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MEMORANDUM

TO: Mountain Village Town Council
FROM: David McConaughy, Town Attorney
RE: **Ski Ranches Fire Safety Project**
DATE: March 18, 2024

SUMMARY

The Town provides water services to Ski Ranches Subdivision which is outside the municipal limits of the Town. The Town and Ski Ranches have been discussing a formal agreement to memorialize the terms of continued water service including, among other things, applicable rates and levels of service.

While these other issues are being considered, Council directed Town Staff to work with Ski Ranches on a cooperative Fire Safety Project this year. In general, under the proposed agreement, the Town would apply for grants and other funding sources and direct the work as a priority project, with Ski Ranches' reimbursing the Town for expenses incurred.

Negotiations over the agreement have stalled, largely because of issues left unaddressed in the current draft such as past and future water service fees and the scope of future service for additional units. Note that the Town Council adjusted all water rates on November 16, 2023, by Resolution 2023-1116-25, including the rates for Ski Ranches. That resolution is attached.

The latest draft agreement for the Fire Safety Project is attached for Council's consideration. As of this writing, Ski Ranches has not agreed to these terms. Staff is concerned that the window of opportunity to pursue the project this year may be closing soon if no agreement is reached.

RECOMMENDATION

I recommend that Council consider a motion *authorizing the Mayor to execute an agreement with Ski Ranches Association on substantially the terms set forth in the attachments to this memo, subject to final approval of the exhibits on a staff level.*

This will at least give the parties the opportunity to proceed if Ski Ranches decides to agree to these terms.

FIRE SAFETY PROJECT AGREEMENT

SKI RANCHES – MOUNTAIN VILLAGE

This Fire Safety Project Agreement (“**Agreement**”), effective the ____ day of _____, 2024, is between The Town of Mountain Village (the “**Town**”), a Colorado home rule municipality, and Telluride Ski Ranches Association (“**Ski Ranches**”), a Colorado nonprofit corporation, (each individually referred to as a “**Party**” and collectively as the “**Parties**”).

Recitals

- A. Ski Ranches was established in 1971 as a residential subdivision in San Miguel County, Colorado, in the area described on the survey attached **Exhibit A** (the “**Ski Ranches Service Area**”).
- B. In 1983, the Mountain Village Metropolitan District (“**MVMD**”) was established and assumed responsibility for water service to Ski Ranches pursuant to C.R.S. § 32-1-1001 *et seq.*
- C. Water rights to serve the Ski Ranches were acquired by Telluride Properties, Inc. and subsequently conveyed to MVMD in 1998 by Telluride Properties, Inc.’s successor, the Telluride Company.
- D. The Town was incorporated in 1995 and provides water service to its residents and also to some properties outside of its boundaries as permitted under C.R.S. § 31-35-701.
- E. MVMD was dissolved pursuant to an Order of the San Miguel County District Court dated December 13, 2006.
- F. The Town has provided potable water service to Ski Ranches since 2007, but there is no written agreement directly between the Town and Ski Ranches to memorialize the terms of water service to the Ski Ranches.
- G. To date, Ski Ranches continues to pay service fees to the Town and receive from the Town water service; however, Ski Ranches is served by independent septic systems and thus does not receive septic service from the Town, as do properties within the Town’s municipal boundaries.
- H. The Town has already initiated a project to improve the fire safety water infrastructure available to Ski Ranches to ensure that such water system infrastructure meets all state and local requirements (the “**Fire Safety Project**”).

- I. Ski Ranches and the Town desire to enter into this written Agreement to formally memorialize a joint plan to accelerate the Fire Safety Project from its current twenty-five (25) to thirty (30) year timeframe to three (3) to seven (7) years to completion.

Agreement

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. The foregoing recitals are incorporated by reference herein as representations and acknowledgments of the Parties.
2. The Parties accept and agree with the Letter Report prepared by Wright Water Engineers, Inc. (“**WWE Report**”), including but not limited to, the conclusions and recommendations as shown in **Exhibit B**.
3. The Parties agree to proceed with an engineering design commencing within 30 days after mutual execution of this Agreement for a 2024 scope of work as recommended in the WWE Report (“**2024 Engineered Plans**”), if the outsourced Town engineer is available to perform such work or as soon thereafter as practicable.
4. Ski Ranches shall have 30 days to review, provide input and accept the 2024 Engineered Plans with the use of Wright Water Engineers, Inc. (“**WWE**”) or another Ski Ranches selected engineer, acceptance shall not be unreasonably withheld, conditioned or delayed.
5. The Town shall prepare a draft request for proposal (“**RFP**”) or other form of solicitation consistent with the Town’s procurement policies to obtain bids for construction of the work outlined in the final 2024 Engineered Plans. The draft RFP and associated proposed construction contract for the Fire Safety Project shall be provided to Ski Ranches for review and comment, who shall provide input on the construction contract within fourteen (14) business days of receipt, and the Parties shall jointly accept the construction contract, which approval shall not be unreasonably withheld, conditioned or delayed by either Party.
6. The Town acknowledges that its staff will be responsible to oversee construction of the Fire Safety Project in general conformance with the 2024 Engineered Plan and specifications and will consult with a Ski Ranches designated representative during construction and during Key Decisions (as defined in subsection 7.6 below). At a minimum, the Town’s construction contract with the Fire Safety Project contractor (“**Contractor**”) shall include provisions for the following:
 - 6.1. WWE or another selected Ski Ranches representative will be allowed to participate in the pre-construction meeting and regularly scheduled construction progress meetings (anticipated weekly) to review status of the Fire Safety Project work as it occurs through the construction season;

- 6.2. The Ski Ranches and their designated representative shall be listed as additionally insured under the Contractor's general liability insurance for the duration of the construction contract.
 - 6.3. A Ski Ranches representative will be present during the Fire Safety Project walkthrough that develops a final punch list prior to final payment. A Ski Ranches representative will be present during the final walkthrough of the Fire Safety Project after all punch list items have been completed by the Contractor and prior to final payment.
 - 6.4. Ski Ranches, through its designated representative, shall be consulted on all Key Decisions, specifically, Ski Ranches shall be provided with at least five (5) business days to review and provide input on Key Decisions, and the Parties shall jointly approve Key Decisions, which approval shall not be unreasonably withheld, conditioned or delayed by either Party.
 - 6.5. A procedure for the Ski Ranches designated representative to review the Contractor's progress payment applications and supporting information in order to verify to Ski Ranches' reasonable satisfaction that the work for which payment is requested has been completed in general conformance with the 2024 Engineered Plans and associated specifications.
 - 6.6. As used herein, "**Key Decisions**" means written change orders for the Fire Safety Project, changes in the Fire Safety Project budget, material changes in the location of the Town's water service infrastructure in conjunction with the Fire Safety Project and/or changes in scope of the Fire Safety Project work.
7. Once the RFP and associated construction contract are mutually accepted by both Parties, the Town shall issue the RFP or other form of solicitation consistent with the Town's procurement procedures to obtain contractor bids for construction of the work outlined in the 2024 Engineered Plans and provide the bids to Ski Ranches for review, who shall provide input on the contractor selection process and cost review, and the Parties shall jointly approve the contractor/bid, which approval shall not be unreasonably withheld, conditioned or delayed by either Party. Prior to the formal award of such bid, Ski Ranches must provide the Town with proof of its financial capability to pay for the costs of the work, which may be in the form of cash on hand, awarded grants, approved loan agreements, a bond, or such other assurance as the Town deems satisfactory in its reasonable discretion.
 8. The Town shall not impose any new or additional water rate surcharge on Ski Ranches homeowners for the specific purpose of funding the Fire Safety Project but shall instead allow Ski Ranches to finance the Fire Safety Project through whatever means it deems necessary and appropriate.

