\$10,000.00
S - Electrical/Pump Controls	Moderate (6)	6/30/2001	50	29	\$50,000.00
M - Pump Station Building	Moderate (6)	6/30/1985	75	38	\$45,000.00
M - Storage Tank	Moderate (6)	6/30/1985	50	13	\$10,000.00
M - Booster Pump 1	Major (8)	6/30/2018	15	11	\$10,000.00
M - Booster Pump 2	Major (8)	6/30/2018	15	11	\$10,000.00
M - Electrical/Pump Controls	Major (8)	6/30/2018	50	46	\$50,000.00
M - Process Piping & Appurtenances	Moderate (6)	6/30/2018	50	46	\$5,000.00
M - VFD	Moderate (6)	6/30/2018	15	11	\$5,000.00
MUDDY WELL 1	Moderate (6)	11/2/1987	30	-5	\$40,000.00
MUDDY WELL 2	Moderate (6)	1/21/1988	30	-4	\$40,000.00
MUDDY WELL 1 PUMP	Moderate (6)	11/2/1987	15	-20	\$10,000.00
MUDDY WELL 2 PUMP	Moderate (6)	1/21/1988	15	-19	\$3,000.00

Cost and Maintenance



**Village District of Eidelweiss
Asset Risk Matrix (All Assets)
May 2022**

Asset Description (Name)	Intersection	Consequence of Failure	Probability of Failure	Risk Level	Urgency
C - Pump Station Building	CHOCORUA	8.8	8.0	4.00	Priority for YR 1-10 Capital Improvement Plan
BERGAMO (6")	Schwyz to Waldsbütt	8.3	6.0	4.00	
ASPEN (TOP-DOWN)	New Line	7.3	6.0	4.00	
BIG LOOP (6")	Altdore to Interlaken	7.3	6.0	4.00	
INTERLAKEN CIRCLE	Porridge Shore to Big Loop	7.3	6.0	4.00	
INTERLAKEN CIRCLE (MIDDLE SHO	Middle Shore to Altdore	7.3	6.0	4.00	
OAK RIDGE (3")	Eidelweiss to Oak Ridge PS	6.3	6.0	4.00	
WINNINGON (GRACHEN)	Grachen to the North	6.3	6.0	4.00	
APPENVEL (2")	Deadend West of Aspen to L	6.3	6.0	4.00	
APPENVEL (3")	Lugano towards Thusis	6.3	6.0	4.00	
ASPEN (BOT - UP)		6.3	6.0	4.00	
BLINDEN (BERGAMO)		6.3	6.0	4.00	
BRENNER		6.3	6.0	4.00	
FORCLAZ		6.3	6.0	4.00	
DPW - Electrical/Pump Controls	DPW	6.2	8.0	3.00	Priority for YR 10-15 Capital Improvement Plan
DPW WELL	DPW WELL 1	6.2	8.0	3.00	
DPW WELL PUMP	DPW WELL 1	6.2	8.0	3.00	
S - Storage Tank	SUMMIT	6.2	6.0	3.00	
S - Storage Tank (10,000)	SUMMIT	5.8	10.0	3.00	
S - Electrical/Pump Controls	SUMMIT	5.6	6.0	3.00	
S - Pump Station Building	SUMMIT	5.6	10.0	3.00	
J - Storage Tank	JUNGFRAU	5.5	10.0	3.00	
J - Booster Station Building	JUNGFRAU	4.9	5.0	3.00	
M - Electrical/Pump Controls	MUDDY	4.6	8.0	3.00	
M - Process Piping & Appurtenanc	MUDDY	4.6	8.0	3.00	
M - Pump Station Building	MUDDY	4.6	6.0	3.00	
O - Electrical/Pump Controls	OAK	4.5	8.0	3.00	
O - Hydroneumatic Tank	OAK	3.4	10.0	3.00	
LUCERN		0.6	6.0	3.00	
UPPER LAKEVIEW		0.6	6.0	3.00	
EIDELWEISS		10.0	5.0	2.00	
ASPEN-REINACH(CC)		9.3	5.0	2.00	
JUNGFRAU (THUSIS-DOWN)		9.3	5.0	2.00	
LINE FROM RT 113 TO		9.3	5.0	2.00	
REINACH PLACE		9.3	5.0	2.00	
REINACH-ASPEN (CC)		9.3	5.0	2.00	
S - Booster Pump 2	SUMMIT	9.2	0.6	2.00	
S - Air Compressor	SUMMIT	9.2	0.6	2.00	
LINE FROM RT 113 TO		8.7	5.0	2.00	
DPW - Heater	DPW	8.5	4.0	2.00	
MUDDY WELL 2	MUDDY WELL FIELD	8.5	3.0	2.00	
MUDDY WELL 2 PUMP	MUDDY WELL FIELD	8.5	3.0	2.00	
DPW - Containment Pallet	DPW	8.5	2.0	2.00	
DPW - Chemical Feed Piping & Ap	DPW	8.5	2.0	2.00	

Asset Description (Name)	Intersection	Consequence of Failure	Probability of Failure	Risk Level	Urgency
O - Booster Pump 2	OAK	8.5	0.6	2.00	Monitor
O - Process Piping & Appurtenand	OAK	8.5	0.6	2.00	
DPW - Chemical Day Tank	DPW	8.5	0.1	2.00	
MUDDY WELL 1 PUMP	MUDDY WELL FIELD	8.5	0.1	2.00	
DPW - Chemical Bulk Tank (Caus	DPW	8.5	0.1	2.00	
OAK HILL (SUMMIT)		8.3	5.0	2.00	
OAK RIDGE (SUMMIT)		8.3	5.0	2.00	
O - Booster Pump 1	OAK	8.0	4.8	2.00	
DPW - SCADA	DPW	8.0	3.5	2.00	
C - Storage Tank	CHOCORUA	8.0	1.8	2.00	
R - Process Piping & Appurtenand	REINACH	8.0	1.1	2.00	
R - Booster Pump	REINACH	8.0	1.1	2.00	
C - Electrical/Pump Controls	CHOCORUA	8.0	1.1	2.00	
S - Storage Tank (30,000)	SUMMIT	8.0	0.1	2.00	
S - Booster Pump 1	SUMMIT	8.0	0.0	2.00	
LAKEVIEW		7.7	5.0	2.00	
ADELBODEN (4")	Bristenstock to Binsca	7.7	3.1	2.00	
BERGDORF (6")	Grandval to Konstanz	7.3	5.0	2.00	
BIASCA		7.3	5.0	2.00	
GRANDVAL		7.3	5.0	2.00	
BRISTENSTOCK		7.3	3.0	2.00	
BRISTENSTOCK		7.3	3.0	2.00	
ALTDORF		7.3	1.1	2.00	
KLAUSEN		7.3	5.0	2.00	
KONSTANZ		7.3	5.0	2.00	
OAK RIDGE (CLEMENS)		7.3	5.0	2.00	
C - Booster Pump 1	CHOCORUA	6.9	0.4	2.00	
C - Booster Pump 2	CHOCORUA	6.9	0.4	2.00	
C - Process Piping & Appurtenand	CHOCORUA	6.9	0.4	2.00	
BERGDORF (4")	Midway between Konstanz ar	6.7	5.0	2.00	
GENEVA		6.7	5.0	2.00	
GRACHEN (4")	Aspen to Winnigon	6.7	5.0	2.00	
M - Booster Pump 1	MUDDY	6.4	0.6	2.00	
ADELBODEN (2")	Binsca to Deadend	6.3	5.0	2.00	
ALPENHOF		6.3	5.0	2.00	
BERGAMO (2")	Dorfli to Porridge Shore	6.3	5.0	2.00	
BERGDORF (2")	Konstanz towards Aspen	6.3	5.0	2.00	
BLINDEN (INTERLAKEN)		6.3	5.0	2.00	
CHOCORUA VIEW		6.3	5.0	2.00	
DIESSBACH		6.3	5.0	2.00	
GRACHEN (2")	Winnigon to Eidelweiss	6.3	5.0	2.00	
GRISON		6.3	5.0	2.00	
ISLAND		6.3	5.0	2.00	
JUNGFRAU		6.3	5.0	2.00	
LITTLE LOOP (LEFT)		6.3	5.0	2.00	
LITTLE LOOP (RIGHT)		6.3	5.0	2.00	
OAK RIDGE (PORIDGE VIEW)		6.3	5.0	2.00	
PORRIDGE VIEW		6.3	5.0	2.00	
PRESIDENTAIL VIEW		6.3	5.0	2.00	
ST MORITZ (BASAL)		6.3	5.0	2.00	
ST MORITZ (COMO)		6.3	5.0	2.00	
J - Electrical/Pump Controls	JUNGFRAU	6.0	4.0	2.00	

Asset Description (Name)	Intersection	Consequence of Failure	Probability of Failure	Risk Level	Urgency
WINNINGON (EIDELWEISS)	Eidelweiss to the South	5.7	5.0	2.00	High
RT 113		5.3	5.0	2.00	
SHORE DRIVE		5.3	5.0	2.00	
THUSIS (2")	Eidelweiss to Appenvel	5.3	5.0	2.00	
VISP		5.3	5.0	2.00	
WALDSBUT (SHORE DRIVE)		5.3	5.0	2.00	
R - Storage Tank	REINACH	4.8	0.8	1.00	Routine Maintenance
J - Booster Pump 2	JUNGFRAU	4.8	0.6	1.00	
J - Process Piping & Appurtenances	JUNGFRAU	4.8	0.6	1.00	
J - Booster Pump 1	JUNGFRAU	4.8	0.6	1.00	
M - Storage Tank	MUDDY	4.6	0.6	1.00	
DPW - Chemical Feed Pump 1	DPW	3.0	0.6	1.00	
DPW - Chemical Feed Pump 2	DPW	3.0	0.6	1.00	
M - Booster Pump 2	MUDDY	2.8	4.0	1.00	
MUDDY WELL 1	MUDDY WELL FIELD	2.8	0.6	1.00	
J - VFD	JUNGFRAU	2.0	4.0	1.00	
R - Booster Pump	REINACH	1.7	0.6	1.00	
R - Electrical/Pump Controls	REINACH	1.7	0.6	1.00	
M - VFD	MUDDY	1.4	0.6	1.00	
R - Booster Station Building	REINACH	1.1	0.8	1.00	
O - Pump Station Building	OAK	1.1	0.8	1.00	
BIG LOOP (8")	Eidelweiss to Altdore	0.8	5.0	1.00	
LITTLE SHORE (8")	Bergamo to Eidelweiss	0.8	5.0	1.00	
MIDDLE SHORE (6")	Geneva to Interlaken	0.7	5.0	1.00	
THUSIS (6")	Eidelweiss to Jungfrau	0.7	5.0	1.00	
OAK RIDGE (4")	Oak Ridge PS to Presidential	0.7	5.0	1.00	
BARDEN		0.6	5.0	1.00	
BASAL		0.6	5.0	1.00	
BERN		0.6	5.0	1.00	
COMO		0.6	5.0	1.00	
HUTWILL		0.6	5.0	1.00	
LITTLE SHORE (2")	Bergamo to Geneva	0.6	5.0	1.00	
LUGANO		0.6	5.0	1.00	
MIDDLE SHORE (2")	Little Shore to Geneva	0.6	5.0	1.00	
SCHWYZ		0.6	5.0	1.00	
SALINS		0.5	5.0	1.00	
SARNEN		0.5	5.0	1.00	
DPW - Office Space	DPW	0.5	4.0	1.00	

Appendix D System Maps

Y:\12101 Eidelweiss Village District AMP_SOD\DWG\Concepts\12101_LADL_from_GIS.dwg 2/16/2022 3:51:52 PM KarenPhiback

CONWAY ROAD
NH-113

BERN DRIVE

HUTTWill DRIVE

SHEET 2

SHEET 1

PRESIDENTIAL VIEW DRIVE

UPPER LAKEVIEW DRIVE

HUTTWill DRIVE

OAK RIDGE ROAD

SHEET 1

SHEET 3

SAINT MORITZ DRIVE

MIDDLE
PEA PORRIDGE POND

PEA PORRIDGE POND

BERN DRIVE

CONWAY ROAD
NH-113

OAK RIDGE ROAD

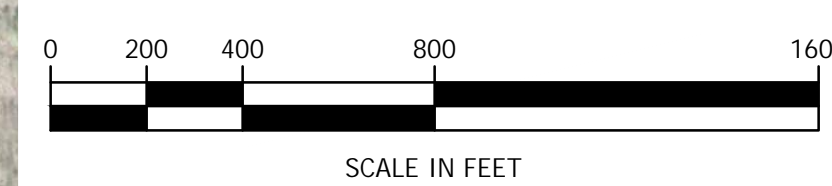
EIDELWEISS DRIVE

EIDELWEISS DRIVE

GRACHEN DRIVE

SHEET 1

SHEET 3



FOR REVIEW
NOT FOR CONSTRUCTION

DATE OF PRINT
MAY 23, 2022
HORIZONS ENGINEERING



© 2022
horizons
Engineering
All rights reserved

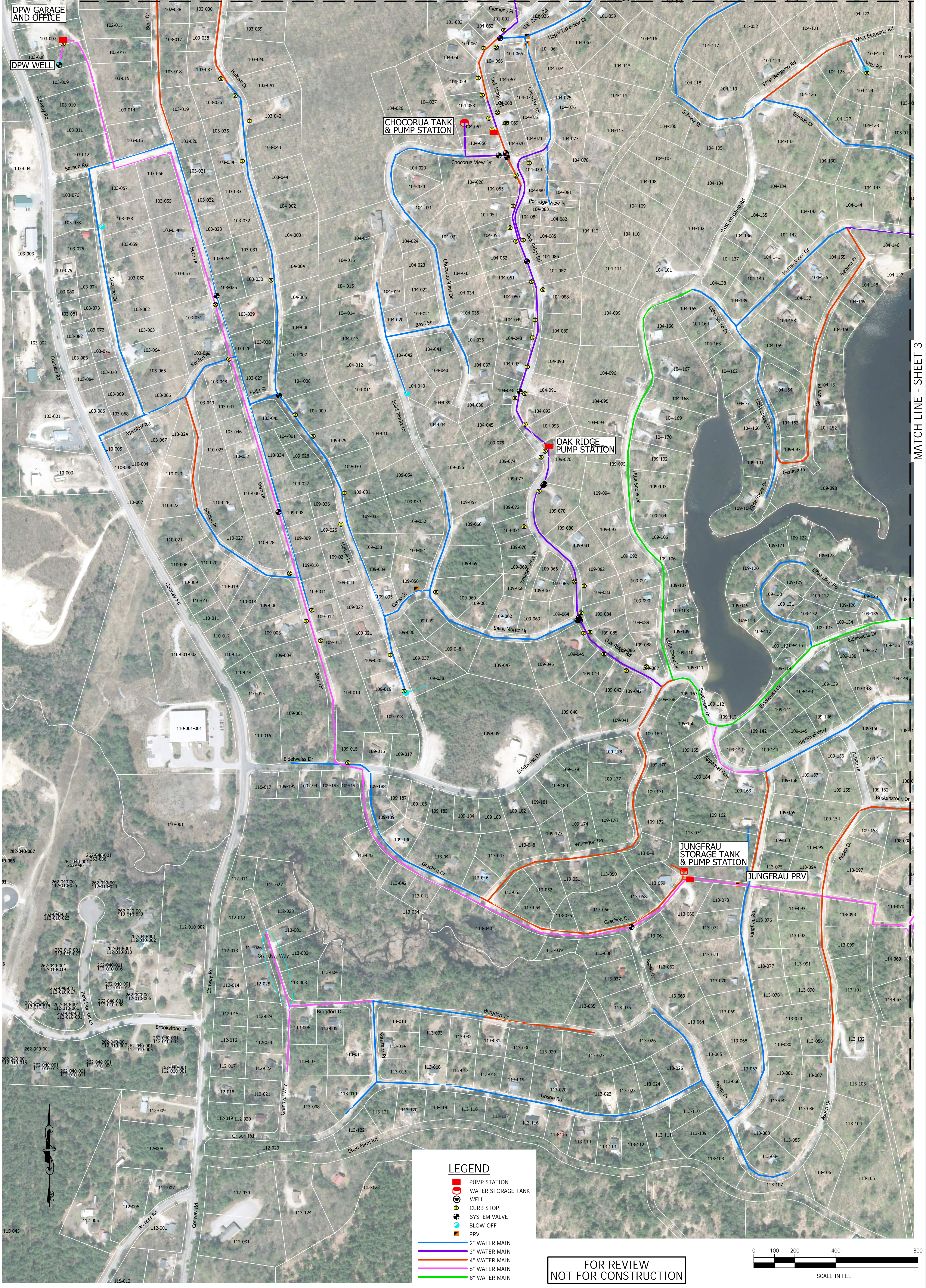
PROJECT #:	21201	REVISION DESCRIPTION	ENG DWG
DATE:	MAY 2022		
MAP/LOT (OR ARCHIVE)	...		
SURVEYED BY:	HORIZONS		
ENGINEERED BY:	CFC		
DRAWN BY:	KRP		
CHECKED BY:	...		

