

MEMO

To: Jason Dietz, Summit County Housing Director

Cc: Brian Duffany, Economic & Planning Solutions

From: Chris Durloo, PE

Date: September 17, 2021

Subject: Lake Hill Property – Water and Wastewater Due Diligence Review

The following memorandum summarizes the water and wastewater due diligence level review completed by Tetra Tech for the Lake Hill property. Summit County purchased the 44.8 Acre property from the White River National Forest to develop workforce housing on the site. This memo includes the review and recommendations to provide water and wastewater utility services from existing utility districts near the Lake Hill property.

The Lake Hill property is located just outside the Town of Frisco boundary. The property is bordered by the Dillon Dam Road to the southeast, Interstate 70 to the northwest, Lake View Terrace condominiums to the south, and White River National Forest property to the north. See Figure 1 Project Overview Map that shows the location of the Lake Hill property.

Proposed Development

A Master Development Plan was completed for Lake Hill in 2017 outlining the proposed development for the property. The development plan included a total of 436 residential units and a Community Center. The following is further detail of the proposed uses:

- 300 Multi-family Units: 2 bedroom, 2 bath units.
- 85 Townhome Units: 2-3 bedroom units (assumed all are 3 bedroom units)
- 51 Single Family/Duplex Units: 2-3 bedroom units (assumed all are 3 bedroom units)
- Daycare Facility: 5,000 SF, capacity of 50 children
- Office Space: 5,000 SF

Based on the proposed development information above, water and wastewater demand information was estimated to allow for servicing by nearby utilities to be evaluated. Most of the utilities in the area use similar Equivalent Residential Units (EQR) methodology to estimate the water and wastewater demand for the uses identified for the development. For this study, the Town of Silverthorne/Joint Sewer Authority EQR schedule was used to estimate the water and wastewater demand for the Lake Hill property. Based on the proposed development information

above, 400 EQRs was estimated for the Lake Hill property. The only utility reviewed in this study that had a significant difference in EQR rates was the Frisco Sanitation District (FSD). Their EQR rates are based on 1.0 EQR for a 2 bedroom, 2 bath residential unit versus a 0.85 EQR for the same type of unit per the Town of Silverthorne/Joint Sewer Authority EQR schedule. Accounting for this difference in EQR rates for the FSD, a higher EQR estimate resulted of 450 EQRs that was used to evaluate wastewater connection to the FSD. Appendix A EQR Estimates includes a summary of the EQR estimate calculations for the Lake Hill property.

Initial Utility Providers Screening

There are several existing utility districts within 2 miles of the Lake Hill property that provide either water or wastewater service. Tetra Tech met with each of these utilities in 2019, to review initial willingness and threshold capacity for their respective Districts to provide water or wastewater service to Lake Hill. The following is a summary of the initial review with each utility.

Water Utilities

- Town of Frisco: The Town of Frisco already has a water tank next to the Lake Hill property, and the transmission line from that tank runs along the Dillon Dam Road. The Town has indicated that they may be willing to provide service to the Lake Hill property. In order to provide service, upgrades include construction of additional water mains for redundancy. Additionally, water system upgrades may be required including a new well, additional water storage and a new pressure zone to provide service to the upper areas of the development. The Lake Hill property is not required to be annexed into the Town of Frisco to provide service. Water Service may be provided to a property outside of the Town boundary subject to an extraterritorial service agreement where water rates may be negotiated with Town Council.
- Town of Dillon: Dillon's existing water system is over 1 mile away from the property, but the Town is willing to provide water service to the Lake Hill property. A water pipeline and expansion of the water plant would be required to connect. The Town typically charges 2 times their normal water rates for properties located out of Town, however discussions with Town Council may allow for a negotiated out of Town water rate.
- Buffalo Mountain Metropolitan District: The Buffalo Mountain Metropolitan District (BMMD) is a special district that provides water service to the Wilderrest Neighborhood located just west of Silverthorne. Their water system is approximately 1 mile away. In order to connect to the BMMD a water pipeline would be required across Interstate 70 and their water treatment plant would require expansion.
- Town of Silverthorne: Silverthorne's existing water system is approximately 1 mile away. A pipeline crossing Interstate 70 would be required. For the Town to provide water service, the Lake Hill Property would need to be annexed into the Town which would include a significant contribution to public amenities or public improvements in the Town of Silverthorne.

All four water providers listed above would require water rights to be dedicated to provide water service to the Lake Hill Property. The costs for water right acquisition has not been included in the analysis presented in this memo. Based on review of initial information gathered for each utility with Summit County, the two most favorable utilities to provide water service were determined to be the Town of Frisco and the Town of Dillon. Further study of the infrastructure required to connect to these two utilities was evaluated in the next section of this memo.