9. All expenditures incurred by the Town directly related to the Fire Safety Project shall be paid by, and reimbursed to, the Town pursuant to the following hierarchy:
 - 9.1. First, the Town shall utilize State, federal and any other grant funds awarded for the Fire Safety Project; and
 - 9.2. Second, Town shall utilize loan funds from State and federal agencies, as discussed below; and
 - 9.3. Third, if and to the extent that the funding described in subsections 10.1, 10.2 and 10.3, above, is exhausted, Town shall invoice Ski Ranches monthly for reimbursement pursuant to section 13, below, or if no loan repayment schedule applies, then for reimbursement by Ski Ranches within 90 days of invoice.
10. The Town shall in good faith pursue financing and/or construction of the Fire Safety Project through channels available to the Town, including but not limited to applying for and pursuing a Drinking Water Revolving Fund (“DWRF”) Loan from the Colorado Department of Public Health and Environment (“CDPHE”) State Revolving Fund (“SRF”), Colorado Water Conservation Board (“CWCB”) and federal funding opportunities. SRF Loans are administered by the CDPHE in cooperation with the Department of Local Affairs and the Colorado Water Resources & Power Development Authority. The Parties agree and acknowledge that no particular funding arrangement from any entity or agency not a party to this Agreement is guaranteed.
11. More specifically, for purposes of obtaining DWRF Loan funding, the Town shall:
 - 11.1. List and include the estimated cost of the Ski Ranches Fire Safety Project water system improvements on the Town’s 2025 SRF eligibility survey which is anticipated to be open between late May and June 2024;
 - 11.2. Once the Town’s eligibility survey is submitted to CDPHE, the Town agrees to submit a completed pre-qualification form to initiate the DWRF loan application process for the Ski Ranches water system improvements, including but not limited to the Fire Safety Project.
 - 11.3. Invite Ski Ranches representatives to attend the pre-qualification meeting with Town and SRF representatives.
12. In the event that the Fire Safety Project is pre-qualified for a DWRF Loan, the Parties shall work together to complete the remaining DWRF Loan program steps outlined in the attached **Exhibit C TO BE ATTACHED**.
13. Ski Ranches, as the Ski Ranches’ owners’ association, will be responsible for reimbursing the Town in accordance with the DWRF Loan repayment schedule developed by SRF representatives for the Fire Safety Project. Town shall credit Ski Ranches for its payment of costs covered by the DWRF loan in advance of loan disbursements to the Town.
14. The Parties shall continue working together to complete the Fire Safety Project in the same process as outlined herein for year 2024, with a goal of completing the entire Fire Safety

Project in 3 to 7 years. The Parties acknowledge and agree to negotiate in good faith to extend this Agreement, develop additional annual scopes of work and jointly pursue funding in order to complete the Fire Safety Project following completion of the scope of work set forth in the 2024 Engineered Plans.

15. If the Town connects other properties to the physical infrastructure that serves the Ski Ranches, the Town will require reimbursement to Ski Ranches for proportionate expenses associated with the Fire Safety Project that benefit the newly connected properties.

16. In the event either Party defaults on its obligations pursuant to this Agreement, the non-defaulting Party shall give the other Party written notice of default, and the defaulting Party shall then have 30 days to effectuate a cure or to commence a cure if the cure cannot reasonably be completed within such 30-day period. If no such cure is completed or commenced within such period, then the non-defaulting Party shall be free to pursue any available remedy at law or equity, including but not limited to specific performance.

17. General Provisions:

- a. Notice. All notices and other communications shall be in writing and shall be deemed to have been duly given on the date of service, if sent by email or if served personally on the party to whom notice is given. Notice shall be deemed to have been duly given three days after mailing if mailed to the party to whom notice is to be given by first class mail, registered or certified, postage prepaid and properly addressed as follows:

To SKI RANCHES:

Telluride Ski Ranches Association

c/o Telluride Consulting, LLC
P.O. Box 518, Telluride, CO 81435
garrett@tellurideconsulting.com

To TOWN:

Paul F. Wisor, Mountain Village Town Manager
455 Mountain Village Blvd, Suite A
Mountain Village, CO 81435
pwisor@mtnvillage.org

- b. Governing Law and Venue. This Agreement shall be construed under Colorado law, and the forum for resolution of any and all disputes arising hereunder shall be the District Court in and for San Miguel County, State of Colorado.

- c. Binding Effect. The terms of this Agreement shall be binding on and shall inure to the benefit of the Parties' successors and assigns.
- d. Headings. The headings of this Agreement are included for purposes of convenience only and shall not affect the construction or interpretation of any of its provisions.
- e. Amendments. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing by the Parties.
- f. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original and all of which together shall be deemed to be one and the same instrument. Electronic signatures shall be acceptable, valid and enforceable.
- g. Proper Authority. The individuals signing below represent and warrant that they are authorized to sign on behalf of and bind the respective Parties to the terms and conditions hereof.
- h. Subject to Appropriations. Any and all fiscal obligations of the Town arising out of this Agreement shall at all times be subject to annual budgeting and appropriation as required by the Colorado Constitution and other applicable law.
- i. Remedies/Attorneys' Fees. In the event of breach of this Agreement, and subject to the provisions of Section 14 above, the prevailing Party shall be entitled to recover its costs and attorney fees in addition to any other remedies.

SIGNATURES:

TELLURIDE SKI RANCHES ASSOCIATION

By: _____

TOWN OF MOUNTAIN VILLAGE, COLORADO

By: _____

Attest: _____



Wright Water Engineers, Inc.

1666 N. Main Avenue, Suite C
Durango, Colorado 81301
(970) 259-7411 TEL
(970) 259-8758 FAX

www.wrightwater.com
e-mail:hlenhart@wrightwater.com

August 21, 2023

Via email: scott@tellurideconsulting.com

Scott Benge, Chief Operations Officer, and
Members of the Telluride Ski Ranches Association
Telluride, CO 81435

*Draft For Review and
Comment*

Re: Letter Report – Review of Ski Ranches Water System Capital Improvements Plan

Dear Scott and Members of the Telluride Ski Ranches Association,

Wright Water Engineers, Inc. (WWE) is pleased to provide the Telluride Ski Ranches Association (Ski Ranches) with this letter report summarizing our review of the *Draft – Town of Mountain Village, Ski Ranches Water System Capital Improvements Plan*, prepared by Russell Planning and Engineering, Inc. (Russell Engineering), dated November 9, 2017 (Water System Improvement Plan), and the associated Phased Conditions Water Distribution Model that was used to support the Water System Improvement Plan. This letter report is organized to provide a high-level overview of our findings and recommended next steps, followed by report sections which provide more detail for the basis of our review and associated conclusions.