Northeast GIS, LLC
Brian@NortheastGIS.com
Tel.: (603) 903.7033

horizons
Engineering
Civil and Structural Engineering
Land Surveying and Environmental Consulting
MAINE • NEW HAMPSHIRE • VERMONT
www.horizonsengineering.com

VILLAGE DISTRICT OF EIDELWEISS
MADISON, NEW HAMPSHIRE
ASSET MANAGEMENT PLAN
PWS ID #1461010
PROJECT OVERVIEW

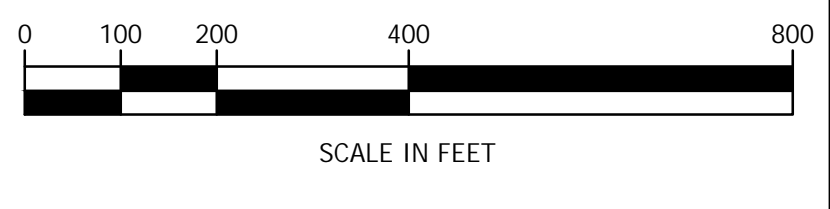
EXHIBIT



LEGEND

- PUMP STATION
- WATER STORAGE TANK
- WELL
- CURB STOP
- SYSTEM VALVE
- BLOW-OFF
- PRV
- 2" WATER MAIN
- 3" WATER MAIN
- 4" WATER MAIN
- 6" WATER MAIN
- 8" WATER MAIN

FOR REVIEW
NOT FOR CONSTRUCTION



EXHIBIT

VILLAGE DISTRICT OF EIDELWEISS
MADISON, NEW HAMPSHIRE
ASSET MANAGEMENT PLAN
PWS ID #1461010

PLAN SHEET 1 OF 3

horizons
Engineering

Civil and Structural Engineering
Land Surveying and Environmental Consulting
MAINE • NEW HAMPSHIRE • VERMONT
www.horizonsengineering.com

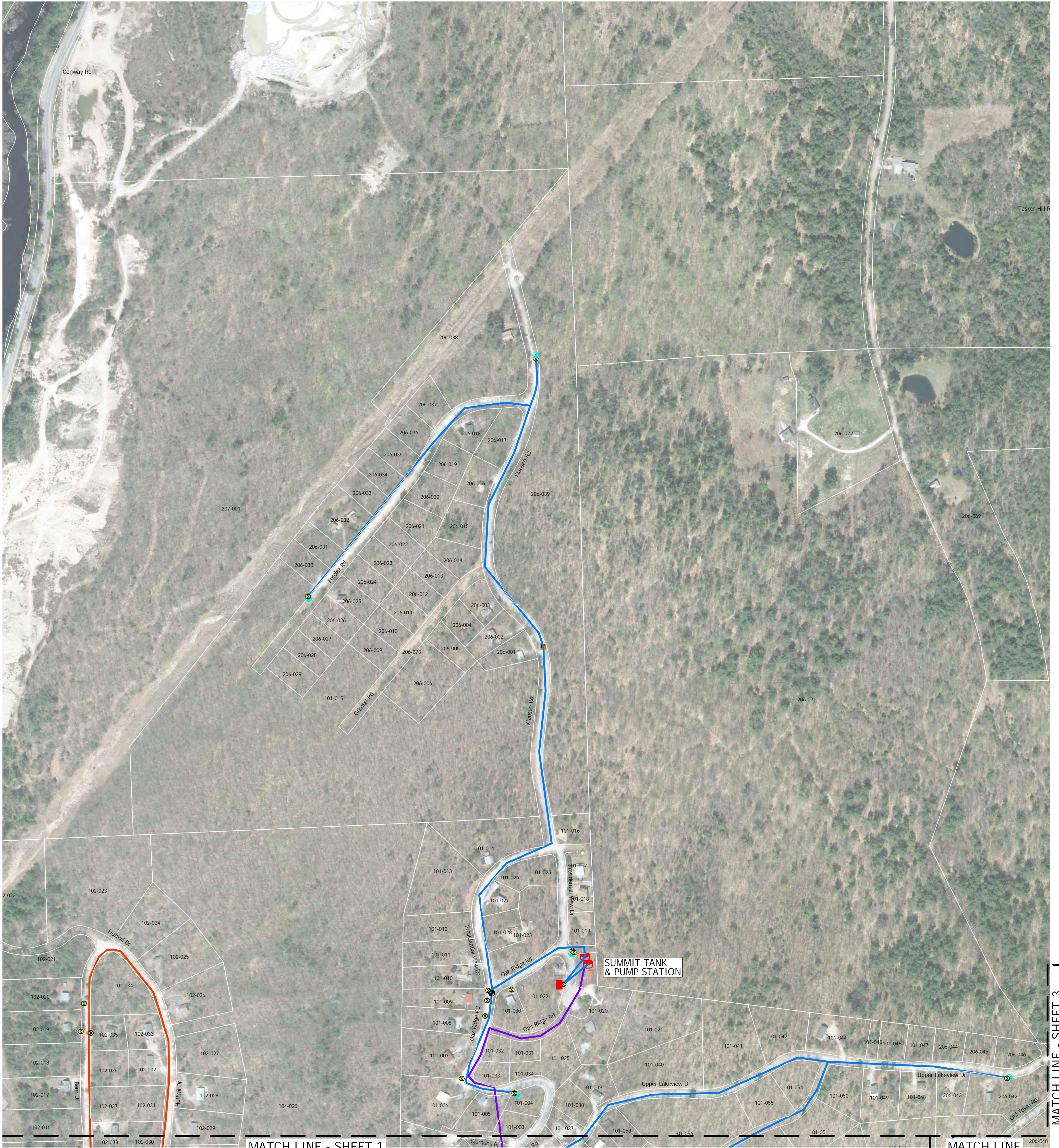
GIS

Northeast GIS, LLC
Brian@NortheastGIS.com
Tel. (603) 903.7033

PROJECT #:	21201	NO.	DATE	REVISION DESCRIPTION	ENG	DWG
DATE:	MAY 2022					
MAP-LOT (OR ARCHIVE):	--					
SURVEYED BY:	HORIZONS					
ENGINEERED BY:	CFC					
DRAWN BY:	KRP					
CHECKED BY:	--					

DATE OF PRINT
MAY 23 2022
HORIZONS ENGINEERING

© 2022
horizons
Engineering
All rights reserved



SUMMIT TANK & PUMP STATION

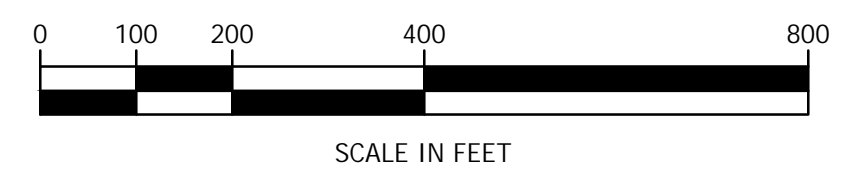
MATCH LINE - SHEET 1

MATCH LINE SHEET 3

MATCH LINE - SHEET 3

LEGEND

- PUMP STATION
- WATER STORAGE TANK
- WELL
- CURB STOP
- SYSTEM VALVE
- BLOW-OFF
- PRV
- 2" WATER MAIN
- 3" WATER MAIN
- 4" WATER MAIN
- 6" WATER MAIN
- 8" WATER MAIN



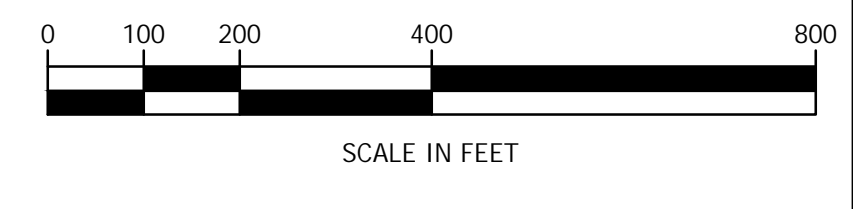
FOR REVIEW
NOT FOR CONSTRUCTION

EXHIBIT	VILLAGE DISTRICT OF EIDELWEISS MADISON, NEW HAMPSHIRE ASSET MANAGEMENT PLAN PWS ID #1461010 PLAN SHEET 2 OF 3	 horizons <i>Engineering</i> Civil and Structural Engineering Land Surveying and Environmental Consulting MAINE • NEW HAMPSHIRE • VERMONT www.horizonsengineering.com	 Northeast GIS, LLC Brian@NortheastGIS.com Tel. (603) 903.7033	PROJECT #: 21201 DATE: MAY 2022 MAP-LOT (OR ARCHIVE): -- SURVEYED BY: HORIZONS ENGINEERED BY: CFC DRAWN BY: KRP CHECKED BY: --	<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>REVISION DESCRIPTION</th> <th>ENG</th> <th>DWG</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	REVISION DESCRIPTION	ENG	DWG																					DATE OF PRINT MAY 23 2022 HORIZONS ENGINEERING © 2022 All rights reserved
	NO.	DATE	REVISION DESCRIPTION	ENG	DWG																										

Y:\21201 Eidelweiss Village District AMP_SCD\DWG\GIS\Concepts\21201_CAD_CAD_02\2022 3:53:27 PM_KateP@horizons.com



- LEGEND**
- PUMP STATION
 - WATER STORAGE TANK
 - WELL
 - CURB STOP
 - SYSTEM VALVE
 - BLOW-OFF
 - PRV
 - 2" WATER MAIN
 - 3" WATER MAIN
 - 4" WATER MAIN
 - 6" WATER MAIN
 - 8" WATER MAIN

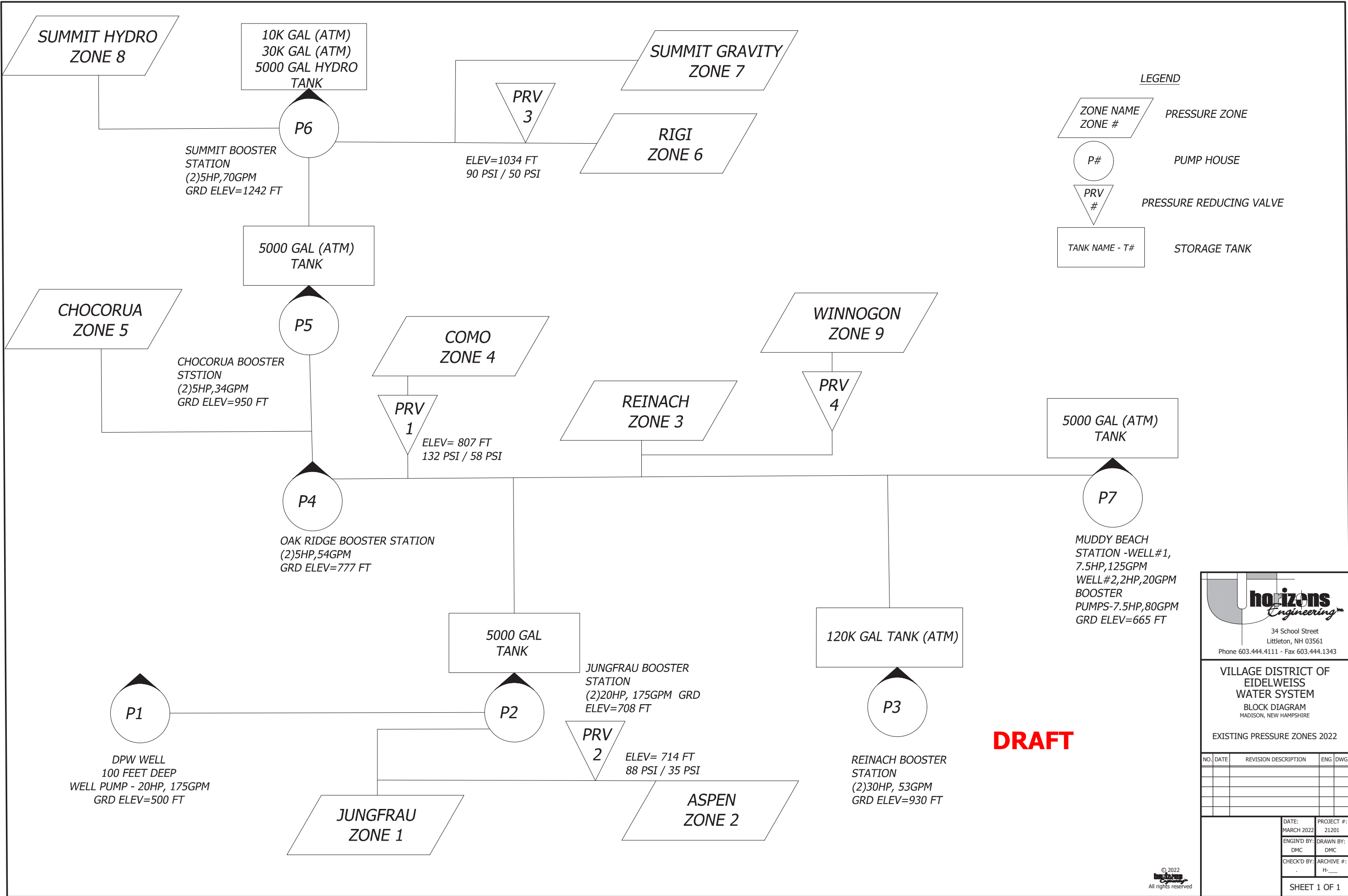


FOR REVIEW
NOT FOR CONSTRUCTION

EXHIBIT	VILLAGE DISTRICT OF EIDELWEISS MADISON, NEW HAMPSHIRE ASSET MANAGEMENT PLAN PWS ID #1461010 PLAN SHEET 3 OF 3	 horizons <i>Engineering</i> Civil and Structural Engineering Land Surveying and Environmental Consulting MAINE • NEW HAMPSHIRE • VERMONT www.horizonsengineering.com	 Northeast GIS, LLC Brian@NortheastGIS.com Tel. (603) 903.7033	PROJECT #: 21201 DATE: MAY 2022 MAP-LOT (OR ARCHIVE): -- SURVEYED BY: HORIZONS ENGINEERED BY: CFC DRAWN BY: KRP CHECKED BY: --	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>REVISION DESCRIPTION</th> <th>ENG</th> <th>DWG</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	REVISION DESCRIPTION	ENG	DWG																DATE OF PRINT MAY 23 2022 HORIZONS ENGINEERING © 2022 All rights reserved
	NO.	DATE	REVISION DESCRIPTION	ENG	DWG																					

Y:\21201 Eidelweiss Village District AMP_SCD\DWG\CD\Compas\21201_CAD_000_GIS.dwg, 3, 5/23/2022 2:56:25 PM, KarimPillay

\\192.168.50.34\littn\proj_2021\21201 Eidelweiss Village District AMF SOQQDWGS\Final\PressureZones\Figure_02.dmc.dwg, 5/6/2022 9:33:54 AM, LasaMcClure



LEGEND

- ZONE NAME ZONE # PRESSURE ZONE
- P# PUMP HOUSE
- PRV # PRESSURE REDUCING VALVE
- TANK NAME - T# STORAGE TANK

DRAFT

horizons Engineering
 34 School Street
 Littleton, NH 03561
 Phone 603.444.4111 - Fax 603.444.1343

VILLAGE DISTRICT OF EIDELWEISS WATER SYSTEM
 BLOCK DIAGRAM
 MADISON, NEW HAMPSHIRE
 EXISTING PRESSURE ZONES 2022

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE: MARCH 2022	PROJECT #: 21201
ENG'ND BY: DMC	DRAWN BY: DMC
CHECK'D BY:	ARCHIVE #: H---
SHEET 1 OF 1	

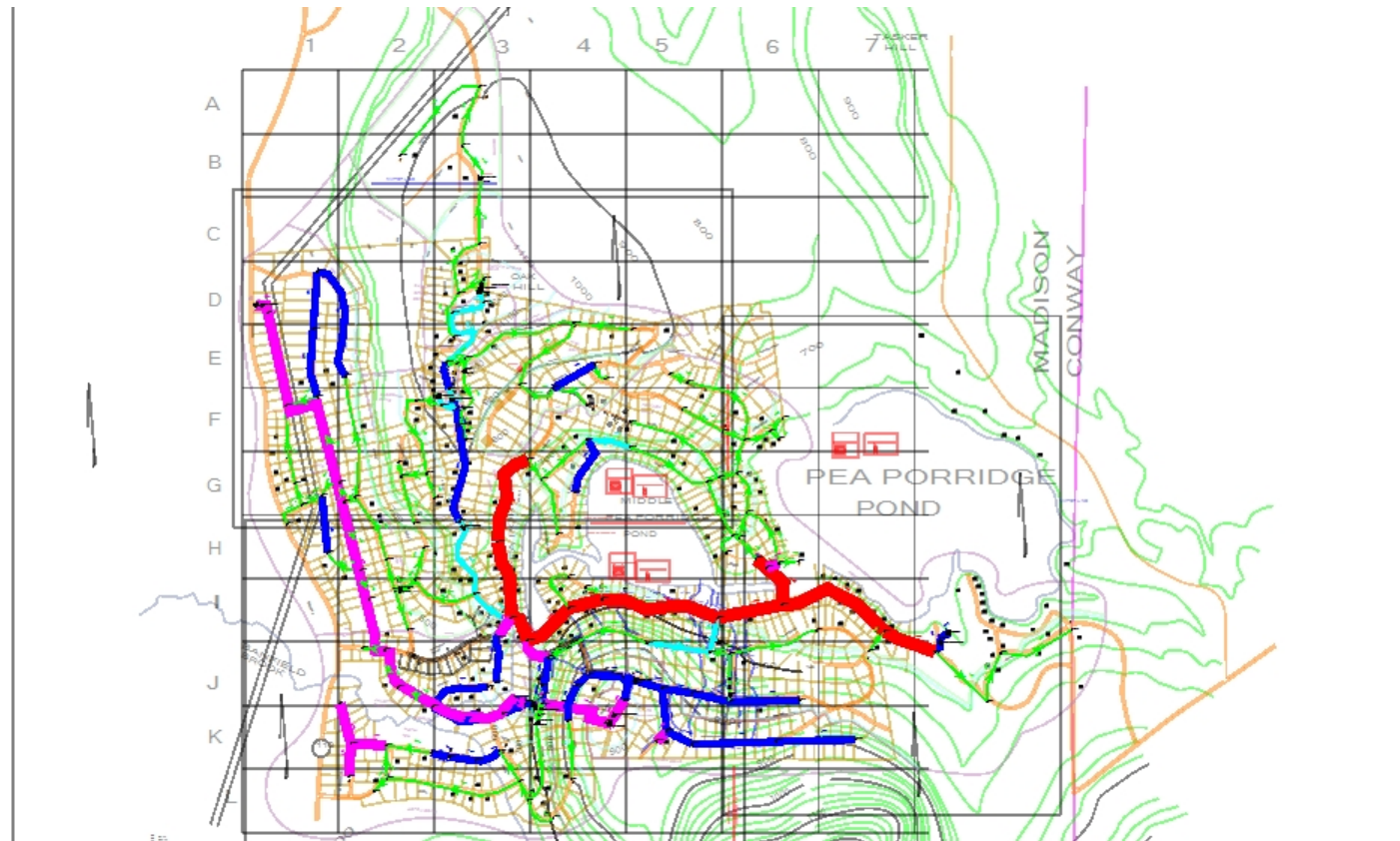
Appendix E Hydraulic Model

Eidelweiss WaterCad Report

Hydraulic Model Properties

Title
Engineer
Company
Date 4/18/2022
Notes

Pressure Zones



Eidelweiss WaterCad Report

Network Inventory			
Pipe	172	-Constant Speed - Four-Quadrant Characteristics	7
Lateral	0	-Constant Speed - Pump Definition	0
Junction	146	-Shut Down After Time Delay	0
Hydrant	0	-Variable Speed/Torque	0
Tank	6	-Pump Start - Variable Speed/Torque	0
-Circular	6	Customer Meter	0
-Non-Circular	0	Pump Station	0
-Variable Area	0	Variable Speed Pump Battery	0
Reservoir	1	SCADA Element	0
Tap	0	PRV	5
Pump	7	PSV	0
-Constant Power	0	PBV	0
-Custom Extended	0	FCV	0
-Design Point (1 Point)	7	TCV	0
-Multiple Point	0	GPV	0
-Standard (3 Point)	0	Isolation Valve	1
-Standard Extended	0	Spot Elevation	0