Wastewater Utilities

- Frisco Sanitation District: The Frisco Sanitation District (FSD) provides wastewater service to the Town of Frisco and adjacent unincorporated Summit County areas located within the District boundaries. Their District boundary is adjacent to the Lake Hill property. The FSD has completed studies outlining the requirements for the Lake Hill property to be served by the FSD including collection system and wastewater treatment plant improvements.
- Buffalo Mountain Metropolitan District: The BMMD provides wastewater service to the Wilderrest neighborhood located just west of Silverthorne. Their wastewater system is approximately 1 mile away. According to the District Manager, the BMMD's wastewater system does not have capacity to provide service to the Lake Hill Property.
- Joint Sewer Authority: The Joint Sewer Authority (JSA) is a wastewater utility that is directed by the Town of Silverthorne. They provide wastewater service to the Town of Silverthorne, Town of Dillon as well as other smaller service areas that are within their District boundary. The JSA is open to providing wastewater service to the Lake Hill property. A wastewater pipeline across Interstate 70 and expansion of the wastewater treatment plant would be required to provide service to Lake Hill.

Based on review of the initial wastewater utility information with Summit County, the two most favorable utilities to provide wastewater service were determined to be the Frisco Sanitation District and the Joint Sewer Authority. Further study of the infrastructure required to connect to these two utilities was evaluated in the next section of this memo.

Water Utility Connection Review

The Town of Frisco hired Leonard Rice Engineers, Inc. to review the Lake Hill property and recommend water infrastructure improvements required to provide water service to the Lake Hill property. A final report was issued dated October 30, 2015, summarizing their recommendations. From this report, the infrastructure improvements required to provide water service to Lake Hill included:

- Water Tank Redundant Pipeline
- Lake View Terrace Condos Redundant Pipeline

Tetra Tech excluded the on-site water main distribution network estimates from the Leonard Rice Report for the purpose of this due diligence study to compare water connection costs between

the Town of Frisco and the Town of Dillon. It is assumed that on-site water distribution piping will be similar in layout and cost for either case, and the cost of the on-site water distribution system is part of the development specific cost.

A meeting was held with the Town of Frisco Public Works and Water Department in 2019 to review the current proposed Lake Hill property development. The 2015 Leonard Rice report was based on up to 400 residential units, and the current development density proposed for Lake Hill is 436 residential units. This small increase in residential density isn't expected to impact the above redundant pipeline costs, however final sizing of all water mains required to support the project will be completed as the development moves forward. Based on the discussion with the Public Works Director and Water Department, there were some additional water system improvements that may be required by the Town to support the Lake Hill property as follows:

- New well added to the water system
- Potential additional pressure zone to service the upper elevations of the project site
- Additional Water Storage

A meeting was held in 2019 with the Town Manager and Public Works Director of the Town of Dillon to review the water infrastructure required to serve Lake Hill. The required infrastructure includes the following:

- Water transmission line from the existing water system to Lake Hill
- A Water Booster Pump Station
- Water Storage Tank

Tetra Tech reviewed a potential route for a new water transmission line to connect from the Town of Dillon to the Lake Hill property. The closest location to connect to the Town's water system is at Anemone Trail. The water transmission line would run along the Blue River Trail, through the softball field complex and westerly to the Lake Hill property. Figure 2 Pipeline Route Map shows the conceptual pipeline alignment and locations for the new booster pump station and water storage tank.

Based on the current tap fees and water system infrastructure required to provide service to the Lake Hill property, the rough order of magnitude cost estimates include approximately \$7.8 Million to connect to the Town of Frisco and \$13.6 Million to connect to the Town of Dillon. Further information on the rough order of magnitude estimates completed is provided in Appendix C.

Wastewater Utility Connection Review

The Frisco Sanitation District has completed two studies to review the wastewater infrastructure required to provide service to the Lake Hill property. The first study is the Collection System Buildout Capacity Study: Impact of the Lake Hill Development completed by Tetra Tech dated October 19, 2016. The second study is the memo issued Building Capacity Study – Wastewater

Treatment Plant (WWTP) Component completed by Tetra Tech dated October 14, 2020. These studies include the following recommended improvements:

- A new lift station with flow equalization
- Replacement of certain sections of the North Frisco Interceptor (NFI) to accommodate the proposed wastewater flows
- Upgrades to the wastewater treatment plant

Based on the improvements identified above construction cost estimates were provided in each of the two studies for the recommended improvements. The 2016 Collection System Buildout Capacity Study was based on up to 400 EQRs. The current development planned for Lake Hill is anticipated to include up to 450 EQRs (as estimated by the FSD EQR schedule). Based on initial review of the capacity study, it does not appear that additional segments of the NFI will need to be upsized, however this may require further review in the future. In addition, the WWTP upgrades identified in the 2020 memo were allocated based on the Lake Hill Property EQR percentage. Based on 450 EQRs estimated for Lake Hill, that equates to 37% of the total additional 1219 EQRs identified in the buildout study. The total EQRs was adjusted for this calculation to remove the additional 100 residential units for Lake Hill that was included in the 2020 Frisco Sanitation District memo. Based on the 37%, the direct project cost of \$3.00 Million for wastewater treatment upgrades has been included in this report.