Executive Summary

WWE prepared this letter report to provide the Ski Ranches with an independent engineering review of the recommendations outlined in the Water System Improvement Plan. Based on WWE’s review of the Water System Improvement Plan and the associated Water System Model, WWE offers the following findings:

Major Conclusions and Recommendations:

WWE’s modified water distribution computer model, updated to reflect Ski Ranches water system improvements completed through the end of 2022, indicates approximately 22 percent of the hydrants in the Ski Ranches water distribution system **cannot** currently meet Telluride Fire Protection District (TFPD) minimum fire flow requirement of 1,000 gpm, and 28 percent of the hydrants **cannot** meet the Town required fire flow of 1,250 gpm. Given the importance of adequate fire protection for human health and safety and to help minimize the potential risk of a wildfire starting from a residential fire, WWE recommends the Ski Ranches work collaboratively with the Town of Mountain Village (Town) to identify solution-based approaches to finance and manage a more comprehensive project to install improvements identified in the Water System Improvement Plan on a more accelerated timeline.

WWE understands the Town's annual budget to fund the Water System Improvement Plan is \$250,000. Based on the estimated present-day cost¹ of \$8.9 million to design and construct all the improvements presented in the Water System Improvement Plan, it will take more than 30 years to make the improvements.

Overall, WWE recommends constructing all phases of the Water System Improvement Plan due to the age of the system which is at or near the end of its useful service life. At a minimum, WWE recommends the Ski Ranches work with the Town and consider applying for a loan through the State Revolving Fund (SRF) program to fully fund and construct at least one of the following alternatives on a more accelerated timeline to help minimize impacts to Ski Ranches water service rates. Computer modeling indicates each of the following alternatives is anticipated to provide the TFPD required fire flow of at least 1,000 gpm to every hydrant in the Ski Ranches:

1. The first three phases of the Water System Improvement Plan, with an estimated present-day cost of \$5.3 million, or
2. The first two phases of the Water System Improvement Plan plus the addition of a pipeline loop between Vance Creek Road and Saddle Horn Lane, with an estimated present-day cost of \$4.6 million. Please note that the proposed loop between Vance Creek Road and Saddle Horn Lane was not part of the original Water System Improvement Plan (see Figure 1).

WWE recommends implementing one of the above alternatives to help address health and human safety concerns and minimize the potential for the cost of these alternatives to grow beyond a \$250,000 annual SRF loan payment, the Town's current annual budget for the Ski Ranches improvements. Based on WWE's Projected Future Project cost projections, the annual loan payment for both these alternatives could exceed \$250,000 in or around 2025. Additional funding is required for implementation of all phases of the Water System Improvement Plan.

WWE understands from the Ski Ranches that the Town may have limited capacity to take on managing a water system improvement plan of this magnitude and encourages the Ski Ranches to work collaboratively with the Town to find a project management and financing strategy that works well for both parties.

Fire Suppression Volume Adequacy Findings:

- The Ski Ranch Community requires approximately 150,000 gallons of water storage to meet Town fire suppression flow requirement of 1,250 gallons per minute for 2 hours. According to the Town water system operator, the Ski Ranches 100,000-gallon water storage tank is currently equipped with an automatic bypass valve that provides the Ski Ranches Community water system with additional fire suppression storage from the Town's combined 2.7 million gallons of water storage and meets fire suppression volume requirements.

¹ The Water System Improvement Plan estimated a total project cost of \$7,202,000. Cost adjusted to 2023 value by using Engineering News Record Construction Cost Indices.

Proposed Distribution System Improvements:

- Based on WWE’s review of the Phased Improvements Model, it appears that the order of proposed phasing addresses system deficiencies in a logistically efficient manner, however, WWE recommends accelerating the timeline for implementation of Water System Improvement Plan.
- Under full-buildout demand conditions, the Phased Improvements Model indicates the Water System Improvement Plan is adequate to comply with a TFPD minimum fire flow requirement of 1,000 gpm.
- Under full-buildout demand conditions, the Phased Improvements Model indicates the improvements recommended in the Water System Improvement Plan would allow 90 percent of the hydrants in the Ski Ranches community to meet the Town required fire flow of 1,250 gpm. Modeling results suggest the addition of a pipeline loop between Vance Creek Lane and Saddle Horn Lane (see Figure 1), not currently included in the Water System Improvement Plan, is required for all hydrants to meet the Town’s fire flow requirement of 1,250 gpm.
- Under full-buildout demand conditions, the Phased Improvements Model indicates the lowest modeled residual pressure in the distribution system is approximately 20 pounds per square inch (psi) under a TFPD required fire flow demand of 1,000 gpm. This modeled residual pressure complies with the Colorado Department of Public Health and Environment (CDPHE) Potable Water System Design Criteria minimum residual distribution pressure requirement of 20 psi.

1.0 Review Scope and Documentation Relied Upon

This letter is intended to provide the Ski Ranches with an independent engineering review of the Water System Improvement Plan for the Ski Ranches Community. WWE’s review focused on reviewing and confirming the engineering assumptions used to develop the recommendations of the Water System Improvement Plan for general conformance with the standard of practice for water distribution system planning. To perform this review, WWE relied upon the following documentation:

- *Water System Network Analysis, Recommendations and Costs – Town of Mountain Village Colorado*, prepared by Professional Consultant Inc., PCI, dated 2009 (Water System Analysis).
- *Draft – Town of Mountain Village, Ski Ranches Water System Capital Improvements Plan*, prepared by Russell Planning and Engineering, Inc. (Russell), dated November 9, 2017 (Water System Improvement Plan).
- Existing Conditions Water Distribution Model for the Town of Mountain Village (Existing Conditions Model). Phased Conditions Water Distribution Model for the Ski Ranches Distribution System (Phased Improvements Model). Received March 2023 in EPANet Model format from Short Elliott Hendrickson Inc. (SEH).

- Ordinance No. 2016-11 An Ordinance Amending the Town of Mountain Village Municipal Code Chapter 13.10 Water and Sewer Rules, Regulations and Rates.
- Colorado Department of Public Health and Environment Design Criteria for Potable Water Systems. Dated July 1, 2022. (CDPHE Potable Water System Design Criteria).
- Information gathered during WWE site visit on October 6, 2022 (see Attachment A).
- Teleconference with Scott Heidergott, Fire Marshal for TFPD on March 29, 2023.
- Teleconference with Bob Haining, Town of Mountain Village Water System Operator, on April 12, 2023.

2.0 Ski Ranches Water Distribution System Review

WWE understands the Ski Ranches water storage and distribution system (water system) is part of the Town's public water system. The Ski Ranches water system does not have its own public water system identification number (PWSID), and it is covered under the Town's PWSID. The Ski Ranches water distribution system is currently served by a 100,000-gallon water storage tank that is filled by a 6-inch diameter pipeline connected to the Town's water distribution system.

The existing water distribution system for the Ski Ranches Community, constructed in or around the 1970's, is generally a 6-inch diameter ductile iron pipe (DIP). As discussed in Attachment A, it appears that the original DIP was directly buried below ground (in contact with soil) without corrosion or cathodic protection. Due to its age and the conditions in which it was originally installed, the DIP is at or near the end of its useful service life, evidenced by the numerous water line breaks that have and continue to occur within the Ski Ranches Distribution System (see Attachment A).