Eidelweiss WaterCad Report

Scenario Summary

ID	1
Label	Base
Notes	
Active Topology	Base Active Topology
User Data Extensions	Base User Data Extensions
Physical	Base Physical
Demand	Base Demand
Initial Settings	Base Initial Settings
Operational	Base Operational
Age	Base Age
Constituent	Base Constituent
Trace	Base Trace
Fire Flow	Base Fire Flow
Energy Cost	Base Energy Cost
Pressure Dependent Demand	Base Pressure Dependent Demand
Transient	Base Transient
Failure History	Base Failure History
SCADA	Base SCADA
Steady State / EPS Solver Calculation Options	Base Calculation Options
Transient Solver Calculation Options	Base Calculation Options

Eidelweiss WaterCad Report

Hydraulic Summary

Time Analysis Type	Steady State	Simulation Start Date	1/1/2000
Friction Method	Hazen-Williams	Hydraulic Time Step	1.000
Accuracy	0.001	Duration	24.000
Trials	40	Calculation Type	Hydraulics Only

Eidelweiss WaterCad Report

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
45	J-1120	820.00	<None>	<Collection: 1 item>	0	1,233.19	179
41	J-1090	830.00	<None>	<Collection: 1 item>	2	1,233.19	174
44	J-1110	860.00	<None>	<Collection: 1 item>	2	1,233.15	161
43	J-1100	865.00	<None>	<Collection: 1 item>	0	1,233.19	159
40	J-1080	870.00	<None>	<Collection: 1 item>	0	1,233.48	157
54	J-1200	1,140.00	<None>	<Collection: 1 item>	0	1,477.46	146
74	J-1400	610.00	<None>	<Collection: 1 item>	2	915.07	132
47	J-1140	880.00	<None>	<Collection: 1 item>	2	1,176.97	128
48	J-1150	890.00	<None>	<Collection: 1 item>	2	1,177.18	124
50	J-1170	1,190.00	<None>	<Collection: 1 item>	0	1,476.52	124
130	J-580	560.00	<None>	<Collection: 1 item>	2	840.22	121
131	J-590	560.00	<None>	<Collection: 1 item>	0	840.22	121
56	J-1220	960.00	<None>	<Collection: 1 item>	2	1,238.26	120
121	J-50	800.00	<None>	<Collection: 1 item>	2	1,074.31	119
175	J-990	680.00	<None>	<Collection: 1 item>	0	948.65	116
213	J-5	610.00	<None>	<Collection: 1 item>	0	878.65	116
51	J-1180	1,210.00	<None>	<Collection: 1 item>	2	1,477.46	116
133	J-600	575.00	<None>	<Collection: 1 item>	2	840.25	115
128	J-560	575.00	<None>	<Collection: 1 item>	2	840.22	115

Eidelweiss WaterCad Report
Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
93	J-240	650.00	<None>	<Collection: 1 item>	0	915.21	115
59	J-1260	650.00	<None>	<Collection: 1 item>	2	915.07	115
142	J-690	650.00	<None>	<Collection: 1 item>	0	912.24	113
156	J-810	620.00	<None>	<Collection: 1 item>	0	880.59	113
72	J-1390	880.00	<None>	<Collection: 1 item>	2	1,137.94	112
115	J-440	585.00	<None>	<Collection: 1 item>	2	840.31	110
129	J-570	585.00	<None>	<Collection: 1 item>	0	840.31	110
127	J-550	585.00	<None>	<Collection: 1 item>	0	840.29	110
95	J-260	660.00	<None>	<Collection: 1 item>	0	915.19	110
97	J-280	660.00	<None>	<Collection: 1 item>	0	915.18	110
100	J-300	660.00	<None>	<Collection: 1 item>	0	915.12	110
107	J-370	660.00	<None>	<Collection: 1 item>	0	915.12	110
109	J-390	660.00	<None>	<Collection: 1 item>	0	915.12	110
116	J-450	660.00	<None>	<Collection: 1 item>	0	915.12	110
108	J-380	660.00	<None>	<Collection: 1 item>	2	915.08	110
122	J-500	660.00	<None>	<Collection: 1 item>	0	915.07	110
77	J-1415	820.00	<None>	<Collection: 1 item>	2	1,074.42	110
98	J-290	665.00	<None>	<Collection: 1 item>	2	915.14	108
101	J-310	665.00	<None>	<Collection: 1 item>	2	915.12	108

Eidelweiss WaterCad Report

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
126	J-540	595.00	<None>	<Collection: 1 item>	2	840.33	106
103	J-330	670.00	<None>	<Collection: 1 item>	0	915.12	106
87	J-190	670.00	<None>	<Collection: 1 item>	2	914.93	106
73	J-140	830.00	<None>	<Collection: 1 item>	0	1,074.43	106
30	J-10	830.00	<None>	<Collection: 1 item>	2	1,074.42	106
105	J-350	670.00	<None>	<Collection: 1 item>	2	914.27	106
113	J-420	670.00	<None>	<Collection: 1 item>	0	914.08	106
141	J-680	670.00	<None>	<Collection: 1 item>	2	912.21	105
157	J-820	640.00	<None>	<Collection: 1 item>	2	880.53	104
79	J-1417	600.00	<None>	<Collection: 1 item>	2	840.31	104
94	J-250	675.00	<None>	<Collection: 1 item>	2	915.19	104
110	J-40	678.00	<None>	<Collection: 1 item>	2	915.77	103
102	J-320	680.00	<None>	<Collection: 1 item>	2	915.07	102
151	J-770	680.00	<None>	<Collection: 1 item>	0	914.68	102
111	J-400	680.00	<None>	<Collection: 1 item>	0	914.20	101
112	J-410	680.00	<None>	<Collection: 1 item>	2	914.08	101
146	J-720	680.00	<None>	<Collection: 1 item>	2	913.72	101
148	J-740	680.00	<None>	<Collection: 1 item>	2	913.72	101
80	J-1419	680.00	<None>	<Collection: 1 item>	0	913.71	101

Eidelweiss WaterCad Report
Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
135	J-620	680.00	<None>	<Collection: 1 item>	2	913.50	101
136	J-630	680.00	<None>	<Collection: 1 item>	0	913.37	101
137	J-640	680.00	<None>	<Collection: 1 item>	2	913.29	101
138	J-650	680.00	<None>	<Collection: 1 item>	0	912.44	101
140	J-670	680.00	<None>	<Collection: 1 item>	2	912.24	100
114	J-430	685.00	<None>	<Collection: 1 item>	2	914.11	99
52	J-1190	1,250.00	<None>	<Collection: 1 item>	2	1,478.17	99
91	J-220	690.00	<None>	<Collection: 1 item>	0	916.08	98
96	J-270	690.00	<None>	<Collection: 1 item>	2	915.18	97
147	J-730	690.00	<None>	<Collection: 1 item>	0	914.68	97
106	J-360	690.00	<None>	<Collection: 1 item>	2	914.12	97
39	J-1070	1,010.00	<None>	<Collection: 1 item>	2	1,234.08	97
104	J-340	700.00	<None>	<Collection: 1 item>	0	914.62	93
99	J-30	500.00	<None>	<Collection: 1 item>	0	711.99	92
86	J-180	705.00	<None>	<Collection: 1 item>	0	915.10	91
145	J-710	705.00	<None>	<Collection: 1 item>	0	912.44	90
134	J-610	720.00	<None>	<Collection: 1 item>	0	925.96	89
132	J-60	720.00	<None>	<Collection: 1 item>	2	925.92	89
191	J-1	720.00	<None>	<Collection: 1 item>	2	925.44	89

Eidelweiss WaterCad Report

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
89	J-200	710.00	<None>	<Collection: 1 item>	0	915.14	89
154	J-80	640.00	<None>	<Collection: 1 item>	0	841.23	87
88	J-20	725.00	<None>	<Collection: 1 item>	0	925.02	87
38	J-1060	1,040.00	<None>	<Collection: 1 item>	0	1,238.26	86
208	J-4	1,040.00	<None>	<Collection: 1 item>	2	1,237.56	85
37	J-1050	1,040.00	<None>	<Collection: 1 item>	2	1,237.05	85
84	J-160	750.00	<None>	<Collection: 1 item>	2	945.26	84
165	J-90	880.00	<None>	<Collection: 1 item>	0	1,074.45	84
150	J-760	725.00	<None>	<Collection: 1 item>	2	915.07	82
149	J-750	725.00	<None>	<Collection: 1 item>	0	915.07	82
92	J-230	735.00	<None>	<Collection: 1 item>	2	924.15	82
152	J-780	710.00	<None>	<Collection: 1 item>	2	895.66	80
32	J-1000	765.00	<None>	<Collection: 1 item>	2	948.65	79
58	J-1240	955.00	<None>	<Collection: 1 item>	0	1,138.00	79
85	J-170	765.00	<None>	<Collection: 1 item>	0	945.26	78
35	J-1030	770.00	<None>	<Collection: 1 item>	0	948.70	77
159	J-840	570.00	<None>	<Collection: 1 item>	2	747.73	77
49	J-1160	1,000.00	<None>	<Collection: 1 item>	2	1,177.61	77
174	J-980	555.00	<None>	<Collection: 1 item>	2	731.49	76

Eidelweiss WaterCad Report

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
34	J-1020	775.00	<None>	<Collection: 1 item>	2	948.70	75
163	J-880	560.00	<None>	<Collection: 1 item>	2	731.48	74
170	J-940	560.00	<None>	<Collection: 1 item>	2	731.45	74
33	J-1010	780.00	<None>	<Collection: 1 item>	0	948.65	73
167	J-910	565.00	<None>	<Collection: 1 item>	0	731.46	72
125	J-530	545.00	<None>	<Collection: 1 item>	2	710.97	72
81	J-1421	780.00	<None>	<Collection: 1 item>	0	945.26	72
143	J-70	680.00	<None>	<Collection: 1 item>	2	842.31	70
164	J-890	570.00	<None>	<Collection: 1 item>	0	731.52	70
169	J-930	570.00	<None>	<Collection: 1 item>	0	731.46	70
162	J-870	575.00	<None>	<Collection: 1 item>	2	731.53	68
168	J-920	575.00	<None>	<Collection: 1 item>	2	731.46	68
124	J-520	555.00	<None>	<Collection: 1 item>	2	711.01	67
153	J-790	805.00	<None>	<Collection: 1 item>	2	959.67	67
78	J-1416	580.00	<None>	<Collection: 1 item>	2	731.49	66
123	J-510	560.00	<None>	<Collection: 1 item>	2	711.29	65
118	J-470	565.00	<None>	<Collection: 1 item>	2	711.86	64
171	J-950	585.00	<None>	<Collection: 1 item>	0	731.49	63
155	J-800	931.00	<None>	<Collection: 1 item>	0	1,074.52	62

Eidelweiss WaterCad Report

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
158	J-830	605.00	<None>	<Collection: 1 item>	0	747.81	62
117	J-460	700.00	<None>	<Collection: 1 item>	0	842.31	62
90	J-210	780.00	<None>	<Collection: 1 item>	2	915.16	58
139	J-660	780.00	<None>	<Collection: 1 item>	2	911.76	57
82	J-1422	611.30	<None>	<Collection: 1 item>	2	742.54	57
166	J-900	605.00	<None>	<Collection: 1 item>	2	731.52	55
119	J-480	590.00	<None>	<Collection: 1 item>	0	711.95	53
120	J-490	590.00	<None>	<Collection: 1 item>	2	711.85	53
172	J-960	610.00	<None>	<Collection: 1 item>	2	731.52	53
63	J-1300	825.00	<None>	<Collection: 1 item>	0	945.26	52
161	J-860	615.00	<None>	<Collection: 1 item>	2	732.16	51
173	J-970	615.00	<None>	<Collection: 1 item>	2	731.68	50
144	J-700	800.00	<None>	<Collection: 1 item>	2	913.17	49
66	J-1330	835.00	<None>	<Collection: 1 item>	2	945.22	48
160	J-850	625.00	<None>	<Collection: 1 item>	0	733.02	47
65	J-1320	840.00	<None>	<Collection: 1 item>	2	945.23	46
69	J-1360	860.00	<None>	<Collection: 1 item>	2	945.23	37
67	J-1340	860.00	<None>	<Collection: 1 item>	2	945.22	37
75	J-1410	880.00	<None>	<Collection: 1 item>	2	949.30	30

Eidelweiss WaterCad Report
Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
68	J-1350	882.00	<None>	<Collection: 1 item>	0	945.22	27
71	J-1380	900.00	<None>	<Collection: 1 item>	0	953.97	23
46	J-1130	1,210.00	<None>	<Collection: 1 item>	2	1,239.29	13
53	J-120	910.00	<None>	<Collection: 1 item>	0	926.00	7
61	J-1290	700.00	<None>	<Collection: 1 item>	2	711.99	5
36	J-1040	945.00	<None>	<Collection: 1 item>	2	952.99	3
64	J-1310	665.00	<None>	<Collection: 1 item>	2	670.00	2
55	J-1210	1,235.00	<None>	<Collection: 1 item>	0	1,239.82	2
57	J-1230	945.00	<None>	<Collection: 1 item>	2	949.68	2

Eidelweiss WaterCad Report
Pipe Table - Time: 0.00 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C
188	P-1570	227	PMP-6 REINACH HYDRO	J-800	6.0	Ductile Iron	130.0
190	P-1725	72	J-20	J-1	2.0	Ductile Iron	130.0
192	P-10	52	T-1 REINACH	J-120	6.0	Ductile Iron	130.0
193	P-1240	70	T-2 JUNG FRAU	PMP-2 JUNG FRAU	4.0	Ductile Iron	130.0
194	P-1420a	49	PMP-3 MUDDY BEACH	J-1310	4.0	Ductile Iron	130.0
195	P-1726	71	J-1	J-610	2.0	Ductile Iron	130.0
196	P-1250	89	PMP-2 JUNG FRAU	J-610	6.0	Ductile Iron	130.0
197	P-480	95	T-2 JUNG FRAU	J-1290	4.0	Ductile Iron	130.0
198	P-400	79	J-400	J-410	2.0	Ductile Iron	130.0
199	P-820a	86	PMP-4 OAK RIDGE	J-790	3.0	Ductile Iron	130.0
200	P-610	101	J-230	J-610	4.0	Ductile Iron	130.0
203	P-1320	113	T1 CHOCORUA	J-1230	3.0	Ductile Iron	130.0
206	P-430	145	PMP-1 DPW WELL	J-30	6.0	Ductile Iron	130.0
207	P-1370	116	J-4	J-1050	2.0	Ductile Iron	130.0
210	P-1600	123	J-4	J-1060	2.0	Ductile Iron	130.0
211	P-1420	135	PMP-3 MUDDY BEACH	J-330	4.0	Ductile Iron	130.0
212	P-1590	124	J-810	J-5	2.0	Ductile Iron	130.0
214	P-1440	125	T-6 MB WELL	J-1310	4.0	Ductile Iron	130.0
215	P-1120	117	J-1040	PMP-5 CHOCORUA	4.0	Ductile Iron	130.0
216	P-1120a	139	PMP-5 CHOCORUA	J-1220	3.0	Ductile Iron	130.0
217	P-890	139	J-850	J-860	2.0	Ductile Iron	130.0
218	P-640	142	J-620	J-630	2.0	Ductile Iron	130.0
219	P-1280	140	T-4 SUMMIT	J-1210	3.0	Ductile Iron	130.0
221	P-710	151	J-670	J-690	2.0	Ductile Iron	130.0
223	P-380	164	J-370	J-390	8.0	Ductile Iron	130.0
225	P-1580	173	J-1320	J-1360	6.0	Ductile Iron	130.0
226	P-1060	178	J-1000	J-1010	2.0	Ductile Iron	130.0
227	P-1350	181	J-1040	J-1230	3.0	Ductile Iron	130.0
228	P-1650	208	J-1380	J-1040	4.0	Ductile Iron	130.0
229	P-700	217	J-670	J-680	2.0	Ductile Iron	130.0
230	P-1180	246	J-1100	J-1110	2.0	Ductile Iron	130.0
231	P-1330	222	J-440	J-570	4.0	Ductile Iron	130.0
232	P-410	288	J-410	J-420	2.0	Ductile Iron	130.0
233	P-600	226	J-550	J-600	2.0	Ductile Iron	130.0
234	P-1727	232	J-610	J-60	2.0	Ductile Iron	130.0