FSD has indicated, however, that they do not have the financial resources to make the \$8.0 million investment needed to upgrade the wastewater treatment plant to serve Lake Hill. If the Lake Hill development pays the full \$8.0 million upfront, the County and FSD should consider a reimbursement process so that, as other development connects to the FSD the County and/or FSD can recoup the upfront costs for other additional development. If the Lake Hill project can pay only the \$3.0 million pro rata share, other funding will need to be identified for the remaining \$5.0 million. One option being explored by Summit County is federal grant and recovery funding related to the COVID-19 pandemic. If these additional upfront costs are included in the analysis for the Lake Hill property, the total cost to connect to FSD could be approximately \$13.7 million.

A meeting was also completed in 2019 with the Utility Director of the Joint Sewer Authority to review the improvements required for the JSA to provide wastewater service to Lake Hill. The following improvements were identified:

- Pipeline Crossing Interstate 70
- Lift Station
- Wastewater Treatment Plant Upgrades

Based on the improvements identified above, the Utility Director provided rough order of magnitude costs for those improvements, and they are included in Appendix C. In addition, Tetra Tech reviewed the pipeline route and prepared an estimate for the pipeline. This route is shown on Figure 2. Based on the current tap fees and wastewater system infrastructure required to provide service to the Lake Hill property, the rough order of magnitude cost estimates include

approximately \$8.7 Million to connect to the Frisco Sanitation District and \$26.8 Million to connect to the Joint Sewer Authority. Further information on the rough order of magnitude estimates completed is provided in Appendix C.

Separate Districts

During the execution of the project some review and discussion regarding the potential of creating a new, special district for water or wastewater utility service specifically for the Lake Hill Property was completed. There were several issues identified to creating a new utility district including:

- CDPHE may not permit a new wastewater district given the close proximity of the project site to existing utility providers.
- It is anticipated that Denver Water would not be supportive of a new wastewater facility discharge to Dillon Reservoir, and wastewater treatment and mixing zone requirements for discharge would be difficult to get permitted and costly to implement.
- A new water source would most likely be considered as “Groundwater Sources Under the Direct Influence of Surface Water” by CDPHE and require more expensive water treatment technologies.

Due to these initial issues identified, and availability of existing utility providers nearby, further review of the requirements to create new separate utility districts was not further explored.

Conclusions

Based on the due diligence level evaluations completed for water and wastewater service for the Lake Hill property, it is recommended that further discussions occur to formalize the requirements to connect to the Town of Frisco for water service and the Frisco Sanitation District for wastewater service.



Legend

- Water Pipeline to the Town of Dillon Water System
- Sanitary Sewer Pipeline to the Joint Sewer Authority

Note: GIS Mapping information provided by Summit County.

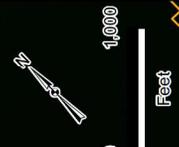
<p>TETRA TECH www.tetrattech.com 130 SH Hill Road, Suite 140 Breckenridge, Colorado 80424 PROJECT: (970) 459-5384</p>	<p>SUMMIT COUNTY</p> <p>LAKE HILL PROPERTY</p> <p>WATER AND WASTEWATER DUE DILIGENCE REVIEW</p> <p>PROJECT OVERVIEW MAP</p>	<p>Project No.: 200228841-90001</p> <p>Date: APR 19, 2021</p> <p>Designed By: JJA</p> <p>Figure No: 1</p>
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Legend

- Water Alignment
- Sewer Alignment
- Existing Contours (10' Interval)
- Summit County Parcel Data (No Owners)

Note: GIS Mapping information provided by Summit County.



Project No.:	200278841-19001
Date:	AUG 05, 2021
Designed By:	JJA
Figure No.:	2

SUMMIT COUNTY
 LAKE HILL PROPERTY
 WATER AND WASTEWATER DUE DILIGENCE REVIEW
PIPELINE ROUTE MAP

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 130 SH Hill Road, Suite 140
 Breckenridge, Colorado 80424
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Appendix A - EQR Estimates

Lake Hill Property

EQR Conceptual Planning Estimate

8/5/2021

Estimates for All Utilities (Except for Frisco Sanitation District)

Residential	Units	EQR	Total
Multifamily Units (2 Bedroom, 2 Bath)	300	0.85	255
Townhomes (3 Bedrooms)	85	1	85
Single Family/Duplex (3 Bedrooms)	51	1	51
Total Units	436		391 Subtotal EQR