The following sections provide the basis for WWE's review of the Water System Improvement Plan.

2.1 Distribution System Planning Criteria

In accordance with WWE's scope, our review is focused on providing an engineering-based review of the Water System Improvement Plan's reasonableness and suitability to meet fire suppression storage, fire flow requirements, and distribution pipeline system pressures in accordance with the engineering profession standard of care. The following provides a summary of the planning criteria WWE used to evaluate the Water System Improvement Plan:

- **Fire Flow and Suppression Storage:** The Water System Improvement Plan based its recommendations on a fire flow requirement of 1,250 gpm for 2 hours. This equates to a fire suppression storage volume of 150,000 gallons. WWE interviewed the TFPD Fire Marshal, and the Fire Marshal's required fire flow is 1,000 gpm for 1 hour for the Ski Ranches Community. This equates to a fire suppression storage volume of 60,000 gallons.

According to the Water System Improvement Plan, the selected fire flow requirement of 1,250 gpm for 2 hours is based on a target flow set by the Town. WWE understands that the Town's fire flow requirement is higher than what the Fire Marshal requires for the Ski Ranches Community because there are areas in Town with higher density and larger structure footprints when compared to the Ski Ranches Community.

Based on this information, WWE used a **fire flow requirement between 1,000 and 1,250 gpm**, and a **fire suppression storage volume of 150,000 gallons** as the planning criteria for reviewing the adequacy of the Water System Improvement Plan.

- **Water Demands:**

- **Existing Water System Demands:** Typical Fire Flow hydraulic modeling analysis is performed under a maximum day demand scenario, with the required fire flow rate added to a system stressed by the maximum demand. According to the Water System Improvement Plan, the maximum day demand estimates are based on the average day demand from the larger of either meter readings or an assumed 100 gallons per day (gpd) per person times the average number of people per home, with a peaking factor of 4.5 from average day to maximum day.

Based on WWE's review of the Existing Conditions Water Distribution Model the peak hour baseline demand on the system used as the basis for the Water System Improvement Plan is approximately 18,400 gallons per hour (gph). This equates to a daily demand of approximately 100,000 gpd for the Ski Ranches water system. Based on conversations with the Ski Ranches water system operator, a Ski Ranches community base daily demand of 100,000 gpd is reasonable for planning purposes.

Additionally, WWE independently calculated the existing conditions demand for the current developed lot count with accessory dwelling units (ADUs) using the assumption of 100 gpd per person times a 4.5 peaking factor. WWE calculated an ADU base demand of 90 GPD per ADU². WWE's calculated existing conditions demand was less than 18,400 gph, which suggests that the existing demands used in the Existing Conditions Water Distribution Model are conservative and based on meter readings, rather than a baseline demand of 100 gpd per person. Existing lot conditions are shown on Figure 2.

Based on this information, planning for an **existing conditions base peak hourly demand of 18,400 gph** appears consistent with EPA and CDPHE published planning criteria.

Full Buildout Water System Demands: WWE calculated a **full buildout conditions peak hourly demand of approximately 22,900 gph** for the Ski Ranches Community. To estimate full buildout demand conditions, WWE added demands from an additional 40 single-family residential units (SFUs) and 152 ADUs to the existing conditions demands. This reflects potential demand conditions if all 204 lots included an SFU and an ADU, a conservative assumption.

²WWE calculated the demand per ADU by multiplying the base demand from a SFU by the ratio of the allowable ADU footprint (793 square feet) to the average area of an SFU (2,000 square feet).

WWE's calculated full buildout demand also includes future demands from Skyfield, a small development immediately west of Ski Ranches, which is provided water by the Ski Ranches Water system. Ski Ranches provided full build out assumptions for Skyfield and included 21 developed lots each constructed with an ADU, a conservative assumption.

Distribution Pipeline System Pressures: To assess the impacts of a fire flow from one hydrant on other areas in the distribution system, the Water System Improvement Plan assumed a minimum residual pressure requirement of 10 psi anywhere else in the Ski Ranches system. CDPHE Potable Water System Design Criteria indicates that a minimum residual pressure requirement of 20 psi should be maintained anywhere else in a water system during a fire flow event.

Based on this information, WWE used a **minimum residual system pressure of 20 psi** in accordance with CDPHE Potable Water System Design Criteria as planning criteria to assess the fire flow availability at one hydrant based on the recommended improvements.

2.2 Existing Conditions

The following sections summarize WWE's review of the existing system, as it relates to the planning criteria discussed in Section 2.1.

2.2.1 Fire Suppression Storage

As discussed in PCI's Water System Analysis and the Water System Improvement Plan, the existing storage tank is not adequately sized to meet the fire suppression storage criteria of 150,000 gallons. The Water System Improvement Plan recommended that the conditions between the 6-inch water feed line from the Town to the tank be improved so that a minimum of 1,250 gpm could be delivered to the Ski Ranches water system in the event of a fire and make use of the additional storage available in the Town water system.

According to the Ski Ranches water system operator the 6-inch line coming into the Ski Ranches Community water tank is now equipped with an automatic bypass valve that allows up to 1,440 gpm to flow directly into the Ski Ranches Community water distribution system without having to enter the tank. The water system operator noted the bypass valve was tested to confirm the 1,440-gpm flow rate. According to the water system operator, the automatic tank bypass valve is set to open when demand from the water system is greater than 500 gpm for 30 minutes or more. This improvement reportedly provides the Ski Ranches Community water system with additional fire suppression storage at from the Town's combined 2.7 million gallons of water storage at a flow rate greater than the minimum required.

2.2.2 Fire Flow Availability and Distribution System Pressures

As discussed in PCI's Water System Analysis and the Water System Improvement Plan, the Existing Conditions Model indicates the distribution system is not adequately sized to convey the required fire flow to the hydrants located throughout the Ski Ranches Community. Both PCI's Water System Analysis and the Water System Improvement Plan indicate that under existing

conditions the hydrants in the Ski Ranches Community can sustain a flow of 500 gpm or less under peak user demand conditions.

WWE performed a desktop level evaluation of the Existing Conditions Model received from SEH to check the reasonableness of model parameters such as pipe diameters, pipe lengths, roughness coefficients, baseline system demands, pressure zone settings and elevations of each node in the system. Based on WWE's desktop level review and communication with the water systems operator, WWE did not observe any model parameter omissions or obvious issues with the Existing Conditions Model that would affect the overall conclusions.

After performing the desktop evaluation, WWE ran the Existing Conditions Model and obtained similar results between the values published in the Water System Improvement Plan and WWE's run of the Existing Conditions Model. See Table 1 for a comparison of WWE's Existing Conditions Model run results compared with the published results in the Water System Improvement Plan. WWE agrees with the conclusion that the existing distribution system is not adequately sized to meet fire flow requirements at any existing hydrant and does not maintain minimum residual system pressures in accordance with CDPHE Potable Water System Design Criteria.

2.3 Post Water System Improvement Plan Conditions

The following sections summarize WWE's review of the improvements recommended in the Water System Improvement Plan, as it relates to the planning criteria discussed in Section 2.1. Please note that Fire Suppression Storage is not covered in the following sections and is addressed in Section 2.2.1

2.3.1 Fire Flow Availability and Distribution System Pressure

According to the Water System Improvement Plan, Russell Engineering used the Existing Conditions Model developed for PCI's Water System Analysis as the basis for the resizing, and phasing of the Ski Ranches community distribution system. WWE received the Phased Improvements Model from SEH which WWE understands was the basis for the recommendations developed as part of the Water System Improvement Plan.