Eidelweiss WaterCad Report

Pipe Table - Time: 0.00 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C
236	P-1736	235	J-630	J-640	2.0	Ductile Iron	130.0
237	P-1010	243	J-860	J-970	2.0	Ductile Iron	130.0
238	P-190	241	J-180	J-200	2.0	Ductile Iron	130.0
239	P-440	243	J-380	J-450	2.0	Ductile Iron	130.0
240	P-270	250	J-270	J-280	2.0	Ductile Iron	130.0
241	P-70	250	J-70	J-80	2.0	Ductile Iron	130.0
242	P-1470	295	J-800	J-90	4.0	Ductile Iron	130.0
243	P-940	295	J-900	J-970	2.0	Ductile Iron	130.0
244	P-950	266	J-900	J-920	2.0	Ductile Iron	130.0
245	P-970	272	J-920	J-930	2.0	Ductile Iron	130.0
246	P-530	278	J-520	J-530	2.0	Ductile Iron	130.0
247	P-730	280	J-650	J-710	2.0	Ductile Iron	130.0
248	P-960	380	J-910	J-920	2.0	Ductile Iron	130.0
249	P-770	300	J-730	J-750	2.0	Ductile Iron	130.0
251	P-1070	307	J-1000	J-1020	2.0	Ductile Iron	130.0
252	P-310	307	J-310	J-320	2.0	Ductile Iron	130.0
253	P-1080	314	J-1020	J-1030	2.0	Ductile Iron	130.0
254	P-1733	328	J-1417	J-540	4.0	Ductile Iron	130.0
256	P-1310	330	J-1060	J-1220	4.0	Ductile Iron	130.0
257	P-1720	320	J-1410	J-1230	2.0	Ductile Iron	130.0
258	P-420	321	J-400	J-430	2.0	Ductile Iron	130.0
259	P-1560	113	T-1 REINACH	PMP-6 REINACH HYDRO	6.0	Ductile Iron	130.0
260	P-230	387	J-220	J-240	6.0	Ductile Iron	130.0
261	P-1731	324	J-440	J-1417	4.0	Ductile Iron	130.0
262	P-390	327	J-400	J-390	2.0	Ductile Iron	130.0
263	P-690	342	J-650	J-670	2.0	Ductile Iron	130.0
264	P-1360	380	J-500	J-240	8.0	Ductile Iron	130.0
265	P-1260	347	J-1180	J-1190	2.0	Ductile Iron	130.0
266	P-1520	348	J-1320	J-1330	4.0	Ductile Iron	130.0
267	P-1400	300	J-480	J-1290	4.0	Ductile Iron	130.0
269	P-910	363	J-870	J-880	2.0	Ductile Iron	130.0
270	P-1660	396	J-1240	J-1390	2.0	Ductile Iron	130.0
271	P-460	479	J-70	J-460	2.0	Ductile Iron	130.0
272	P-250	652	J-250	J-260	2.0	Ductile Iron	130.0
273	P-880(1)	396	J-830	J-1422	2.0	Ductile Iron	130.0

Eidelweiss WaterCad Report
Pipe Table - Time: 0.00 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C
274	P-1210	421	J-1130	J-1210	3.0	Ductile Iron	130.0
275	P-590	399	J-580	J-590	6.0	Ductile Iron	130.0
276	P-990	400	J-940	J-950	2.0	Ductile Iron	130.0
277	P-560	400	J-550	J-560	2.0	Ductile Iron	130.0
278	P-850	403	J-810	J-820	2.0	Ductile Iron	130.0
279	P-1160	510	J-1080	J-1090	2.0	Ductile Iron	130.0
280	P-670	417	J-640	J-650	2.0	Ductile Iron	130.0
281	P-260	416	J-250	J-270	8.0	Ductile Iron	130.0
282	P-1450	427	J-290	J-200	3.0	Ductile Iron	130.0
283	P-580	428	J-560	J-580	6.0	Ductile Iron	130.0
286	P-540	441	J-80	J-540	2.0	Ductile Iron	130.0
287	P-1190	484	J-1090	J-1120	2.0	Ductile Iron	130.0
288	P-920	488	J-870	J-890	2.0	Ductile Iron	130.0
289	P-130	422	J-90	J-140	4.0	Ductile Iron	130.0
290	P-220	461	J-220	J-230	4.0	Ductile Iron	130.0
291	P-150(2)	467	J-1421	J-160	4.0	Ductile Iron	130.0
293	P-510	476	J-470	J-510	2.0	Ductile Iron	130.0
294	P-520	484	J-510	J-520	2.0	Ductile Iron	130.0
295	P-660	524	J-640	J-430	2.0	Ductile Iron	130.0
296	P-870	489	J-830	J-840	2.0	Ductile Iron	130.0
297	P-360	546	J-300	J-370	8.0	Ductile Iron	130.0
299	P-1490	517	J-1300	J-1320	4.0	Ductile Iron	130.0
301	P-1735	524	J-1419	J-720	3.0	Ductile Iron	130.0
302	P-810	554	J-500	J-780	3.0	Ductile Iron	130.0
303	P-1270	596	J-1180	J-1200	2.0	Ductile Iron	130.0
304	P-570	548	J-560	J-570	2.0	Ductile Iron	130.0
305	P-1680	586	J-1400	J-1260	4.0	Ductile Iron	130.0
306	P-170	576	J-160	J-180	2.0	Ductile Iron	130.0
307	P-1170	583	J-1090	J-1100	4.0	Ductile Iron	130.0
308	P-1050	588	J-990	J-1000	2.0	Ductile Iron	130.0
310	P-340	619	J-340	J-350	2.0	Ductile Iron	130.0
313	P-240	647	J-240	J-250	8.0	Ductile Iron	130.0
314	P-370	783	J-1170	J-1180	2.0	Ductile Iron	130.0
315	P-760	739	J-720	J-740	4.0	Ductile Iron	130.0
316	P-320	662	J-310	J-330	8.0	Ductile Iron	130.0
317	P-790	706	J-730	J-770	2.0	Ductile Iron	130.0
318	P-930	689	J-890	J-900	4.0	Ductile Iron	130.0

Eidelweiss WaterCad Report

Pipe Table - Time: 0.00 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C
319	P-1730	693	J-1416	J-980	4.0	Ductile Iron	130.0
320	P-50	706	J-10	J-50	2.0	Ductile Iron	130.0
321	P-490	769	J-470	J-490	4.0	Ductile Iron	130.0
322	P-630	724	J-410	J-620	2.0	Ductile Iron	130.0
323	P-450	775	J-430	J-450	2.0	Ductile Iron	130.0
324	P-750	736	J-720	J-730	2.0	Ductile Iron	130.0
325	P-840	830	J-780	J-810	2.0	Ductile Iron	130.0
326	P-1230	755	J-1150	J-1160	2.0	Ductile Iron	130.0
327	P-200	774	J-200	J-210	3.0	Ductile Iron	130.0
328	P-290	790	J-290	J-300	8.0	Ductile Iron	130.0
329	P-820	921	J-780	PMP-4 OAK RIDGE	3.0	Ductile Iron	130.0
330	P-1729	839	J-950	J-1416	4.0	Ductile Iron	130.0
331	P-880(2)	852	J-1422	J-850	2.0	Ductile Iron	130.0
332	P-160	839	J-160	J-170	4.0	Ductile Iron	130.0
333	P-900	852	J-860	J-870	2.0	Ductile Iron	130.0
334	P-470	913	J-470	J-480	4.0	Ductile Iron	130.0
335	P-330	876	J-330	J-340	2.0	Ductile Iron	130.0
336	P-1710	1,050	J-1020	J-1410	2.0	Ductile Iron	130.0
337	P-350	950	J-350	J-360	2.0	Ductile Iron	130.0
338	P-800	954	J-760	J-500	8.0	Ductile Iron	130.0
339	P-980	952	J-930	J-940	2.0	Ductile Iron	130.0
340	P-1550	958	J-1340	J-1350	4.0	Ductile Iron	130.0
341	P-1290	1,048	J-210	J-40	2.0	Ductile Iron	130.0
342	P-680	1,191	J-650	J-660	2.0	Ductile Iron	130.0
343	P-1150	1,054	J-1070	J-1080	2.0	Ductile Iron	130.0
344	P-1540	1,016	J-1330	J-1340	4.0	Ductile Iron	130.0
345	P-1734	1,069	J-620	J-1419	2.0	Ductile Iron	130.0
346	P-780	1,185	J-750	J-760	8.0	Ductile Iron	130.0
347	P-1020	1,069	J-970	J-950	2.0	Ductile Iron	130.0
349	P-180	1,107	J-180	J-190	2.0	Ductile Iron	130.0
350	P-1640	1,209	J-790	J-1380	4.0	Ductile Iron	130.0
352	P-720	1,311	J-630	J-700	2.0	Ductile Iron	130.0
353	P-1220	1,334	J-1150	J-1140	2.0	Ductile Iron	130.0
354	P-300	1,458	J-300	J-310	8.0	Ductile Iron	130.0
355	P-1040	1,464	J-980	J-960	4.0	Ductile Iron	130.0
356	P-1140	1,453	J-1050	J-1070	2.0	Ductile Iron	130.0

Eidelweiss WaterCad Report

Pipe Table - Time: 0.00 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C
357	P-280	1,455	J-270	J-290	8.0	Ductile Iron	130.0
358	P-1000	1,482	J-850	J-960	2.0	Ductile Iron	130.0
359	P-550	1,655	J-80	J-550	2.0	Ductile Iron	130.0
360	P-830	6,959	J-30	J-1290	6.0	Ductile Iron	130.0
Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)	
False	0.000	16	0.18	0.000	False	0	
False	0.000	-14	1.43	0.006	False	0	
False	0.000	18	0.20	0.000	False	0	
False	0.000	160	4.09	0.018	False	0	
False	0.000	0	0.00	0.000	False	0	
False	0.000	-16	1.63	0.007	False	0	
False	0.000	160	1.82	0.002	False	0	
False	0.000	12	0.31	0.000	False	0	
False	0.000	7	0.70	0.002	False	0	
False	0.000	80	3.62	0.020	False	0	
False	0.000	-160	4.08	0.018	False	0	
False	0.000	-68	3.08	0.015	False	0	
False	0.000	0	0.00	0.000	False	0	
False	0.000	12	1.23	0.004	False	0	
False	0.000	-14	1.43	0.006	False	0	
False	0.000	0	0.00	0.000	False	0	
False	0.000	24	2.45	0.016	False	0	
False	0.000	2	0.05	0.000	False	0	
False	0.000	0	0.00	0.000	False	0	
False	0.000	0	0.00	0.000	False	0	
False	0.000	15	1.48	0.006	False	0	
False	0.000	5	0.52	0.001	False	0	
False	0.000	18	0.82	0.001	False	0	
False	0.000	0	0.00	0.000	False	0	
False	0.000	9	0.06	0.000	False	0	
False	0.000	2	0.02	0.000	False	0	
False	0.000	0	0.00	0.000	False	0	
False	0.000	76	3.44	0.018	False	0	
False	0.000	78	1.99	0.005	False	0	
False	0.000	2	0.20	0.000	False	0	

Eidelweiss WaterCad Report

Pipe Table - Time: 0.00 hours

Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
False	0.000	2	0.20	0.000	False	0
False	0.000	2	0.05	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	3	0.31	0.000	False	0
False	0.000	8	0.81	0.002	False	0
False	0.000	-2	0.20	0.000	False	0
False	0.000	-2	0.20	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	12	1.23	0.004	False	0
False	0.000	16	0.41	0.000	False	0
False	0.000	-4	0.39	0.001	False	0
False	0.000	2	0.25	0.000	False	0
False	0.000	0	0.04	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	-6	0.64	0.001	False	0
False	0.000	-2	0.20	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	-6	0.15	0.000	False	0
False	0.000	2	0.05	0.000	False	0
False	0.000	-6	0.61	0.001	False	0
False	0.000	3	0.27	0.000	False	0
False	0.000	16	0.18	0.000	False	0
False	0.000	152	1.72	0.002	False	0
False	0.000	-4	0.10	0.000	False	0
False	0.000	-9	0.97	0.003	False	0
False	0.000	4	0.41	0.001	False	0
False	0.000	-120	0.77	0.000	False	0
False	0.000	-8	0.82	0.002	False	0
False	0.000	4	0.10	0.000	False	0
False	0.000	-10	0.26	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	2	0.20	0.000	False	0

Eidelweiss WaterCad Report

Pipe Table - Time: 0.00 hours

Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
False	0.000	0	0.00	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	22	2.25	0.013	False	0
False	0.000	-18	0.82	0.001	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	-2	0.16	0.000	False	0
False	0.000	2	0.21	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	4	0.41	0.001	False	0
False	0.000	8	0.82	0.002	False	0
False	0.000	30	0.19	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	2	0.02	0.000	False	0
False	0.000	8	0.82	0.002	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	1	0.06	0.000	False	0
False	0.000	6	0.15	0.000	False	0
False	0.000	-158	4.03	0.017	False	0
False	0.000	2	0.05	0.000	False	0
False	0.000	6	0.61	0.001	False	0
False	0.000	4	0.41	0.001	False	0
False	0.000	-7	0.71	0.002	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	18	0.11	0.000	False	0
False	0.000	8	0.20	0.000	False	0
False	0.000	-2	0.10	0.000	False	0
False	0.000	108	4.89	0.035	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	-2	0.20	0.000	False	0
False	0.000	-2	0.05	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	2	0.05	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	4	0.41	0.001	False	0
False	0.000	32	0.20	0.000	False	0
False	0.000	-6	0.61	0.001	False	0
False	0.000	2	0.05	0.000	False	0

Eidelweiss WaterCad Report

Pipe Table - Time: 0.00 hours

Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
False	0.000	4	0.03	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	1	0.02	0.000	False	0
False	0.000	-1	0.04	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	2	0.05	0.000	False	0
False	0.000	5	0.49	0.001	False	0
False	0.000	-6	0.64	0.001	False	0
False	0.000	-6	0.64	0.001	False	0
False	0.000	26	2.66	0.018	False	0
False	0.000	-4	0.41	0.001	False	0
False	0.000	-2	0.09	0.000	False	0
False	0.000	26	0.16	0.000	False	0
False	0.000	80	3.62	0.020	False	0
False	0.000	1	0.01	0.000	False	0
False	0.000	20	2.04	0.011	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	5	0.47	0.001	False	0
False	0.000	-10	0.26	0.000	False	0
False	0.000	4	0.41	0.001	False	0
False	0.000	-4	0.41	0.001	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	-8	0.05	0.000	False	0
False	0.000	0	0.04	0.000	False	0
False	0.000	0	0.00	0.000	False	0
False	0.000	-4	0.42	0.001	False	0
False	0.000	4	0.41	0.001	False	0
False	0.000	4	0.41	0.001	False	0
False	0.000	2	0.05	0.000	False	0
False	0.000	-2	0.23	0.000	False	0
False	0.000	-6	0.04	0.000	False	0
False	0.000	2	0.21	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	78	1.99	0.005	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	2	0.20	0.000	False	0
False	0.000	8	0.05	0.000	False	0

Eidelweiss WaterCad Report
Pipe Table - Time: 0.00 hours

Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
False	0.000	-3	0.09	0.000	False	0
False	0.000	8	0.82	0.002	False	0
False	0.000	28	0.18	0.000	False	0
False	0.000	5	0.56	0.001	False	0
False	0.000	4	0.41	0.001	False	0
False	0.000	0	0.00	0.000	False	0

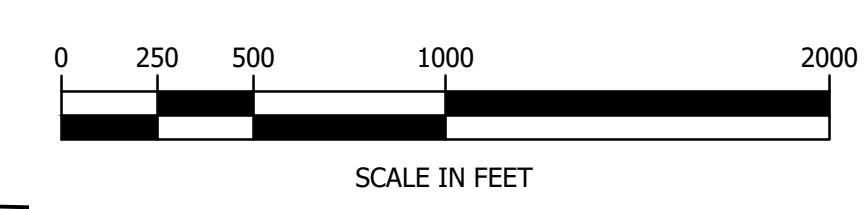
Eidelweiss WaterCad Report
Pump Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
176	PMP-1 DPW WELL	500.00	DPW	Off	540.00	711.99	0	0.00
177	PMP-2 JUNG FRAU	708.00	Jung Frau	On	710.74	926.18	160	215.44
178	PMP-3 MUDDY BEACH	667.50	muddy beach	Off	670.00	915.12	0	0.00
179	PMP-4 OAK RIDGE	777.00	Oak Ridge	On	877.17	961.41	80	84.24
180	PMP-5 CHOCORUA	950.00	Chocorua	Off	952.99	1,238.26	0	0.00
181	PMP-6 REINACH HYDRO	900.00	Reinach	On	926.00	1,074.53	16	148.54

SECTION 1

SECTION 2

SECTION 3



**FOR REVIEW
NOT FOR CONSTRUCTION**

DATE OF PRINT
JUNE 27 2022
HORIZONS ENGINEERING

© 2022
horizons
Engineering
All rights reserved

horizons
Engineering
Civil and Structural Engineering
Land Surveying and Environmental Consulting
MAINE • NEW HAMPSHIRE • VERMONT
www.horizonsengineering.com

**VILLAGE DISTRICT OF
EIDELWEISS
BOARD OF COMMISSIONERS
ASSET MANAGEMENT PLAN**

MADISON, NEW HAMPSHIRE

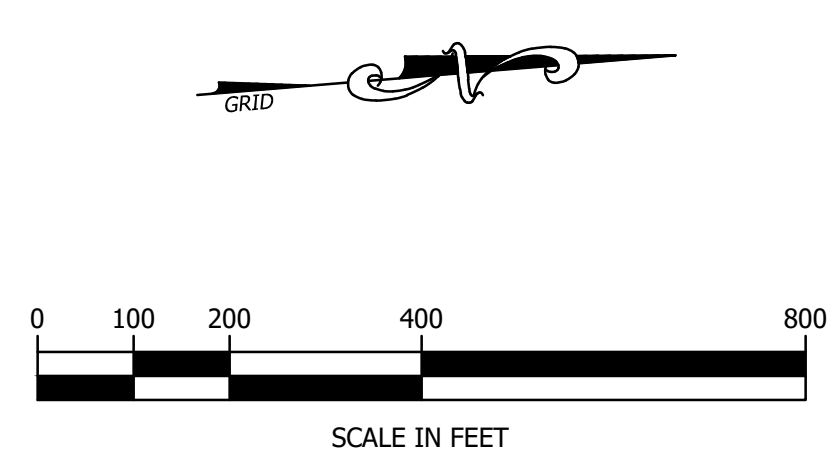
MAP OVERVIEW

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE:	PROJECT #:
JUNE 2022	21201
ENG'D BY:	DRAWN BY:
-	APH
CHECK'D BY:	ARCHIVE #:
DMC	H-___

SHEET 1 OF 1

I:\192.168.50.34\hthorjrd_2021121201 Eidelweiss Village District AMP_S000DWG\WaterCAD\201_map and model_0827.dwg, Overview, 6/27/2022 11:10:02 AM, AndyHoltmann



FOR REVIEW
NOT FOR CONSTRUCTION

DATE OF PRINT
JUNE 27 2022
HORIZONS ENGINEERING

© 2022
horizons
Engineering
All rights reserved

horizons
Engineering
Civil and Structural Engineering
Land Surveying and Environmental Consulting
MAINE • NEW HAMPSHIRE • VERMONT
www.horizonsengineering.com