Commercial

Community Facility (Daycare, 5000 SF, 50 Students)	1	1.5	1.5
Community Facility (Office, 5000 SF)	5	0.65	3.25
			4.75 Subtotal EQR

395.75

400 Rounded EQR for Planning

Notes:

Basis is Silverthorne/Dillon JSA EQR Schedule September, 2001

1 SF up to 3 bed, 3 bath = 1.0

Estimates for Frisco Sanitation District

Residential	Units	EQR	Total
Multifamily Units (2 Bedroom, 2 Bath)	300	1	300
Townhomes (3 Bedrooms)	85	1	85
Single Family/Duplex (3 Bedrooms)	51	1	51
Total Units	436		436 Subtotal EQR

Commercial

Community Facility (Daycare, 5000 SF, 50 Students)	1	1.5	1.5
Community Facility (Office, 5000 SF)	5	0.65	3.25
			4.75 Subtotal EQR

440.75

450 Rounded EQR for Planning

Notes:

Basis is Frisco Sanitation District EQR Schedule

1 SF up to 2 bed, 2 bath = 1.0

Appendix B - Summary of Connection Requirements

Lake Hill Property

Water and Wastewater Utility Servicing Review

Tt # 200-276841-19001

August 5, 2021

Potential Water Service Providers	Willingness to Provide Service	Treatment Capacity	Treatment Upgrades	Water Supply to Serve	Water Rights need to be Dedicated	Tap Fee per EQR	Infrastructure Required to Connect	Offsite Infrastructure	Other requirements to connect
Buffalo Mountain Metropolitan District	Yes	No	Additional Treatment and Supply	No	Yes	\$7,000.00	Yes	Well, pipeline, pump station, storage tank, I-70 crossing	Must provide water rights to even start discussion to provide service
Town of Frisco	Need from Town Council	Yes	No	No	Yes	\$7,806.15	Yes	Well, upper pressure zone with pump station or storage tank, some piping for redundancy	Out of Town rates are 1.5X normal rates if don't Annex into the Town. Included rate at 1.5X in this table.
Town of Dillon	Yes	No	Additional Treatment Skid	No	Yes	\$13,512.00	Yes	Pipeline including pump station, possibly storage tank	Out of Town rates are 2X normal rates, but is negotiable. Included rate at 1.5X in this table.
Town of Silverthorne	Yes	Yes	No	No	Yes	\$8,400.00	Yes	Pipeline including pump station, possible storage tank, I-70 crossing	Must annex into the Town of Silverthorne. Will require public improvement contribution and dedicate water rights to the Town
Potential Wastewater Service Providers									
Buffalo Mountain Metropolitan District	No	No				\$7,400.00	N/A		No taps available, would need to get service directly from ISA
Frisco Sanitation District	Yes	No	Yes	Expand Treatment Plant		\$10,000.00	Yes	Collection system upgrades, flow equalization, pump station	Project is outside of the District boundaries.
Silverthorne/Dillon Joint Sewer Authority	Yes	No				\$7,000.00	Yes	Pipeline, crossing I-70 and flow equalization, pump station	

Notes:

Water Rights may be trickier if use a water provider above the reservoir, and wastewater to ISA by-passing Dillon reservoir
Potential for County to provide water rights to water providers versus provider purchasing

Appendix C - Summary of Connection Cost Estimates

Lake Hill Property

Rough Order of Magnitude Cost Estimates

Tt # 200-276841-19001

August 5, 2021

	Tap Fee (400 EQR, 450 EQR FSD)	Treatment Upgrades	Pipelines	Other	Infr. Subtotal	Total
Potential Water Service Providers						
Buffalo Mountain Metropolitan District						
Town of Frisco	\$ 3,122,460	\$ -	\$ 600,000	\$ 4,000,000	\$ 4,600,000	\$ 7,722,460
Town of Dillon	\$ 5,404,800	\$ 1,100,000	\$ 7,000,000	\$ -	\$ 8,100,000	\$ 13,504,800
Town of Silverthorne						
Potential Wastewater Service Providers						
Buffalo Mountain Metropolitan District						
Frisco Sanitation District	\$ 4,500,000	\$ 3,000,000	\$ 450,000	\$ 750,000	\$ 4,200,000	\$ 8,700,000
Silverthorne/Dillon Joint Sewer Authority	\$ 2,800,000	\$ 16,000,000	\$ 8,000,000	\$ -	\$ 24,000,000	\$ 26,800,000

Notes:

Above estimates do not include water rights.

Zach thought about \$5M for sewer connection, Tt estimate included above

Tap Fees indicated above are current as of 8/1/2021.

According to Town of Frisco website their water tap fee rates are going to go up 10% annually through Oct. 1, 2024.