WWE performed a desktop level evaluation of the Phased Improvements Model received from SEH to review model parameters such as pipe diameters, pipe lengths, roughness coefficients, baseline system demands, pressure zone settings and elevations of each node in the system. Based on WWE's desktop level review and communication with the water systems operator, WWE only disagreed with one of the model inputs used to develop the recommended improvements.

The pipeline diameters input into the Phased Improvements Model were consistent with nominal pipe diameters (i.e., 10-inch, 8-inch, etc.) and did not consider the actual internal diameter of the proposed pipeline material. WWE observed construction of a portion of the Phase 1 improvements, including installation of a 10-inch diameter HDPE pipe with an inside pipe diameter less than 9 inches (IPS HDPE DR-11). The actual inside diameter of a 10-inch diameter IPS HDPE DR-11 pipe is 8.679 inches and the actual diameter of an 8-inch pipe (same material

and grade) is 6.96 inches. As a result, the Phased Improvements Model assumes more flow area is available in the pipelines than is physically available based on the pipe material.

WWE updated and ran the Phased Improvements Model with corrected pipe diameters to better reflect fire flow availability at each hydrant under post improvement conditions (Modified Phased Improvements Model). WWE's model output also assumes that 20 psi must be available at the hydrant, and minimum residual system pressure of 20 psi in accordance with Section 2.1.

WWE's Modified Phased Improvement Model indicates reduced flow availability at select hydrants when comparing them with the flow availability published in the Water System Improvement Plan. While there is reduced flow capacity, the results indicate that adequate fire flow, hydrant pressure, and residual system pressure criteria are met with the TFPD requirements of 1,000 gpm, but not all hydrants meet the Town requirement of 1,250 gpm. See Table 1 for a comparison of WWE's Modified Phased Improvements Model results compared with the published results in the Water System Improvement Plan.

2.3.2 Full Buildout Fire Flow Availability and Distribution System Pressure

WWE also ran the Modified Phase Improvement Model under the full buildout demand conditions described in Section 2.1. The results of the Modified Phased Improvement Model – Full Buildout indicate that adequate fire flow, hydrant pressure, and residual system pressure criteria are met with the TFPD requirements of 1,000 gpm, but not all hydrants meet the Town requirement of 1,250 gpm. The results of WWE's Modified Phased Improvement Model – Full Buildout indicate that 100 percent of the hydrants meet fire flow, hydrant pressure, and residual system pressure criteria with the TFPD requirements of 1,000 gpm, and 90 percent of the hydrants meet the Town requirement of 1,250 gpm (see Table 2).

2.3.3 As-Built Conditions Fire Flow Availability and Distribution System Pressure

WWE understands that a portion of the Phase 1 improvements identified in the Water System Improvements have already been installed. Per WWE's conversation with the water system operator, improvements made to the water distribution system through 2022 included:

- Replacement of the PRV at the water storage tank.
- The diameter of the pipe into the tank was increased to a 6-inch diameter HDPE pipe.
- The distribution system is looped with a 10-inch diameter HDPE from the tank to hydrant 39.
- Two distribution system PRVs were replaced.
- The distribution line is now a 10-inch diameter HDPE between the tank and the intersection of Fox Farm Road and Saddle Horn Lane.

WWE modified the Existing Conditions Model to reflect these improvements made through 2022. The results of WWE's 2022 Conditions Model indicate that approximately 78 percent of the hydrants meet fire flow, hydrant pressure, and residual system pressure criteria with the TFPD

requirements of 1,000 gpm, and 72 percent of the hydrants meet the Town requirement of 1,250 gpm (see Table 2).

2.4 Other Considerations

2.4.1 Order of Project Phasing

Currently, WWE does not have recommended changes to the proposed phasing of the Water System Improvement Plan. Based on WWE's Modified Phased Improvements Model, it appears that the order of proposed phasing provides a reasonable sliding scale of benefit to the overall Ski Ranches community with the implementation of each phase. Table 2 provides the percent of the total number of hydrants in the Ski Ranches Community anticipated to meet the fire flow criteria (see Section 2.1) with the implementation of each phase.

It is worth noting that under Phase 3 conditions WWE's Modified Phased Improvements Model indicates that every hydrant in the Ski Ranches Community would meet the TFPD requirement of 1,000 gpm with 20 psi available at the hydrant and 20 psi minimum residual pressure in the distribution system.

2.4.2 Addition of Vance Creek Road and Saddle Horn Lane Loop

During WWE's field visit, the Ski Ranches water system operator noted that the system would benefit from the installation an 8-inch diameter water distribution loop, approximately 950 feet long, between the cul-de-sac on Vance Creek Road and the water line at Saddle Horn Lane (see Figure 1). WWE updated and ran the Modified Phased Improvements Model with this additional loop to help understand potential benefits to the distribution system.

Based on the modeling results the additional loop is necessary for the water system to meet the Town's fire flow criteria of 1,250 gpm. If this loop is incorporated into the phasing of the Water System Improvement Plan, WWE recommends it be incorporated as part of Phase 2, because the model suggests it would provide the hydrants in this area with increased fire flow capacity before the implementation of Phase 3. As shown in Table 2, WWE modeling suggests that implementation of the loop during Phase 2 will increase the percentage of hydrants meeting 1,000 gpm from 88 percent to 100 percent when compared with the current Water System Improvement Plan. The modeled percentage of hydrants meeting 1,250 gpm under Phase 2 conditions would also increase from 86 percent to 98 percent with implementation of the loop.

Based on the Phase 2 cost estimate developed by Russell in the Water System Improvement Plan, the addition of this loop could add approximately \$200,000 to the overall 2017 Phase 2 Project costs, for a total Phase 2 cost of approximately \$2.5 million in present-day dollars.

2.4.3 Water System Improvement Plan Implementation Timeline and Financing

WWE understands that the Town is currently funding construction of the Water System Improvement Plan at an amount of up to \$250,000 a year. WWE understands this \$250,000 is being generated by special assessments on the Ski Ranches water utility bill from the Town. The

total estimated cost to complete all phases presented in the 2017 Water System Improvement plan is estimated at approximately \$8.9 million in 2023 dollars (see Table 3). Without accounting for inflation or changes to fire protection code requirements, full implementation of the plan will take more than 30 years to complete at the current annual funding rate.

Given the importance of adequate fire protection for human health and safety, and the potential risk of starting a wildfire due to a Ski Ranches residential fire, WWE recommends the Ski Ranches work with the Town to secure a loan to fully fund all or at least the first three phases of the Water System Improvement plan so it can be implemented on a faster timeline. The Town may be able to qualify for a low interest loan from the State Revolving Fund (SRF) program to fund construction of at least the first three phases or all phases of the Water System Improvement Plan. With this funding secured, the Water System Improvement plan could be designed and constructed over a much shorter time span. Rather than paying \$250,000 per year for construction, the \$250,000 could be used to pay the annual loan payment.