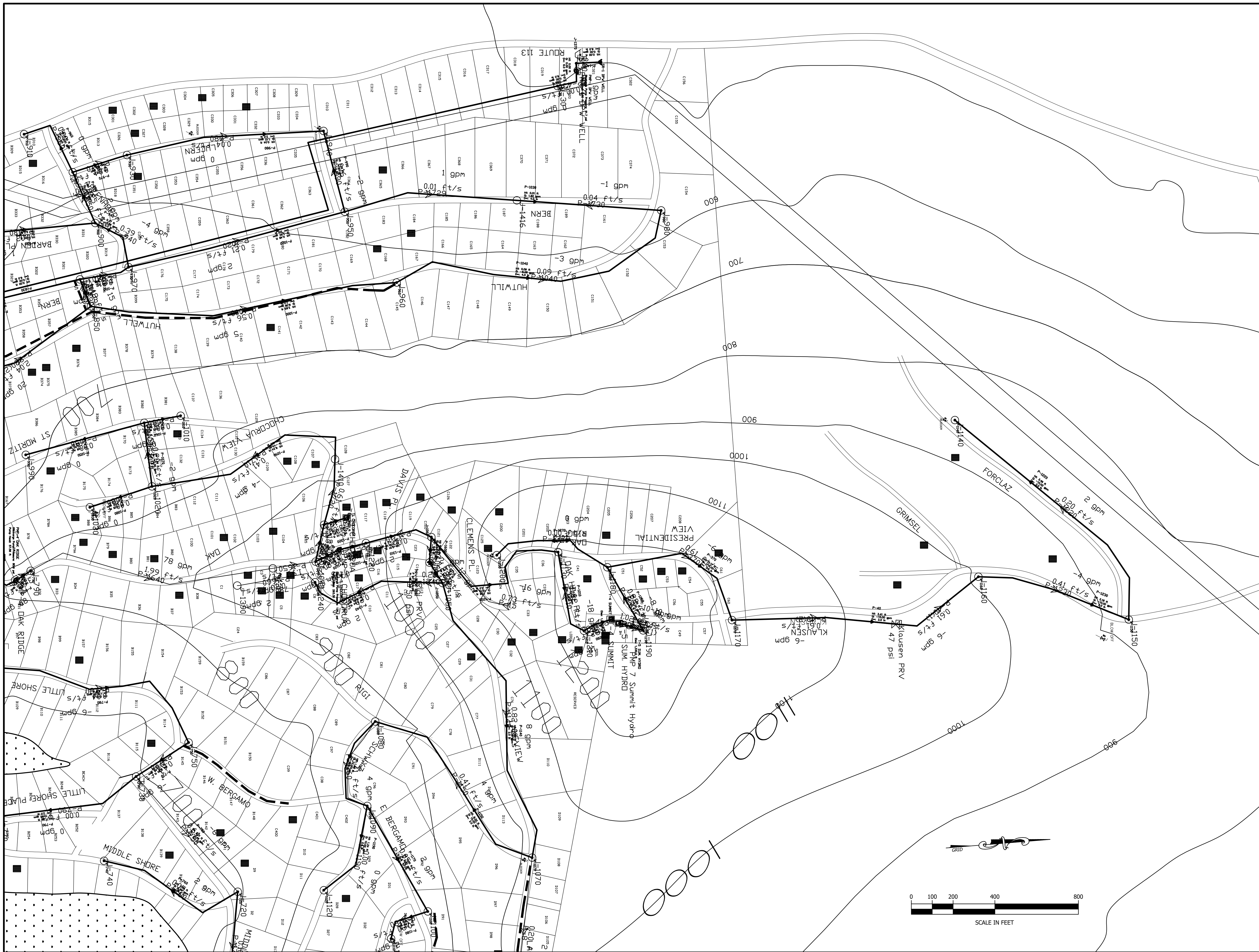
VILLAGE DISTRICT OF
EIDELWEISS
BOARD OF COMMISSIONERS
ASSET MANAGEMENT PLAN
MADISON, NEW HAMPSHIRE

SECTION 1

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE:	PROJECT #:
JUNE 2022	21201
ENGIN'D BY:	DRAWN BY:
-	APH
CHECK'D BY:	ARCHIVE #:
DMC	H-___

\\192.168.50.34\hhorizon_2021\12101_Eidelweiss_Village_District_Amp_S000\DWG\WaterCAD\2101_map_and_model_0827.dwg, Section 1, 6/27/2022 11:10:06 AM, AndyHelmann



FOR REVIEW
NOT FOR CONSTRUCTION

DATE OF PRINT
JUNE 27 2022
HORIZONS ENGINEERING

© 2022
horizons
Engineering
All rights reserved

horizons
Engineering
Civil and Structural Engineering
Land Surveying and Environmental Consulting
MAINE • NEW HAMPSHIRE • VERMONT
www.horizonsengineering.com

VILLAGE DISTRICT OF
EIDELWEISS
BOARD OF COMMISSIONERS
ASSET MANAGEMENT PLAN
MADISON, NEW HAMPSHIRE

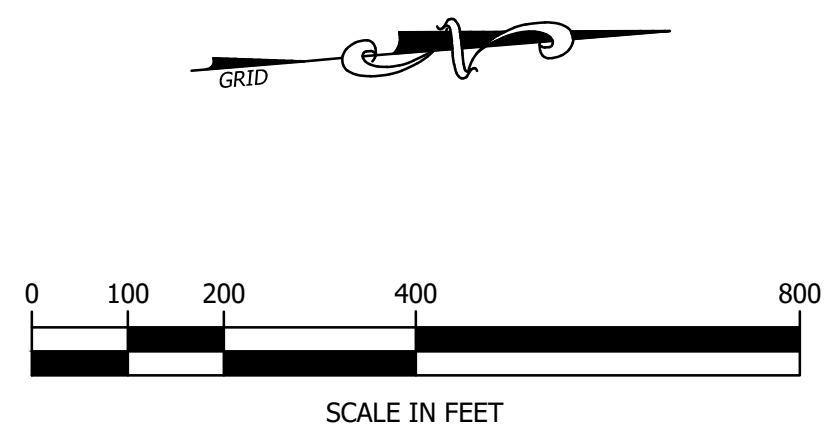
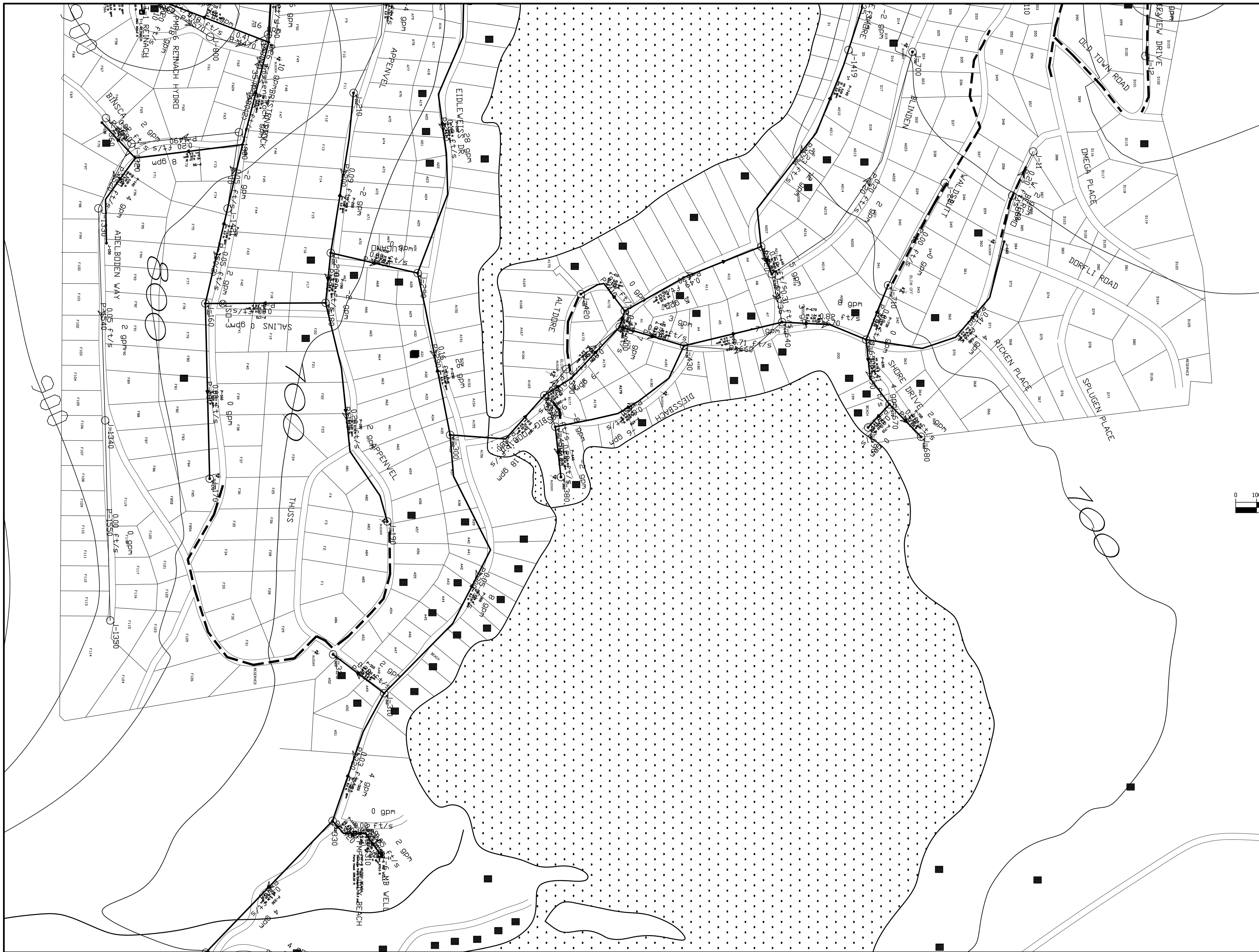
SECTION 2

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE:	JUNE 2022	PROJECT #:	21201
ENGINE'D BY:	-	DRAWN BY:	APH
CHECK'D BY:	DMC	ARCHIVE #:	H-___

SHEET 3 OF 4

\\192.168.50.34\h\hord_2021121201 Eidelweiss Village District AMP S000DWG\WaterCAD\21201_map and model_0827.dwg, Section 2, 6/27/2022 11:10:11 AM, AndyHeilmann



FOR REVIEW
NOT FOR CONSTRUCTION

DATE OF PRINT
JUNE 27 2022
HORIZONS ENGINEERING

© 2022
horizons
Engineering
All rights reserved

horizons
Engineering
Civil and Structural Engineering
Land Surveying and Environmental Consulting
MAINE • NEW HAMPSHIRE • VERMONT
www.horizonsengineering.com

VILLAGE DISTRICT OF
EIDELWEISS
BOARD OF COMMISSIONERS
ASSET MANAGEMENT PLAN
MADISON, NEW HAMPSHIRE

SECTION 3

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE:	JUNE 2022	PROJECT #:	21201
ENG'ND BY:	-	DRAWN BY:	APH
CHECK'D BY:	DMC	ARCHIVE #:	H-___
SHEET 4 OF 4			

\\192.168.50.34\hthorj_202112101 Eidelweiss Village District AMP_S000DWGSS\WaterCAD\201_map and model_0827.dwg, Section 3, 6/27/2022 11:10:16 AM, AndyHelmann

Appendix F Communication Brochure

Levels of Service

The foundation of an asset management plan that establishes customer expectations & allows recovery of full cost of doing business & establishes SMART Goals.

- Meet or Exceed Federal, State and local Safe Drinking Water Act Primary Drinking Water Standards
- Maintain Operating fund financial health
- Review Asset Management Plan Annually
- Reduce system losses by 3% per year and unaccounted water to less than 10%
- Maintain adequate customer delivery pressure under all flows
- Respond within 24 hours to water quality or pressure complaint
- Repair watermain breaks withing 48 hours of identification

Why Asset Management?

Allocate People, Time, and Resources Appropriately

Focus on Making Cost-Effective Decisions

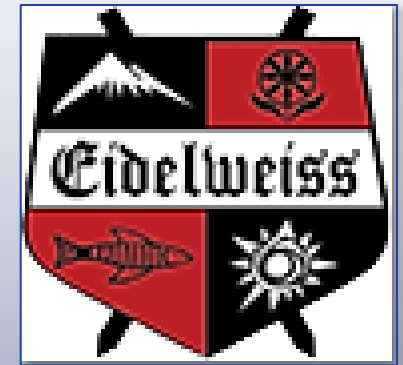
Provide a Sustainable Level of Service for Customers

PREPARED BY:

horizons
Engineering

34 SCHOOL STREET
LITTLETON, NH 03561
PHONE 603-444-4111 FAX
603-444-1343
www.horizonsengineering.com

Village District of Eidelweiss Water System



Village District of Eidelweiss
Board of Commissioners
1680 Conway Road
Madison, New Hampshire 03849
Tel.: 603-367-9022.
Email: Office@vdoe-nh.org
Web: <https://vdoe-nh.org/>

Summer 2022

Asset Management Plan

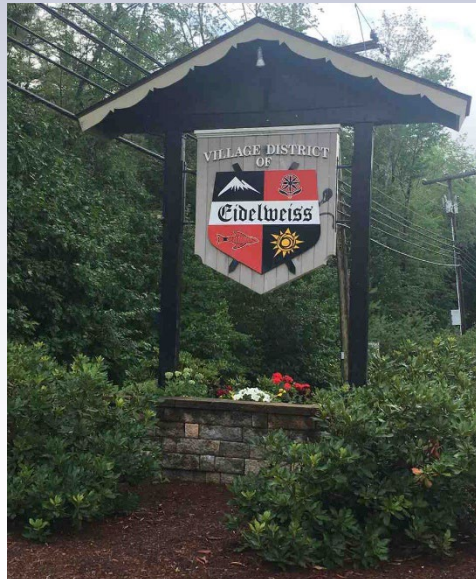
Components of an asset management plan include:

- Assessment of Assets
 - Comprehensive List
 - Condition
 - Useful Life
 - Critical Assets
- Mission Statement
 - Growth Projection
- Level of Service Agreement
- Capital Investment Program
- Financial Strategies
- Communication Plan

Asset Inventory

Asset	Inventory (Number)
Wells	3
Pumping Equipment	9
Storage Tanks	6
Distribution Mains	86540 ft
Buildings	7
Booster Stations	6
Treatment Equipment	1
Pressure Reducing Vaults	3
Blowoff / Bleeder	14/14

Current infrastructure assets have a replacement value estimated at \$23.2 million.



Current Status

The Village District of Eidelweiss has been working to make improvements to its infrastructure that is past its useful life. Recent improvements include

- 2020 Installation of approximately 2500 linear feet of watermain on Interlaken Circle, Altdorf Road and Adelbaden Road
- 2021 Installation of at 120,000-gallon storage tank at the Reinach Site
- 2021 Installation of Pressure Reducing vaults
- Removal of 3 bleeders

VDOE also continues to make operational improvements for efficiency within the zones to improve metering and operating pressures. VDOE will also continue to take advantage of NHDES's sustainability grant programs for leak detection and additional asset management planning.

Capital Improvement Plan

As with any Public Water system, there is always more work to be accomplished. The Village District of Eidelweiss should plan for future improvements as listed below. This plan is a 15 year plan that proposes an expenditure of approximately \$200,000 per year.

- Chocorua Pump Station Upgrades
- Water Main Replacement on Bergamo, Aspen (new line), Big Loop Road, Interlaken Circle, Oak Ridge, Appenvel, Aspen, Blinden, Brenner, Forclaz, Winnington
- DPW controls, well and pump upgrades
- Summit Building and storage upgrades
- Jungfrau storage, controls and building upgrades
- Muddy Beach Pump station building, controls and piping upgrades
- Oak Ridge tank and controls upgrade
- Lucern and Upper Lakeview watermain improvements

Appendix G Pump House Data Sheets

CHOCOURA PUMP HOUSE

Year Built: 1975, ELEVATION 950



PUMP DATA: TWO (2) 5 HP VERTICAL TURBINE BOOSTER PUMPS WITH VARIABLE FREQUENCY DRIVES (VFD), 34 GPM NOMINAL

PUMPING FROM: 5000-GALLON STEEL TANK FILLED FROM OAK RIDGE STATION SYSTEM PRESSURE

PUMPING TO: SUMMIT PUMP STATION, GRAVITY DISTRIBUTION CHOCORUA ZONE

APPROXIMATE USERS: ____

DAILY FLOW: 6000 - 9000 GPD

CONTROLS: SCADA

ASSESSMENT: PUMP HOUSE IS IN FAIR CONDITION WITH REASONABLE ACCESS FOR MAINTENANCE AND OPERATION

BOOSTER PUMPS AND 5000-GALLON TANK



DPW WELL

Year Built: 1993, ELEVATION 500



PUMP DATA: TWO (1) 20 HP SUBMERSIBLE WELL PUMP WITH VARIABLE FREQUENCY DRIVE (VFD), 80 GPM NOMINAL

PUMPING FROM: DPW WELL 100 FEET DEEP PRODUCING 145 - 175 GPM, STATIC PRESSURE = 90 PSI

PUMPING TO: JUNG FRAU STORAGE TANK THROUGH DEDICATED MAIN WITH 20 SERVICES ONLINE OFF JUNG FRAU TANK PRESSURE

APPROXIMATE USERS: _____

DAILY FLOW: 70,000 – 106,000 GPD

CONTROLS: SCADA

ASSESSMENT: GOOD CONDITION

MAG METER AND CHEM INJECTION



JUNG FRAU PUMP HOUSE

Year Built: 1970, ELEVATION 708



PUMP DATA: TWO (2) 20 HP VERTICAL TURBINE BOOSTER PUMPS WITH VARIABLE FREQUENCY DRIVES (VFD), 145 GPM NOMINAL

PUMPING FROM: 5000-GALLON STEEL TANK FILLED BY DPW WELL

PUMPING TO: REINACH TANK, ASPEN ZONE, JUNG FRAU ZONE, OAK RIDGE PUMP STATION – STATIC PRESSURE = 101 PSI

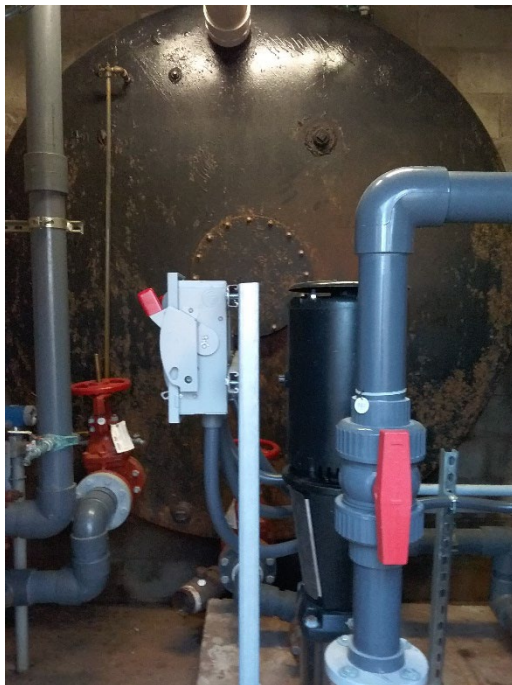
APPROXIMATE USERS: _____

APPROXIMATE DAILY FLOW: 15,000 -25,000 GPD

CONTROLS: SCADA

ASSESSMENT: THE PUMP STATION HAS HAD RECENT UPGRADES TO PUMPS, PIPING AND CONTROLS, THE BUILDING IS IN NEED OF GENERAL MAINTENANCE, INCLUDING THE WALKWAY TO THE LOWER LEVEL SHOULD BE UPGRADED FOR TO ALLOW A SAFE ACCESS.

BOOSTER PUMPS AND 5000-GALLON TANK



MUDDY BEACH PUMP HOUSE

Year Built: 1985, ELEVATION 687



PUMP DATA: TWO (2) 7.5 HP VERTICAL TURBINE PUMPS WITH VARIABLE FREQUENCY DRIVES (VFD), 80 GPM NOMINAL

PUMPING FROM: MUDDY BEACH WELL 1 (7.5 HP) AND 2 (2 HP) THAT FILL A 5000-GALLON ATMOSPHERIC TANK, WELLS PRODUCE 70 GPM AND 50 GPM, RESPECTIVELY. STATIC PRESSURE = 125 PSI

PUMPING TO: REINACH STORAGE TANK THROUGH THE DISTRIBUTION SYSTEM, IF OAK RIDGE IS PUMPING THE FLOW IS SPLIT BETWEEN REINACH AND OAK RIDGE, OTHERWISE ALL GOES REINACH

APPROXIMATE USERS: _____

DAILY FLOW: 20,000 – 40,000 GPD

CONTROLS: SCADA

ASSESSMENT: BUILDING NEEDS TO BE UPGRADED, INSTALL CONCRETE FLOOR, REPAIR SIDING, AND GENERAL MAINTENANCE.

5000-GALLON TANK AND PUMPS



OAK RIDGE PUMP HOUSE

Year Built: 1975, ELEVATION 777



PUMP DATA: TWO (2) 5 HP HORIZONTAL BOOSTER PUMPS WITH VARIABLE FREQUENCY DRIVES (VFD), 54 GPM NOMINAL

PUMPING FROM: REINACH STATION SYSTEM PRESSURE, 66 PSI SUCTION PRESSURE

PUMPING TO: CHOCORUA PUMP STATION ATMOSPHERIC STEEL TANK, 60 PSI STATIC PRESSURE

APPROXIMATE USERS: _____

DAILY FLOW: 13,000 – 18,000 GPD

CONTROLS: SCADA

ASSESSMENT: AN OLD HYDROPNEUMATIC TANK IS DISCONNECTED FROM SYSTEM BUT IS STILL IN PLACE. THE

ACCESS TO THE PUMPS IS VIA A LADDER, WHICH WOULD BE CONSIDERD CONFINED SPACE BY OSHA.

BOOSTER PUMPS



REINACH PUMP HOUSE

Year Built: 2020, ELEVATION 930



PUMP DATA: TWO (2) 3 HP VERTICAL TURBINE BOOSTER PUMPS WITH VARIABLE FREQUENCY DRIVES (VFD), 53 GPM NOMINAL

PUMPING FROM: 120,000-GALLON CONCRETE TANK

PUMPING TO: REINACH ZONE PRESSURE ZONE, GRAVITY TO OAK RIDGE PUMP STATION AND COMO PRV ZONE

APPROXIMATE USERS: _____

DAILY FLOW: 70,000 – 106,000 GPD

CONTROLS: SCADA

ASSESSMENT: NEW PUMP STATION 2021

BOOSTER PUMPS



SUMMIT PUMP HOUSE

Year Built: 1980, ELEVATION 1242



PUMP DATA: TWO (2) 5 HP VERTICAL TURBINE PUMPS WITH VARIABLE FREQUENCY DRIVES (VFD), 70 GPM NOMINAL

PUMPING FROM: 10,000-GALLON AND 30,000-GALLON ATMOSPHERIC STEEL TANKS, 5000-GALLON HYDROPNEUMATIC TANK, 35 PSI – 50 PSI PRESSURE SETTING

PUMPING TO: SUMMIT GRAVITY ZONE AND HYDRO ZONE, RIGI ZONE

APPROXIMATE USERS: _____

DAILY FLOW: 4000 - 8000 GPD

CONTROLS: SCADA

ASSESSMENT: PUMP STATION BUILDING IS IN NEED OF GENERAL MAINTENANCE, INSULATE ALL EXTERIOR WALLS.

SUMMIT PRESSURE PUMPS

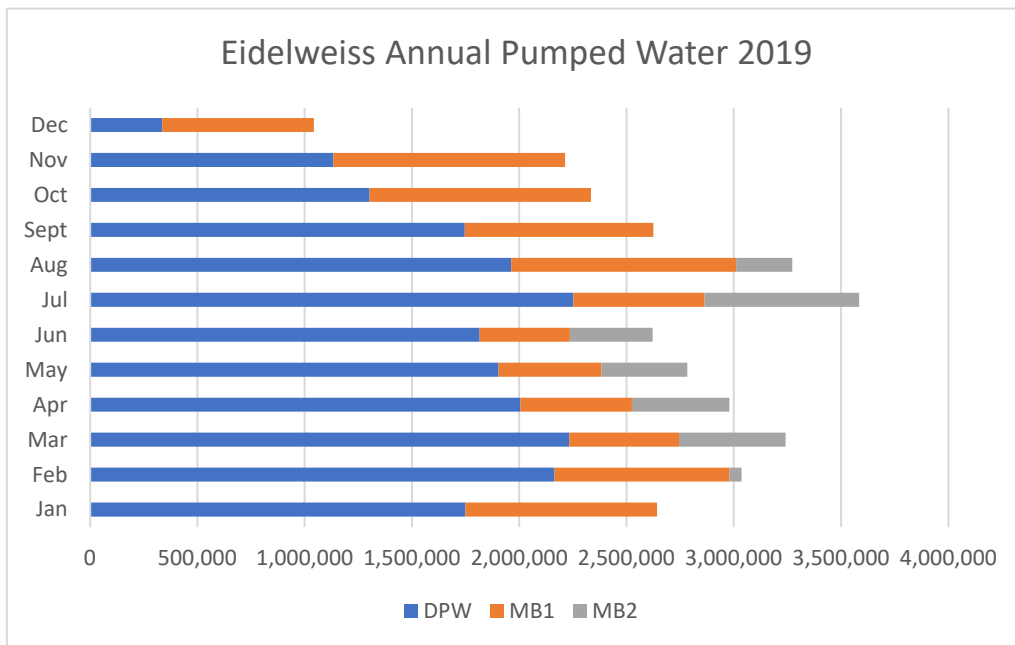


Appendix H Water Use Summary

Village District of Edelweiss Water Usage
2019 Yearly Summary

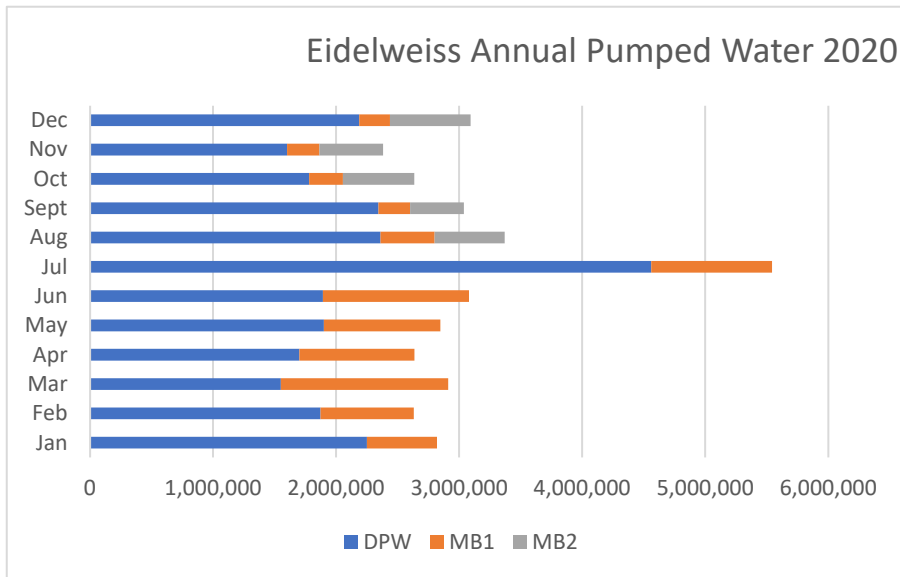
	DPW	MB1	MB2	TOTAL
Jan	1,749,234	893,725		2,642,959
Feb	2,164,575	814,503	57,560	3,036,638
Mar	2,233,455	511,602	496,369	3,241,426
Apr	2,005,500	520,252	453,740	2,979,492
May	1,903,545	480,653	399,708	2,783,906
Jun	1,815,975	420,454	385,103	2,621,532
Jul	2,252,775	611,647	720,062	3,584,484
Aug	1,962,254	1,048,535	261,715	3,272,504
Sept	1,746,021	879,253	0	2,625,274
Oct	1,302,779	1,031,902	0	2,334,681
Nov	1,134,411	1,079,439	0	2,213,850
Dec	335,983	706,857	0	1,042,840
TOTAL	20,606,507	8,998,822	2,774,257	32,379,586

* December no data for most of the month



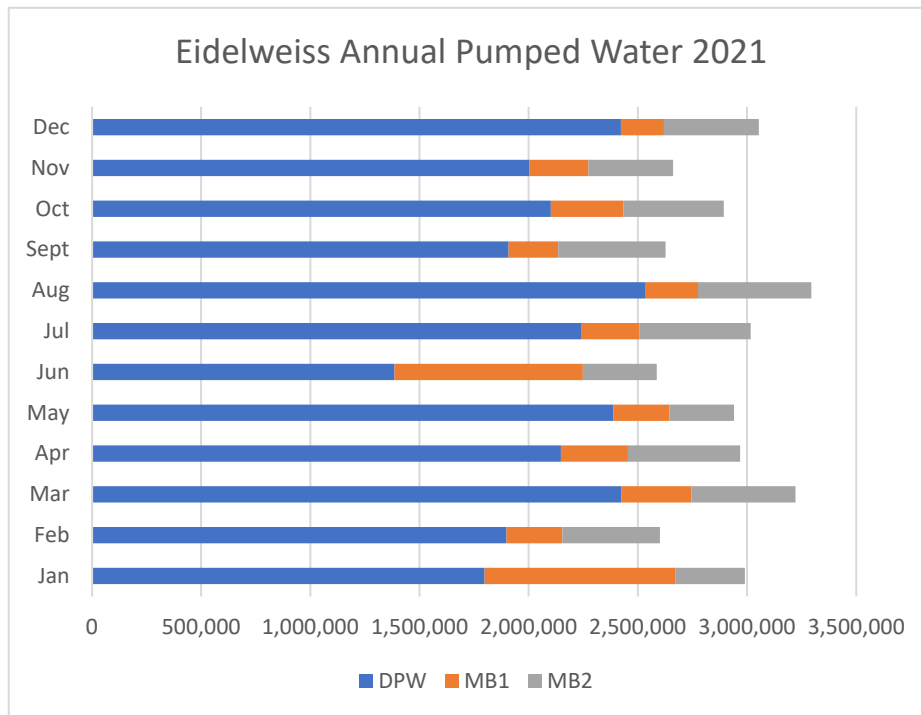
Village District of Eidelweiss Water Usage
2020 Yearly Summary

	DPW	MB1	MB2	
Jan	2,251,295	569,028	0	2,820,323
Feb	1,873,319	758,886	0	2,632,205
Mar	1,550,856	1,360,771	0	2,911,627
Apr	1,702,322	934,953	0	2,637,275
May	1,900,461	946,523	0	2,846,984
Jun	1,893,293	1,186,987	0	3,080,280
Jul	4,561,361.2	981,911	0	5,543,272
Aug	2,360,846	439,375	570,398	3,370,619
Sept	2,344,665	257,110	437,251	3,039,026
Oct	1,781,126	274,706	579,201	2,635,033
Nov	1,602,137	262,867	517,691	2,382,695
Dec	2,188,158	250,423	654,974	3,093,555
	26,009,839	8,223,540	2,759,515	36,992,894



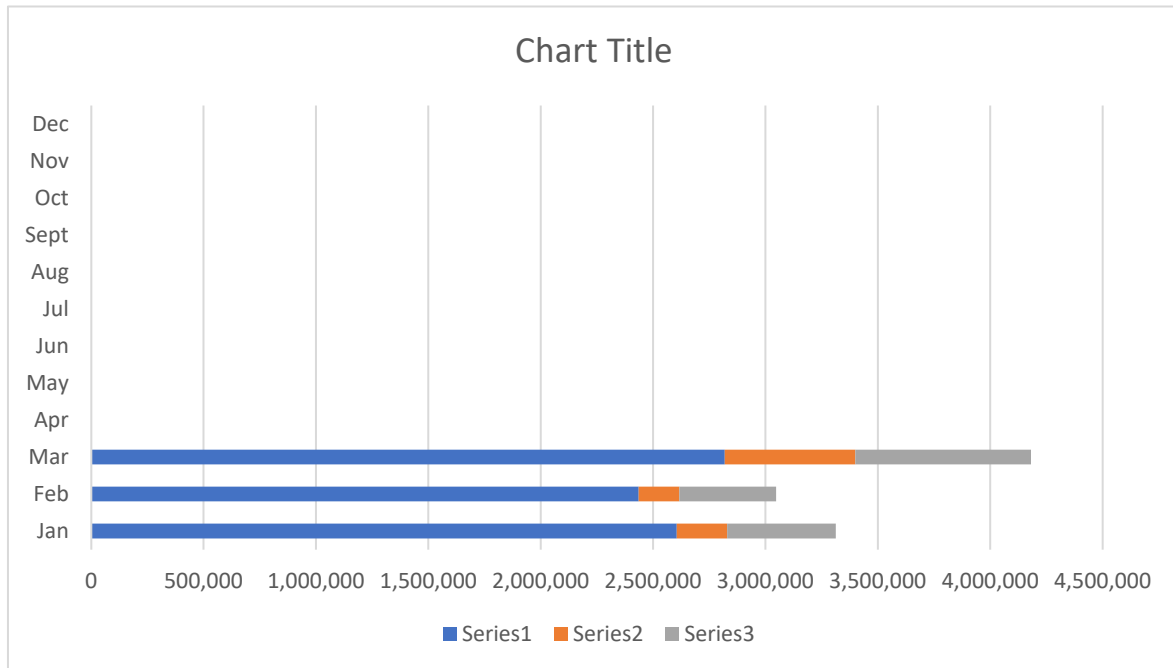
Village District of Eidelweiss Water Usage
2021 Yearly Summary

	DPW	MB1	MB2	TOTAL
Jan	1,798,337	874,725	317,219	2,990,281
Feb	1,898,382	256,091	446,698	2,601,171
Mar	2,425,709	319,012	477,635	3,222,356
Apr	2,147,594	307,477	513,324	2,968,395
May	2,387,499	257,403	295,860	2,940,762
Jun	1,385,882	861,967	339,180	2,587,029
Jul	2,242,951	265,068	508,725	3,016,744
Aug	2,536,240	239,779	518,932	3,294,951
Sept	1,908,177	227,019	491,923	2,627,119
Oct	2,101,597	331,978	460,222	2,893,797
Nov	2,002,757	270,732	388,254	2,661,743
Dec	2,422,264	197,800	434,127	3,054,191
TOTAL	25,257,389	4,409,051	5,192,099	34,858,539
Daily	69198.326	12079.5918	14224.9288	95502.847
% Supply	72%	13%	15%	



2022 Yearly Summary

	DPW	MB1	MB2	
Jan	2,605,460	224,119	483,716	3,313,295
Feb	2,435,678	180,832	431,084	3,047,594
Mar	2,818,987	581,145	781,557	4,181,688
Apr				0
May				0
Jun				0
Jul				0
Aug				0
Sept				0
Oct				0
Nov				0
Dec				0
	7,860,125	986,096	1,696,357	10,542,577



Village District of Eidelweiss Water Usage
Yearly Usage Percentage Change

	2019	% change 19-20	2020	% change 20-21	2021	% change 19-21
Jan	2642959	7%	2820323	6%	2990281	13%
Feb	3036638	-13%	2632205	-1%	2601171	-14%
Mar	3241426	-10%	2911627	11%	3222356	-1%
Apr	2979492	-11%	2637275	13%	2968395	0%
May	2783906	2%	2846984	3%	2940762	6%
Jun	2621532	17%	3080280	-16%	2587029	-1%
July						
Aug	3272504	3%	3370619	-2%	3294951	1%
Sept	2625274	16%	3039026	-14%	2627119	0%
Oct	2334681	13%	2635033	10%	2893797	24%
Nov	2213850	8%	2382695	12%	2661743	20%
Dec						
TOTAL	27752262	2%	28356067	2%	28787604	4%

The following months were removed from data comparison due to leak and meter not working.