WWE typically uses the Engineering News-Record Construction Cost Index (ENR CCI) to adjust historical construction cost estimates into today's dollars. Based on the total Water System Improvement Plan cost of \$7.2 million estimated in 2017, and the ENR CCI change between 2017 and May 2023, the estimated cost to implement all phases is approximately \$8.9 million in 2023 dollars. The cost to implement the first three phases of Water System Improvement Plan is approximately \$5.3 million in 2023 dollars (see Table 3).

Table 3 provides a summary of the loan amortization schedule for a \$5.3 million loan over a range of interest rates. According to the Colorado Water Resources and Power Development Authority website³ the standard rate for an SRF loans is 3.25 percent but could change in the future. The annual payment for an SRF loan principal of \$5.3 million could range between approximately \$270,000 at an interest rate of 3.0 percent and \$297,000 at an interest rate of 3.75 percent.

The anticipated annual payment for an SRF loan principal of \$8.9 million could range between approximately \$454,000 at an interest rate of 3.0 percent and \$499,000 at an interest rate of 3.75 percent (see Table 3).

As discussed in section 2.4.2, the results of WWE's Modified Phased Improvement Model review suggest the addition of the Vance Creek Road and Saddle Horn Lane Loop as part of the Phase 2 improvements may provide at least 1,000 gpm to all the hydrants in the Ski Ranches community in accordance with TFPD requirements. The estimated cost to implement the first two phases of Water System Improvement Plan with the addition of the loop is approximately \$4.6 million in 2023 dollars (see Table 4).

The anticipated annual payment for an SRF loan principal of \$4.6 million could range between approximately \$235,000 at an interest rate of 3.0 percent and \$258,000 at an interest rate of 3.75 percent. Assuming the results of WWE's modeling of the loop are confirmed by more detailed engineering, this approach may be the most cost-effective approach to allow the Ski Ranches water

³Accessed 5/8/2023: <https://www.cwrpda.com/current-interest-rates>

distribution system to meet TFPD's fire flow requirement of 1,000 gpm within the current annual budget. WWE still recommends implementing all phases of the Water System Improvement Plan.

In order to keep potential project costs within a fundable range, WWE recommends the Ski Ranches work collaboratively with the Town to identify solution-based approaches for funding and designing the improvements by 2025. Table 5 provides a summary of projected water system improvement plan costs for each option discussed between 2023 and 2033. As shown in Table 5, the anticipated annual loan payment for improvements through Phase 2 with the addition of the Vance Creek Road and Saddle Horn Lane Loop is anticipated to be greater than \$250,000 in or around 2025.

3.0 Potential Grant Funding Sources

WWE's experience with grants for water infrastructure improvements of this nature suggests the Ski Ranches will have difficulty qualifying for grants from more common grant funding agencies such as the Colorado Department of Local Affairs (DOLA), CDPHE, EPA, and the Natural Resources Conservation Service (NRCS). Ski Ranches may have difficulty qualifying and securing grant funding because: 1) it is unlikely that the Ski Ranches would qualify as a disadvantaged community, and 2) WWE is unaware of any drinking water quality issues at the Ski Ranches. Most grant funds are targeted for disadvantaged communities with low to middle median household income or focused on drinking water quality compliance issues or emerging contaminants.

WWE recommends first reaching out to the regional DOLA representative, as they are a good local resource for identifying potential grant opportunities through DOLA or other state and federal agencies. The current DOLA regional manager is Patrick Rondinelli, and his contact information can be found here⁴. If requested, WWE can assist the Ski Ranches with identifying potential grant funding opportunities that may be applicable to the Water System Improvement Plan.

Other potential sources of grant funding include:

- CDPHE
 - Water quality grants: <https://cdphe.colorado.gov/glu>
 - Source Water Protection: <https://cdphe.colorado.gov/water-quality/drinking-water-resources-for-water-systems/source-water-assessment-and-protection-1>
- USDA: <https://www.rd.usda.gov/programs-services/all-programs/co>

4.0 Overall Summary and Conclusions

In summary, WWE's review of the 2017 Water System Improvement Plan prepared by Russell Engineering indicates that the recommended improvements in the Water System Improvement

⁴ <https://dlg.colorado.gov/regional-managers-and-regional-assistants>

Plan are adequately sized to meet the water distribution planning criteria for fire flow suppression and water distribution system pressures under existing and full buildout conditions.

Given the current proposed timeline of approximately 30 years or more for implementation of the Water System Improvement Plan WWE recommends the Ski Ranches work with the Town to secure SRF loan funding (or similar funding source) for the design and construction of at least one of the following alternatives: 1) the first three phases of the Water System Improvement Plan, or 2) the first two phases with the addition of the Vance Creek Road and Saddle Horn Lane Loop. Computer modeling suggests construction of one of these alternatives is anticipated to provide at least 1,000 gpm to every hydrant in the Ski Ranches Community, which meets the fire flow requirement from the TFPD.

To keep potential project costs within a fundable range and minimize impacts to Ski Ranches water rates, WWE recommends the Ski Ranches work collaboratively with the Town to identify solution-based approaches for funding and designing the improvements by 2025. WWE anticipates the annual loan payment for improvements through Phase 2 with the addition of the Vance Creek Road and Saddle Horn Lane Loop will become greater than \$250,000 in or around 2025.

WWE understands from the Ski Ranches that the Town may have limited capacity to take on managing and implementing a water system improvement plan of this magnitude and encourages the Ski Ranches to work collaboratively with the Town to identify a potential project management and financing strategy that works well for both parties.

The alternatives presented herein are intended to provide the Ski Ranches with an understanding of what may be feasible given the current annual project budget limit. Overall, WWE recommends constructing all phases of the Water System Improvement Plan due to the age of the system which is at or near the end of its useful service life, and additional funding is needed to implement all phases of the Water System Improvement Plan.

Please feel free to call or email me if you have any questions regarding this letter report.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By _____
Hayes A. Lenhart, P.E.
Senior Water Resources Engineer

Attachments:

Table 1. Modeled Fire Flow Availability and Pressures at Select Hydrants

Table 2. Hydrants Meeting Fire Flow Criteria After Each Phase of Implementation

Table 3. Loan Amortization Scenarios – Implementation through Phases 3 and 4

Table 4. Loan Amortization Scenario - Implementation through Phase 2 with Vance Creek Road and Saddle Horn Lane Loop

Table 5. Projected Future Water Improvement Plan Costs

Figure 1. Proposed Pipe Loop Schematic Saddle Horn Lane to Vance Creek Road

Figure 2. Telluride Ski Ranches Existing Lot Conditions

Attachment A. December 14, 2022 – WWE letter regarding: Summary of October 6, 2022, Site Visit to Telluride Ski Ranches Water System.

Table 1
Modeled Fire Flow Availability and Pressures at Select Hydrants
 Telluride Ski Ranches

General Notes:

Russell Reported Values: Values published the *Draft - Town of Mountain Village, Ski Ranches Water System Capital Improvements Plan*, prepared by Russell Planning and Engineering, Inc., dated November 9, 2017

WWE Modeled Values:

Existing Conditions: Results from EPANet model executed by WWE, received March 2023 from Short Elliott Hendrickson Inc.

Post Phase 1 through 4 Improvements: Results from EPANET model executed by WWE, after correcting pipe diameter for each phase in EPANet model received March 2023 from Short Elliott Hendrickson Inc.

Hydrants: There are a total of 50 hydrants in the model. The hydrants shown below are representative of the pressure zones in the system.

Existing Conditions Model (No improvements)							
Hydrant ID	Pressure Zone	Russell Reported Values			WWE Modeled Values		
		Available Flow	Pressure at Hydrant	Residual System Pressure	Available Flow	Pressure at Hydrant	Residual System Pressure
SRFH-40	1	424	28	0	424	28	0
SRFH-16	1	487	74	0	487	74	0
SRFH-51	2	499	61	0	499	61	0
SRFH-26	2	499	142	0	499	142	0
SRFH-04	3	498	63	0	498	63	0
SRFH-15	4	487	83	0	487	83	0

2022 Conditions Model (Includes Improvements Completed through end of 2022)							
Hydrant ID	Pressure Zone	Russell Reported Values			WWE Modeled Values		
		Available Flow	Pressure at Hydrant	Residual System Pressure	Available Flow	Pressure at Hydrant	Residual System Pressure
SRFH-09	3	Not Modeled by Russell			725	20	20
SRFH-22	2				1,550	105	20
SRFH-10	4				1,225	21	21
SFRH-17	1				1,400	22	20
SRFH-55	2				820	44	20
SRFH-04	3				1,025	20	20

Post Phase 1 Improvements							
Hydrant ID	Pressure Zone	Russell Reported Values			WWE Modeled Values		
		Available Flow	Pressure at Hydrant	Residual System Pressure	Available Flow	Pressure at Hydrant	Residual System Pressure
SRFH-09	3	737	20	46	735	20	20
SRFH-22	2	4,842	25	10	1,550	137	20
SRFH-10	4	1,283	20	30	1,225	21	21
SFRH-17	1	1,577	20	20	1,400	22	20
SRFH-55	2	888	33	10	825	45	21
SRFH-04	3	1,068	20	48	1,050	22	22

Post Phase 1 and Phase 2 Improvements							
Hydrant ID	Pressure Zone	Russell Reported Values			WWE Modeled Values		
		Available Flow	Pressure at Hydrant	Residual System Pressure	Available Flow	Pressure at Hydrant	Residual System Pressure
SRFH-17	1	2,870	20	16	1,500	34	21
SRFH-24	2	1,633	20	44	1,500	31	21
SRFH-10	4	3,711	38	10	1,500	65	21
SRFH-04	3	1,767	20	44	1,450	22	21
SRFH-45	1	1,514	20	44	1,450	20	20
SRFH-49	2	990	61	10	925	71	20

Post Phase 1, Phase 2 and Phase 3 Improvements							
Hydrant ID	Pressure Zone	Russell Reported Values			WWE Modeled Values		
		Available Flow	Pressure at Hydrant	Residual System Pressure	Available Flow	Pressure at Hydrant	Residual System Pressure
SRFH-04	3	1,767	20	43	1,300	21	21
SRFH-07	3	1,944	20	42	1,325	21	21
SRFH-14	4	2,847	25	10	1,500	57	20
SRFH-23	2	2,299	36	10	1,550	95	20
SRFH-24	2	1,639	20	44	1,500	31	21
SRFH-45	1	1,517	20	45	1,450	20	20
SRFH-52	2	1,296	20	16	1,090	20	20

Post Phase 1, Phase 2, Phase 3 and Phase 4 (all Phases) Improvements							
Hydrant ID	Pressure Zone	Russell Reported Values			WWE Modeled Values		
		Available Flow	Pressure at Hydrant	Residual System Pressure	Available Flow	Pressure at Hydrant	Residual System Pressure
SRFH-41	1	2,974	20	36	1,500	30	21
SRFH-51	2	1,948	20	44	1,150	21	21
SRFH-52	2	2,217	20	10	1,225	39	22
SRFH-07	3	3,894	20	28	1,500	69	21
SRFH-01	3	5,539	72	10	1,500	68	21
SRFH-19	4	3,028	20	31	1,500	43	21

Table 2
Hydrants Meeting Fire Flow Criteria at Various Phases of Implementation
 Telluride Ski Ranches

Existing Demands					
WWE Modified Phase Improvement Model Results			WWE Modified Phase Improvement Model with Vance Road and Saddle Horn Lane Loop Included		
Water System Improvement Phase	Percent of Hydrants Meeting Fire Flow Criteria		Water System Improvement Phase	Percent of Hydrants Meeting Fire Flow Criteria	
	1,000 gpm (20 psi)	1,250 gpm (20 psi)		1,000 gpm (20 psi)	1,250 gpm (20 psi)
Phase 1	80%	72%	Phase 1	80%	72%
Phase 2	88%	86%	Phase 2 (with loop)	100%	98%
Phase 3	100%	90%	Phase 3 (with loop)	100%	100%
Phase 4	100%	90%	Phase 4 (with loop)	100%	100%

2022 Existing Condition and Demand		
WWE 2022 Conditions Model Results		
Water System Improvement Phase	Percent of Hydrants Meeting Fire Flow Criteria	
	1,000 gpm (20 psi)	1,250 gpm (20 psi)
All Improvements Through 2022	78%	72%

Full Buildout Demands					
Modified Phased Improvement Model – Full Buildout			Modified Phased Improvement Model – Full Buildout with Vance Road and Saddle Horn Lane Loop Included		
Water System Improvement Phase	Percent of Hydrants Meeting Fire Flow Criteria		Water System Improvement Phase	Percent of Hydrants Meeting Fire Flow Criteria	
	1,000 gpm (20 psi)	1,250 gpm (20 psi)		1,000 gpm (20 psi)	1,250 gpm (20 psi)
Phase 4	100%	90%	Phase 4 (with loop)	100%	100%

Table 3
Loan Amortization Scenarios - Implementation through Phase 3 and Phase 4
Ski Ranches Water System Improvement Plan
 Telluride Ski Ranches

Water System Improvement Plan Cost Estimate		Notes / References
2017 Phase 1 Cost	\$1,700,000	All Cost from <i>Draft – Town of Mountain Village, Ski Ranches Water System Capital Improvements Plan</i> , prepared by Russell Planning and Engineering, Inc. (Russell), dated November 9, 2017 (Water System Improvement Plan). Costs not independently verified by WWE.
2017 Phase 2 Cost	\$1,800,000	
2017 Phase 3 Cost	\$802,000	
2017 Subtotal (through Phase 3)	\$4,302,000	
2017 Phase 4 Cost	\$2,900,000	
2017 Total Cost (All Phases)	\$7,202,000	
2017 ENR CCI	10737	Values from Engineering New Record Construction Cost Index. Available here: https://www.enr.com
May 2023 ENR CCI	13288	
Estimated 2023 Water System Improvement Plan Cost Through Phase 3	\$5,300,000	Equals 2017 Subtotal (through Phase 3) x (May 2023 ENR CCI ÷ 2017 ENR CCI)
Estimated 2023 Water System Improvement Plan Cost All Phases	\$8,900,000	Equals 2017 Total Cost (All Phases) x (May 2023 ENR CCI ÷ 2017 ENR CCI)

Initial Loan Terms through Phase 3				
Interest Rate	3.00%	3.25%	3.50%	3.75%
Principal	\$5,300,000	\$5,300,000	\$5,300,000	\$5,300,000
Term (years)	30	30	30	30
First payment Year	2024	2024	2024	2024
Annual Payment	\$270,402	\$279,213	\$288,168	\$297,264