Jul	3584484	55%	5543272.17	-46%	3016744	-16%
Dec	1042840	197%	3093555	-1%	3054191	193%

Average Day (GPD) by Year

	88711.195		101350.395		95502.8466
--	-----------	--	------------	--	------------

Village District of Eidelweiss Water Usage

	DPW	MB1	MB2	Actual Monthly Flow	Actual Daily Flow	# Connections	Daily Design Flow/Unit	Days	Design Monthly Flow	Actual Vs Design Monthly Flow Diff
Jan	1,798,337	874,725	317,219	2,990,281	96,461	483	188	31	2,807,438	182,844
Feb	1,898,382	256,091	446,698	2,601,171	92,899	483	188	28	2,535,750	65,421
Mar	2,425,709	319,012	477,635	3,222,356	103,947	483	188	31	2,807,438	414,919
Apr	2,147,594	307,477	513,324	2,968,395	98,947	483	188	30	2,716,875	251,520
May	2,387,499	257,403	295,860	2,940,762	94,863	483	188	31	2,807,438	133,325
Jun	1,385,882	861,967	339,180	2,587,029	86,234	483	188	30	2,716,875	-129,846
Jul	2,242,951	265,068	508,725	3,016,744	97,314	483	188	31	2,807,438	209,307
Aug	2,536,240	239,779	518,932	3,294,951	106,289	483	188	31	2,807,438	487,514
Sept	1,908,177	227,019	491,923	2,627,119	87,571	483	188	30	2,716,875	-89,756
Oct	2,101,597	331,978	460,222	2,893,797	93,348	483	188	31	2,807,438	86,360
Nov	2,002,757	270,732	388,254	2,661,743	88,725	483	188	30	2,716,875	-55,132
Dec	2,422,264	197,800	434,127	3,054,191	98,522	483	188	31	2,807,438	246,754
TOTAL	25,257,389	4,409,051	5,192,099	34,858,539						
Daily	69198.326	12079.5918	14224.9288	95502.847						
% Supply	72%	13%	15%							

Based on 2021 Data

Winter Average Actual Daily Flow Dec, Jan, Feb 95,961
 Fall Average Actual Daily Flow Sept, Oct, Nov 89,881 6,079 Daily Winter Loss
 Summer Average Actual Daily Flow Jul Aug 101,802

Design Flow Vs Actual Flow

477 - 6 of which are duplexes. Total 483 single family homes. Assume 3 bedroom
 In accordance with ENV-Dw 405.10 use 150GPD/bedroom 450 217,350
 Use 2.5 people per house*75GPD/person 187.5 90,563

Appendix I Consumer Confidence Report

2021 Consumer Confidence Report

(2020 data)

Village District of Eidelweiss

PWS ID#1461010

Introduction

Like any responsible public water system, our mission is to deliver the best quality drinking water and reliable service at an appropriate cost.

Aging infrastructure presents challenges to drinking water safety, and continuous improvement is needed to maintain the quality of life we desire for today and for the future.

In the past year, we have continued to make major system improvements. We have secured an asset management grant and will be updating and creating proper mapping. The creation and start-up of the new Reinach atmospheric tanks and pressure zone was finalized. Many leaks were found and repaired, and we are continuing to look into future projects including water main replacement to increase the reliability and cost effectiveness of the system. These investments along with on-going operation and maintenance costs are supported by water user fees. When considering the high value we place on water, it is truly a bargain to have water service that protects public health and provides us with the high-quality of life we enjoy.

What is a Consumer Confidence Report?

The Consumer Confidence Report (CCR) details the quality of your drinking water, where it comes from, and where you can get more information. This annual report documents all detected primary and secondary drinking water parameters and compares them to their respective standards

NOW IT COMES WITH A LIST OF INGREDIENTS.



known as Maximum Contaminant Levels (MCLs).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The US Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

What is the source of my drinking water?

Our water comes from 2 Bedrock wells located at 134 Eidelweiss Drive, commonly referred to as Muddy Beach well field, and one Gravel packed well

located at 1680 Conway Road, commonly referred to as the DPW well. The water is treated to raise pH with Sodium Bicarbonate and Sodium Hydroxide, commonly referred to as Caustic Soda.

Why are contaminants in my water? Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Do I need to take special precautions? Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Source Water Assessment Summary

DES prepared drinking water source assessment reports for all public water systems between 2000 and 2003 in an effort to assess the vulnerability of each of the state's public water supply sources. Included in the report is a map of each source water protection area, a list of potential and known contamination sources, and a summary of available protection options. [The results of the assessment, prepared on 8/31/2000](#) is noted below:

Muddy Beach Bedrock Well (BRW-007) received 1 high susceptibility rating, 0 medium susceptibility ratings, and 11 low susceptibility ratings. Muddy Beach Bedrock Well (BRW-008) received 1 high susceptibility rating, 0 medium susceptibility ratings, and 11 low susceptibility ratings.

DPW Gravel Packed Well (GPW-010) received 2 high susceptibility ratings, 3 medium susceptibility ratings, and 7 low susceptibility ratings.

Note: This information is over 20 years old and includes information that was current at the time the report was completed. Therefore, some of the ratings might be different if updated to reflect current information. At the present time, DES has no plans to update this data.

The complete Assessment Report is available for review at VDOE's office. For more information, call the office at 603-367-9022, or visit the DES Drinking Water Source Assessment website at <http://des.nh.gov/organization/divisions/water/dwgb/dwspp/dwsap.htm>.

How can I get involved?

The best way to get involved is to attend VDOE's Commissioner's meetings, which are posted on the VDOE website and bulletin boards. If there are specific issues you wish to be considered at the meeting, please call ahead to be placed on the agenda. The VDOE phone number is 603-367-9022.

For more information about your drinking water, please call the VDOE office at 603-367-9022, or the primary operator, Simply Water at 603-730-5297. Although we do not have specific dates for public participation events or meetings, feel free to contact us with any questions you may have.

Violations and Other information: We received a Lead Consumer Notice Violation this past year. The reason was that consumers had not been notified of results of monitoring for lead in drinking water. The issue was corrected one week.

Definitions

Ambient Groundwater Quality Standard or AGQS: The maximum concentration levels for contaminants in groundwater that are established under RSA 485-C, the Groundwater Protection Act.

Action Level or AL: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

Abbreviations

BDL: Below Detection Limit
mg/L: milligrams per Liter

NA: Not Applicable

ND: Not Detectable at testing limits

NTU: Nephelometric Turbidity Unit

pCi/L: picoCurie per Liter

ppb: parts per billion

ppm: parts per million

RAA: Running Annual Average

TTHM: Total Trihalomethanes

UCMR: Unregulated Contaminant Monitoring Rule

ug/L: micrograms per Liter

The following applies if these contaminants are present – see table for detected levels.

Drinking Water Contaminants:

Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water system is responsible for high quality drinking water but cannot control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water from your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot water for drinking and cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://water.epa.gov/drink/info/lead/index.cfm>

2021 Report (2020 data)

VIOLATIONS

VIOLATIONS	Date of violation	Explain violation	Length of violation	Action taken to resolve	Health Effects (Env-Dw 804-810)
Lead Consumer Notice	12/31/20	The Lead Consumer Notice confirms that consumers have been notified of results of monitoring for lead in drinking water.	7 days- Returned to compliance 1/06/21	Form was completed	N/A

LEAD AND COPPER

Contaminant (Units)	Action Level	90 th percentile sample value *	Date	# of sites above AL	Violation Yes/No	Likely Source of Contamination	Health Effects of Contaminant
Copper (ppm)	1.3	0.126	9/23/20		No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Lead (ppb)	0.015	0.0024	9/23/20		No	Corrosion of household plumbing systems, erosion of natural deposits	(15 ppb in more than 5%) Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791). (above 15 ppb) Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

DETECTED WATER QUALITY RESULTS

Contaminant (Units)	Level Detected*	MCL	MCL G	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Radioactive Contaminants						
Compliance Gross Alpha (pCi/L)	6.9 3/18/2020	15	0	No	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (ug/L)	17.5 3/18/20	30	0	No	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Combined Radium 226 + 228 (pCi/L)	2 3/18/20	5	0	No	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Inorganic Contaminants						
Nitrate (as Nitrogen) (ppm)	0.51	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	(5 ppm through 10ppm) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider. (Above 10 ppm) Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Sodium	6.59 – 50.1 2018	No limit	No limit	No	Natural deposits	Water with high sodium content may taste salty.

Appendix J Customer by Zone

**Village District of Eidelweiss
Customer by Zone as of 3-8-22**

Zone Street Tax Map a Street Address

Summit Hydro

8

Summit

Klausen

206-001	7 KLAUSEN ROAD
206-002	9 KLAUSEN ROAD
206-003	11 KLAUSEN ROAD
206-016	17 KLAUSEN ROAD
206-038	21 KLAUSEN ROAD

Grimsel

Forclaz

206-018	1 FORCLAZ ROAD
206-025	17 FORCLAZ ROAD
206-032	14 FORCLAZ ROAD

Summit Gravity

45

Upper Oak hill

101-005	78 OAK RIDGE ROAD
101-006	80 OAK RIDGE ROAD
101-007	84 OAK RIDGE ROAD
101-008	86 OAK RIDGE ROAD
101-009	88 OAK RIDGE RD
101-030	87 OAK RIDGE ROAD
104-046	30 OAK RIDGE ROAD
104-047	32 OAK RIDGE ROAD
104-048	34 OAK RIDGE ROAD
104-049	36 OAK RIDGE ROAD
104-050	38 OAK RIDGE ROAD
104-051	40 OAK RIDGE ROAD
104-052	42 OAK RIDGE ROAD
104-053	44 OAK RIDGE ROAD
104-054	46 OAK RIDGE ROAD
104-055	48 OAK RIDGE ROAD
104-056	52 OAK RIDGE ROAD
104-057	54 OAK RIDGE ROAD
104-058	56 OAK RIDGE ROAD
104-059	58 Oak Ridge Road
104-060	60 OAK RIDGE ROAD
104-061	62 OAK RIDGE ROAD
104-062	64 OAK RIDGE ROAD
104-066	59 OAK RIDGE ROAD
104-068	55 OAK RIDGE ROAD

**Village District of Eidelweiss
Customer by Zone as of 3-8-22**

Zone Street Tax Map a Street Address

104-069	53 OAK RIDGE ROAD
104-070	51 OAK RIDGE RD
104-079	49 OAK RIDGE ROAD
104-085	43 OAK RIDGE ROAD
104-088	37 OAK RIDGE ROAD
104-091	29 OAK RIDGE RD
104-092	27 OAK RIDGE RD
109-043	2 OAK RIDGE ROAD
109-044	4 OAK RIDGE ROAD
109-045	6 OAK RIDGE ROAD
109-065	10 OAK RIDGE ROAD
109-071	18 OAK RIDGE ROAD
109-073	22 OAK RIDGE ROAD
109-076	23 OAK RIDGE ROAD
109-078	19 OAK RIDGE ROAD
109-081	13 OAK RIDGE ROAD
109-083	9 OAK RIDGE ROAD
109-084	7 OAK RIDGE ROAD
109-085	5 OAK RIDGE ROAD
109-087	1 OAK RIDGE ROAD

Oak hill pl.

Rigi

23

Lakeview

104-072	6 LAKEVIEW DR
104-075	9 LAKEVIEW DRIVE
104-077	5 LAKEVIEW DRIVE
104-078	3 LAKEVIEW DR
101-037	10 UPPER LAKEVIEW DR
101-039	14 UPPER LAKEVIEW DRIVE
101-044	24 UPPER LAKEVIEW DR
101-048	29 UPPER LAKEVIEW DRIVE
101-049	27 UPPER LAKEVIEW DRIVE
101-058	15 UPPER LAKEVIEW DRIVE
104-065	3 UPPER LAKEVIEW DR
206-042	33 UPPER LAKEVIEW DRIVE
206-043	31 UPPER LAKEVIEW DRIVE

Bergamo

104-120	16 WEST BERGAMO ROAD
104-132	13 WEST BERGAMO ROAD
104-134	9 WEST BERGAMO
104-136	5 WEST BERGAMO ROAD
105-050	2 EAST BERGAMO ROAD
105-051	8 EAST BERGAMO ROAD
105-052	12 EAST BERGAMO ROAD

Village District of Edelweiss
Customer by Zone as of 3-8-22

Zone Street Tax Map a Street Address

105-054	16 EAST BERGAMO ROAD
105-061	19 EAST BERGAMO
105-067	13 EAST BERGAMO ROAD

Rigi

Chocorua

21

Choc View

104-027	24 CHOCORUA VIEW DRIVE
104-029	21 CHOCORUA VIEW DRIVE
104-030	19 CHOCORUA VIEW DR
104-031	17 CHOCORUA VIEW DR
104-032	15 CHOCORUA VIEW DRIVE
104-035	7 CHOCORUA VIEW DRIVE
104-036	5 CHOCRUA VIEW DR
104-037	3 CHOCORUA VIEW DRIVE
104-038	1 CHOCORUA VIEW DRIVE

Upper St Moritz

104-011	28 SAINT MORITZ DRIVE
104-012	30 SAINT MORITZ DRIVE
104-014	34 SAINT MORITZ DR
104-017	37 ST MORITZ DRIVE
104-019	33 SAINT MORITZ DRIVE
104-020	31 SAINT MORITZ DRIVE
104-044	21 SAINT MORITZ DRIVE
109-046	4 SAINT MORITZ DRIVE
109-046	
109-058	15 SAINT MORITZ DRIVE
109-061	7 SAINT MORITZ DRIVE
109-062	5 SAINT MORITZ DRIVE

Cumo zone

31

cumo

bern

109-005	10 BERN DRIVE
109-012	9 BERN DRIVE
109-013	7 BERN DRIVE
102-017	56 BERN DRIVE
102-019	60 BERN DR
102-020	62 BERN DRIVE
102-035	57 BERN DRIVE
102-037	53 BERN DRIVE
102-038	51 BERN DRIVE

**Village District of Eidelweiss
Customer by Zone as of 3-8-22**

Zone Street Tax Map a Street Address

103-013	44 BERN DRIVE
103-014	46 BERN DRIVE
103-016	50 BERN DRIVE
103-021	41 BERN DRIVE
103-022	39 BERN DRIVE
103-046	24 BERN DR
103-050	30 BERN DRIVE
103-051	32 BERN DRIVE
103-053	36 BERN DRIVE
103-054	38 BERN DRIVE

barden

110-018	4 BARDEN PLACE
110-020	8 BARDEN PLACE
110-021	10 BARDEN PLACE
110-022	12 BARDEN PLACE
110-023	14 BARDEN PLACE
110-026	9 BARDEN PLACE

lucern

103-059	15 LUCERNE DRIVE
103-060	13 LUCERNE DRIVE
103-062	9 LUCERNE DRIVE
103-064	5 LUCERNE DRIVE
103-071	8 LUCERNE DRIVE
103-075	18 LUCERNE DRIVE

Jungfrau

18

Winnigon

109-170	19 WINNIGON ROAD
109-171	17 WINNIGON ROAD
109-173	8 WINNIGON ROAD
109-174	10 WINNIGON ROAD
109-176	16 WINNIGON ROAD
109-178	20 WINNIGON ROAD
113-048	6 WINNIGON ROAD
113-049	13 WINNIGON ROAD
113-051	9 WINNIGON ROAD
113-052	5 WINNIGON ROAD

Grachen

**Village District of Edelweiss
Customer by Zone as of 3-8-22**

Zone Street Tax Map a Street Address

109-188	2 GRACHEN DR.
109-189	4 GRACHEN DRIVE
109-190	6 GRACHEN DRIVE
113-043	5 GRACHEN DRIVE
113-044	10 GRACHEN DRIVE
113-046	12 GRACHEN DRIVE
113-058	28 GRACHEN DRIVE
113-059	30 GRACHEN DRIVE

Aspen

40

Bergdorf

113-004	12 BURGDORF DRIVE
113-005	23 BURGDORF DRIVE
113-006	25 BURGDORF DRIVE
113-027	5 BURGDORF DRIVE
113-031	13 BURGDORF DRIVE
113-032	15 BURGDORF DRIVE
113-033	17 BURGDORF DRIVE
113-036	2 BURGDORF DRIVE

Aspen

113-037	3 ASPEN DRIVE
113-062	4 ASPEN DRIVE
113-063	6 ASPEN DRIVE
113-084	18 ASPEN DRIVE
113-087	24 ASPEN DRIVE
113-094	38 ASPEN DRIVE
113-108	19 ASPEN DRIVE
109-150	47 ASPEN DR.
109-151	45 ASPEN DRIVE
109-152	43 ASPEN DRIVE
109-156	46 ASPEN DRIVE

Grison

113-010	6 GRISON ROAD
112-020	3 GRISON ROAD
113-016	14 GRISON ROAD
113-017	16 GRISON RD
113-019	20 GRISON RD
113-020	22 GRISON ROAD
113-022	26 GRISON
113-023	28 GRISON ROAD
113-025	32 GRISON ROAD
113-111	31 GRISON ROAD
113-113	27 GRISON ROAD

Village District of Eidelweiss
Customer by Zone as of 3-8-22

Zone Street Tax Map a Street Address

113-114	25 GRISON ROAD
113-115	23 GRISON ROAD
113-116	21 GRISON RD

Granval

112-021	4 GRANDVAL WAY
112-022	6 GRANDVAL WAY
112-023	8 GRANDVAL WAY
112-025	12 GRANDVAL WAY
112-026	14 GRANDVAL WAY
113-001	15 GRANDVAL WAY
113-008	3 GRANDVAL WAY

Winnigon

Upper Winnigon

Reinach Booster

2 homes

Reinach

291

Little Pea	101-002	2 CLEMENS PLACE	
Middle Pea	101-010	1 PRESIDENTIAL VIEW DR	
	101-014	9 PRESIDENTIAL VIEW DR	
	101-017	13 PRESIDENTIAL VIEW DR	
	101-018	15 PRESIDENTIAL VIEW DR	
	101-025	10 PRESIDENTIAL VIEW DRIVE	
	101-027	6 PRESIDENTIAL VIEW DRIVE	
	101-028	4 PRESIDENTIAL VIEW DR	
	102-025	63 HUTTWIL	
	102-029	53 HUTTWIL DRIVE	
	103-029	36 HUTTWIL DR	
	103-030	38 HUTTWIL DRIVE	
	103-034	46 HUTTWIL DRIVE	
	103-036	50 HUTTWIL DRIVE	
	103-037	52 HUTTWIL DRIVE	
	103-038	54 HUTTWIL DRIVE	
	103-039	51 HUTTWIL DRIVE	
	103-042	45 HUTTWIL DRIVE	
	103-065	6 ALPENHOF ROAD	
	103-067	5 ALPENHOF ROAD	
	103-078	1582 CONWAY ROAD	
	103-079	1560 CONWAY ROAD	
	103-080	1544 CONWAY ROAD	Duplex
	103-081	1540 CONWAY ROAD	Duplex
	103-082	1522 CONWAY ROAD	Duplex

Village District of Edelweiss
Customer by Zone as of 3-8-22

Zone	Street	Tax Map a Street Address
103-083	1512 CONWAY RD	
103-084	1506 CONWAY ROAD	
103-085	1488 CONWAY ROAD	
104-002	39 HUTTWIL DRIVE	
104-005	33 HUTTWIL DRIVE	
104-009	25 HUTTWIL DRIVE	
104-081	4 PORRIDGE VIEW PLACE	
104-082	3 PORRIDGE VIEW PLACE	
104-094	22 LITTLE SHORE DRIVE	
104-096	26 LITTLE SHORE DRIVE	
104-101	2 WEST BERGAMO ROAD	
104-105	2 SCHWYZ STREET	
104-119	1 SCHWYZ STREET	
104-125	1 Visp Rd	
104-126	27 BLINDEN DRIVE	
104-127	25 BLINDEN DRIVE	
104-128	23 BLINDEN DRIVE	
104-139	2 MIDDLE SHORE DRIVE	
104-140	4 MIDDLE SHORE DR	
104-141	6 MIDDLE SHORE DRIVE	
104-142	8 MIDDLE SHORE DRIVE	
104-143	10 MIDDLE SHORE DRIVE	
104-145	22 BLINDEN DRIVE	
104-148	21 GENEVA PLACE	
104-149	19 GENEVA PLACE	
104-150	17 GENEVA PLACE	
104-151	11 GENEVA PLACE	
104-152	5 GENEVA PLACE	
104-153	10 GENEVA PLACE	
104-154	48 LITTLE SHORE DRIVE	
104-156	7 MIDDLE SHORE DRIVE	
104-157	5 MIDDLE SHORE DRIVE	
104-158	3 MIDDLE SHORE DRIVE	
104-160	51 LITTLE SHORE DRIVE	
104-161	49 LITTLE SHORE DRIVE	
104-164	43 LITTLE SHORE DRIVE	
104-166	33 LITTLE SHORE DRIVE	
104-167	29 LITTLE SHORE DRIVE	
104-169	25 LITTLE SHORE DRIVE	
104-170	23 LITTLE SHORE DRIVE	
105-002	22 Middle Shore Road	
105-004	26 MIDDLE SHORE DRIVE	
105-005	28 MIDDLE SHORE DRIVE	
105-006	30 Middle Shore Drive	

**Village District of Edelweiss
Customer by Zone as of 3-8-22**

Zone	Street	Tax Map a	Street Address
105-007			32 MIDDLE SHORE DRIVE
105-012			8 BLINDEN DRIVE
105-013			10 BLINDEN DRIVE
105-014			12 BLINDEN DRIVE
105-015			14 BLINDEN DRIVE
105-017			18 BLINDEN DRIVE
105-018			20 BLINDEN DRIVE
105-020			19 BLINDEN DRIVE
105-021			17 BLINDEN DRIVE
105-023			11 BLINDEN DR
105-029			2 PORRIDGE SHORE DRIVE
105-030			4 PORRIDGE SHORE DRIVE
105-032			6 WALDSBUT ROAD
105-034			10 WALDSBUT ROAD
105-049			3 WALDSBUT ROAD
105-074			8 PORRIDGE SHORE DRIVE
105-075			10 PORRIDGE SHORE DRIVE
105-077			9 PORRIDGE SHORE DRIVE
105-078			5 PORRIDGE SHORE DRIVE
105-079			3 PORRIDGE SHORE DRIVE
105-081			15 INTERLAKEN CIRCLE
105-082			13 INTERLAKEN CIRCLE
105-083			11 INTERLAKEN CIRCLE
105-084			9 INTERLAKEN CIRCLE
105-085			7 INTERLAKEN CIRCLE
105-086			27 DIESSBACH DRIVE
105-087			25 DIESSBACH DRIVE
105-089			26 DIESSBACH DRIVE
105-090			28 DIESSBACH DRIVE
105-093			6 INTERLAKEN CIRCLE
105-095			10 INTERLAKEN CIRCLE
105-096			12 INTERLAKEN CIRCLE
105-098			22 INTERLAKEN CIRCLE
105-099			24 INTERLAKEN CIRCLE
105-101			28 INTERLAKEN CIRCLE
105-102			32 INTERLAKEN CIRCLE
105-103			34 INTERLAKEN CIRCLE
105-104			36 INTERLAKEN CIRCLE
105-105			35 INTERLAKEN CIRCLE
105-106			33 INTERLAKEN CIRCLE
105-107			31 INTERLAKEN CIRCLE
105-110			33 MIDDLE SHORE DRIVE
105-111			31 MIDDLESORE DRIVE
105-113			27 MIDDLE SHORE DRIVE

Village District of Eidelweiss
Customer by Zone as of 3-8-22

Zone	Street	Tax Map a	Street Address
105-115			23 MIDDLE SHORE DRIVE
105-117			19 MIDDLE SHORE DRIVE
105-118			17 MIDDLE SHORE DRIVE
107-001			110 EIDELWEISS DRIVE
107-002			112 EIDELWEISS DRIVE
107-003			114 EIDELWEISS DRIVE
107-004			116 EIDELWEISS DRIVE
107-006			120 EIDELWEISS DRIVE
107-007			122 EIDELWEISS DRIVE
107-008			124 EIDELWEISS DRIVE
107-009			126 EIDELWEISS DRIVE
107-083			125 EIDELWEISS DRIVE
107-084			4 THUSIS ROAD
107-095			115 EIDELWEISS DRIVE
108-001			54 EIDELWEISS DRIVE
108-002			56 EIDELWEISS DRIVE
108-003			58 EIDELWEISS DRIVE
108-005			62 EIDELWEISS DRIVE
108-006			64 EIDELWEISS DRIVE
108-008			72 EIDELWEISS DRIVE
108-013			1 ALTDORF PLACE
108-014			3 ALTDORF PLACE
108-015			5 ALTDORF PLACE
108-016			7 ALTDORF PLACE
108-017			9 ALTDORF PLACE
108-020			2 ALTDORF PLACE
108-023			37 INTERLAKEN CIRCLE
108-024			19 Big Loop Road
108-025			17 BIG LOOP ROAD
108-026			15 BIG LOOP ROAD
108-027			14 DIESSBACH DRIVE
108-028			18 DIESSBACH DRIVE
108-028			18 DIESSBACH DRIVE
108-029			22 DIESSBACH DRIVE
108-030			21 DIESSBACH DRIVE
108-031			19 DIESSBACH DRIVE
108-032			17 DIESSBACH DRIVE
108-033			15 DIESSBACH DRIVE
108-035			9 DIESSBACH DRIVE
108-038			102 EIDELWEISS DRIVE
108-039			104 EIDELWEISS DRIVE
108-041			108 EIDELWEISS DRIVE
108-042			109 EIDELWEISS DR.
108-045			105 EIDELWEISS DR

Village District of Eidelweiss
Customer by Zone as of 3-8-22

Zone	Street	Tax Map a Street Address
108-047	101 EIDELWEISS DRIVE	
108-048	99 EIDELWEISS DRIVE	
108-051	93 EIDELWEISS DRIVE	
108-054	87 EIDELWEISS DRIVE	
108-056	83 EIDELWEISS DRIVE	
108-057	2 LUGANO ROAD	
108-059	6 LUGANO ROAD	
108-062	47 APPENVEL WAY	
108-063	49 APPENVALE WAY	
108-066	59 APPENVEL WAY	
108-086	44 APPENVEL WAY	
108-087	4 SALINS ROAD	
108-088	26 BRISTENSTOCK DRIVE	
108-090	32 BRISTENSTOCK DRIVE	
108-091	34 BRISTENSTOCK DRIVE	
108-095	11 BRISTENSTOCK DRIVE	
108-096	2 REINACH PLACE	
108-098	3 BRISTENSTOCK DR	
108-099	4 BRISTENSTOCK DRIVE	
108-100	6 BRISTENSTOCK DRIVE	
108-103	12 BRISTENSTOCK	
108-104	14 BRISTENSTOCK	
108-106	18 BRISTENSTOCK DR	
108-108	22 BRISTENSTOCK DRIVE	
108-111	38 APPENVEL WAY	
108-112	36 APPENVEL WAY	
108-117	22 APPENVEL WAY	Duplex
108-118	20 APPENVEL WAY	
108-121	21 APPENVEL WAY	
108-122	23 APPENVEL WAY	
108-129	5 LUGANO ROAD	
108-130	3 LUGANO ROAD	
108-131	1 LUGANO ROAD	
108-133	77 EIDELWEISS DR	
108-134	75 EIDELWEISS DRIVE	
108-135	73 EIDELWEISS DRIVE	
108-136	71 EIDELWEISS DRIVE	
108-137	69 EIDELWEISS DRIVE	
108-138	67 EIDELWEISS DRIVE	
108-139	65 EIDELWEISS DRIVE	
108-142	59 EIDELWEISS DR	
108-144	55 EIDELWEISS DRIVE	
109-015	8 EIDELWEISS DRIVE	
109-016	10 EIDELWEISS DRIVE	

Village District of Edelweiss
Customer by Zone as of 3-8-22

Zone	Street	Tax Map a	Street Address
109-019	6 HUTTWIL DRIVE		
109-020	8 HUTTWIL DRIVE		
109-023	14 HUTTWIL DRIVE		
109-025	18 HUTTWIL DRIVE		
109-029	23 HUTTWIL DRIVE		
109-031	19 HUTTWIL DRIVE		
109-035	11 HUTTWIL DRIVE		
109-042	34 EIDELWEISS DRIVE		
109-067	4 WHITTIER VIEW PLACE		
109-069	1 WHITTIER VIEW PLACE		
109-088	4 LITTLE SHORE DR		
109-090	8 LITTLE SHORE DRIVE		
109-091	12 LITTLE SHORE DRIVE		
109-092	14 LITTLE SHORE DRIVE		
109-093	16 LITTLE SHORE DRIVE		
109-094	18 LITTLE SHORE		
109-098	3 GENEVA PLACE		
109-100	57 LITTLE SHORE DRIVE		
109-101	53 LITTLE SHORE DRIVE		
109-102	21 LITTLE SHORE DRIVE		
109-104	17 LITTLE SHORE		
109-105	15 LITTLE SHORE DRIVE		
109-106	13 LITTLE SHORE DRIVE		
109-108	7 LITTLE SHORE DRIVE		
109-109	5 LITTLE SHORE DRIVE		
109-110	3 LITTLE SHORE DRIVE		
109-114	44 EIDELWEISS DRIVE		
109-116	2 LITTLE LOOP ROAD		
109-117	4 LITTLE LOOP ROAD		
109-118	6 LITTLE LOOP ROAD		
109-119	8 LITTLE LOOP ROAD		
109-120	10 LITTLE LOOP ROAD		
109-122	16 LITTLE LOOP ROAD		
109-123	18 LITTLE LOOP RD		
109-125	26 LITTLE LOOP ROAD		
109-126	23 LITTLE LOOP ROAD		
109-129	13 LITTLE LOOP ROAD		
109-130	7 LITTLE LOOP		
109-131	3 LITTLE LOOP ROAD		
109-132	1 LITTLE LOOP ROAD		
109-133	48 EIDELWEISS DRIVE		
109-135	52 EIDELWEISS DRIVE		
109-136	53 EIDELWEISS DRIVE		
109-137	51 EIDELWEISS DRIVE		

Village District of Eidelweiss
Customer by Zone as of 3-8-22

Zone	Street	Tax Map a	Street Address
		109-139	47 EIDELWEISS DRIVE
		109-141	43 EIDELWEISS DRIVE
		109-142	41 EIDELWEISS DRIVE
		109-143	2 APPENVEL WAY
		109-146	9 APPENVEL WAY
		109-148	13 APPENVEL WAY
		109-153	1 BRISTENSTOCK DRIVE
		109-159	21 JUNGFR AU ROAD
		109-160	19 JUNGFR AU ROAD
		109-162	22 JUNGFR AU ROAD
		109-164	3 APPENVEL WAY
		109-166	37 EIDELWEISS DRIVE Duplex
		109-169	33 EIDELWEISS DRIVE
		109-182	23 EIDELWEISS DRIVE
		109-184	19 EIDELWEISS DRIVE
		109-192	9 EIDELWEISS DRIVE
		109-193	7 EIDELWEISS DRIVE
		109-194	5 EIDELWEISS DRIVE Duplex
		110-004	3 ALPENHOF ROAD
		110-005	1 ALPENHOF ROAD
		110-006	1454 CONWAY ROAD
		110-009	1390 CONWAY ROAD
		110-013	1346 CONWAY ROAD
		110-015	1324 CONWAY ROAD
		112-018	1138 CONWAY ROAD
		113-011	2 KONSTANZ PLACE
		113-014	3 KONSTANZ PLACE
		113-066	2 JUNGFR AU ROAD
		113-067	4 JUNGFR AU ROAD
		113-070	10 JUNGFR AU ROAD
		113-072	14 JUNGFR AU ROAD
		113-074	18 JUNGFR AU ROAD
		113-076	15 JUNGFR AU
		113-082	3 JUNGFR AU ROAD
		113-083	1 JUNGFR AU ROAD
		114-008	35 BRISTENSTOCK DRIVE
		114-010	31 BRISTENSTOCK DRIVE
		114-013	25 BRISTENSTOCK DRIVE
		114-019	4 ADELBODEN WAY
		114-052	11 ADELBODEN WAY
		114-053	9 ADELBODEN WAY
		114-054	2 BIASCA PLACE
		114-055	4 BIASCA PLACE
		114-058	3 BIASCA PLACE

**Village District of Eidelweiss
Customer by Zone as of 3-8-22**

Zone	Street	Tax Map a	Street Address
114-069		9	REINACH PLACE
114-073		5	REINACH PLACE

Appendix K Public Meeting Minutes

VILLAGE DISTRICT OF EIDELWEISS
Commissioners Meeting
Friday May 27, 2022

The Board of Commissioners met at 7:30am on Friday May 27, 2022.

In attendance for the public meeting are Commissioner Jay Buckley, Commissioner Mike Smith, Commissioner Ralph Lutjen, Alexis Wagoner-Administrator, Doug Prescott & Larry Leonard.

At 7:30 am Commissioner Ralph Lutjen calls the meeting to order

Public Meeting

Ralph Lutjen makes a motion to open the Commissioner's meeting, Jay Buckley 2nds passes 3-0

Larry Leonard makes a motion to open the Water Committee meeting, Doug Prescott 2nds, passes 2-0

Discussion on AMP draft.

Larry Leonard comments that a lot of people have reviewed and provided information to make this draft presentable.

Review of Table 6-1, Jay Buckley states that the formulas used to determine the risks were provided by DES.

Larry Leonard mentions that the mapping is much better now, the old mapping was missing a lot of piping and information.

Mike Smith wants to point out that the VDOE has to act as if we will not get any grant money and the VDOE will have to pay for these projects.

Discussion on grant money. Must plan grants accordingly and depending on which grants we receive (if any) that will determine which projects will be done.

A lot of improvements have been made to the initial draft and this draft is in a much better position realistically.

Discussion on bleeders. Bleeders are not a high priority since replacing them all would be an astronomical cost. If pipe is to be replaced and there is a bleeder there, then it will be addressed.

Discussion on Muddy Beach pump station. Ian recommended putting VFD's at the Muddy Beach pump house to bypass the tank and pump directly up.

Discussion on Chocorua pump station and it being at the top of the priority list.

Discussion on VDOE capital assets, this was not provided to Horizons.

Discussion on poor record keeping in the past. Need to get better at documenting and updating the mapping.

Mike Smith states there are two things that need to be done. 1. The VDOE needs to improve record keeping and 2. The VDOE needs to hire an engineer to be consistent going forward and not going from one engineer to another. We are going to need to spend some money to get the recording keeping up to date.

Discussion on Aspen (top-down) on the priority list. This is for adding a new water line there.

Mike Smith mentions that band aids have been placed on all these projects, but we need an engineer to review the work and determine what work is to be done and the priority levels.

Discussion on the Asset Risk Matrix table which uses a consequence of failure to determine what category an item falls into.

Mike Smith suggests taking 2023 to establish an engineer and provide them with all the information they need regarding the system. Also increase the water bill to get a financial head start then in 2024 start projects that were determined in 2023. All parties agreed on this plan going forward.

Mike Smith mentions we will also need to determine in the future if we should do all work in house and purchase an excavator & dump truck or outsource the work.

Discussion on increasing the water bill rate. The average rate in the state is around \$600 a year.

Discussion on a District engineer. Larry Leonard comments that Horizons has done a great job for this project. Alexis Wagoner States the RFPs were sent out and are due back on May 30th. Doug Prescott has some comments: 1. This is a working document not something that is set in stone. 2. We need to schedule future meetings with all collective parties to contribute to record keeping and mapping. 3. There is an extension grant to this Asset Management Grant that we could go for and continue our work on the mapping.

Discussion on the leak detection grant. The grant would have the state come in and check for leaks and then pay for any leaks they detected no matching.

Discussion on providing the state with the invoices paid to Horizons and Simply Water to get the \$20,000 match.

Going to set up a monthly meeting with the Commissioners and Water Committee so that everyone is on the same page.

Mike Smith brings up that we need to include the roads when considering projects.

Larry Leonard brings up the SCADA system and the need for Tom to be included as well in some of these meetings.

Doug Prescott suggests we do a quarterly meeting with the Commissioners, Water Committee, Simply Water, Tom, and the Engineer that District choses.

Discussion on mapping, need to include a line item in the AMP regarding getting funds to upgrade the mapping system.

Going to add the mapping line item and a line in section 7 regarding the ability to pay to the final draft.

Discussion on having an engineer for grant writing and an engineer for design. There is possibly an engineer that is better at grant writing and securing grants. Having 1 engineer would be preferred and the Asset Management to write the grant.

Ralph Lutjen makes a motion to adjourn at 9:06 am, Jay Buckley 2nds, passes 3-0

Larry Leonard makes a motion to adjourn at 9:06 am, Doug Prescott 2nds, passes 2-0

Ralph Lutjen makes a motion to open the meeting back up at 9:08 am, Jay Buckley 2nds, passes 3-0

Ralph Lutjen makes a motion to submit the information to the state including the billing of \$40,000 and the proposal, Jay Buckley 2nds, passes 3-0

Ralph Lutjen makes a motion to adjourn at 9:09 am, Jay Buckley 2nds, passes 3-0

Respectfully submitted,
Alexis Wagoner, Administrator.