Initial Loan Terms through Phase 4 (All Phases)				
Interest Rate	3.00%	3.25%	3.50%	3.75%
Principal	\$8,900,000	\$8,900,000	\$8,900,000	\$8,900,000
Term (years)	30	30	30	30
First payment Year	2024	2024	2024	2024
Annual Payment	\$454,071	\$468,867	\$483,905	\$499,180

Water System Improvement Implementation Through Phase 3 Amortization Schedule Only												
Year	3.00% Interest Rate			3.25% Interest Rate			3.50% Interest Rate			3.75% Interest Rate		
	Interest	Principle	Balance	Interest	Principle	Balance	Interest	Principle	Balance	Interest	Principle	Balance
	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
2024	159,000	111,402	5,188,598	172,250	106,963	5,193,037	185,500	102,668	5,197,332	198,750	98,514	5,201,486
2025	155,658	114,744	5,073,854	168,774	110,439	5,082,597	181,907	106,261	5,091,071	195,056	102,209	5,099,277
2026	152,216	118,186	4,955,667	165,184	114,029	4,968,569	178,187	109,981	4,981,090	191,223	106,042	4,993,235
2027	148,670	121,732	4,833,935	161,478	117,735	4,850,834	174,338	113,830	4,867,260	187,246	110,018	4,883,217
2028	145,018	125,384	4,708,551	157,652	121,561	4,729,273	170,354	117,814	4,749,446	183,121	114,144	4,769,074
2029	141,257	129,146	4,579,406	153,701	125,512	4,603,761	166,231	121,937	4,627,509	178,840	118,424	4,650,649
2030	137,382	133,020	4,446,386	149,622	129,591	4,474,171	161,963	126,205	4,501,303	174,399	122,865	4,527,784
2031	133,392	137,010	4,309,375	145,411	133,803	4,340,368	157,546	130,622	4,370,681	169,792	127,472	4,400,312
2032	129,281	141,121	4,168,255	141,062	138,151	4,202,217	152,974	135,194	4,235,487	165,012	132,253	4,268,059
2033	125,048	145,354	4,022,900	136,572	142,641	4,059,576	148,242	139,926	4,095,561	160,052	137,212	4,130,847
2034	120,687	149,715	3,873,185	131,936	147,277	3,912,299	143,345	144,823	3,950,737	154,907	142,358	3,988,489
2035	116,196	154,207	3,718,978	127,150	152,063	3,760,236	138,276	149,892	3,800,845	149,568	147,696	3,840,793
2036	111,569	158,833	3,560,146	122,208	157,005	3,603,230	133,030	155,138	3,645,706	144,030	153,235	3,687,559
2037	106,804	163,598	3,396,548	117,105	162,108	3,441,122	127,600	160,568	3,485,138	138,283	158,981	3,528,578
2038	101,896	168,506	3,228,042	111,836	167,377	3,273,745	121,980	166,188	3,318,950	132,322	164,943	3,363,635
2039	96,841	173,561	3,054,482	106,397	172,816	3,100,929	116,163	172,005	3,146,945	126,136	171,128	3,192,507
2040	91,634	178,768	2,875,714	100,780	178,433	2,922,496	110,143	178,025	2,968,920	119,719	177,545	3,014,961
2041	86,271	184,131	2,691,583	94,981	184,232	2,738,264	103,912	184,256	2,784,664	113,061	184,203	2,830,758
2042	80,747	189,655	2,501,929	88,994	190,220	2,548,045	97,463	190,705	2,593,959	106,153	191,111	2,639,647
2043	75,058	195,344	2,306,585	82,811	196,402	2,351,643	90,789	197,379	2,396,580	98,987	198,278	2,441,369
2044	69,198	201,205	2,105,380	76,428	202,785	2,148,858	83,880	204,288	2,192,292	91,551	205,713	2,235,656
2045	63,161	207,241	1,898,139	69,838	209,375	1,939,483	76,730	211,438	1,980,854	83,837	213,427	2,022,229
2046	56,944	213,458	1,684,681	63,033	216,180	1,723,303	69,330	218,838	1,762,016	75,834	221,431	1,800,798
2047	50,540	219,862	1,464,820	56,007	223,206	1,500,097	61,671	226,497	1,535,519	67,530	229,734	1,571,064
2048	43,945	226,457	1,238,362	48,753	230,460	1,269,638	53,743	234,425	1,301,094	58,915	238,350	1,332,714
2049	37,151	233,251	1,005,111	41,263	237,950	1,031,688	45,538	242,630	1,058,464	49,977	247,288	1,085,427
2050	30,153	240,249	764,862	33,530	245,683	786,004	37,046	251,122	807,342	40,703	256,561	828,866
2051	22,946	247,456	517,406	25,545	253,668	532,336	28,257	259,911	547,431	31,082	266,182	562,684
2052	15,522	254,880	262,526	17,301	261,912	270,424	19,160	269,008	278,423	21,101	276,164	286,520
2053	7,876	262,526	0	8,789	270,424	0	9,745	278,423	0	10,744	286,520	0

Table 4
Loan Amortization Scenario - Implementation through Phase 2 with Vance Creek Road and Saddle Horn Lane Loop
Ski Ranches Water System Improvement Plan
 Telluride Ski Ranches

Water System Improvement Plan Cost Estimate		Notes / References
2017 Phase 1 Cost	\$1,700,000	Phase 1 and Phase 2 Costs from <i>Draft – Town of Mountain Village, Ski Ranches Water System Capital Improvements Plan</i> , prepared by Russell Planning and Engineering, Inc. (Russell), dated November 9, 2017 (Water System Improvement Plan). Costs not independently verified by WWE.
2017 Phase 2 Cost	\$1,800,000	
2017 Vance Creek Road and Saddle Horn Lane Loop	\$200,000	
2017 Subtotal (through Phase 2 with Loop)	\$3,700,000	Vance Creek Road and Saddle Horn Lane loop (950 feet of 8" diameter pipe) cost estimate based on Phase 2 unit pipeline costs (\$214 per linear foot) calculated from Water System Improvement Plan.
2017 ENR CCI	10737	Values from Engineering New Record Construction Cost Index. Available here: https://www.enr.com
May 2023 ENR CCI	13288	
Estimated 2023 Water System Improvement Plan Cost Through Phase 2 with Loop	\$4,600,000	Equals 2017 Subtotal (through Phase 2 with loop) x (May 2023 ENR CCI + 2017 ENR CCI)

Initial Loan Terms through Phase 2 with Loop				
Interest Rate	3.00%	3.25%	3.50%	3.75%
Principal	\$4,600,000	\$4,600,000	\$4,600,000	\$4,600,000
Term (years)	30	30	30	30
First payment Year	2024	2024	2024	2024
Annual Payment	\$234,689	\$242,336	\$250,108	\$258,003

Water System Improvement Implementation Through Phase 2 with Vance Creek Road and Saddle Horn Lane Loop Amortization Schedule Only												
Year	3.00% Interest Rate			3.25% Interest Rate			3.50% Interest Rate			3.75% Interest Rate		
	Interest	Principle	Balance	Interest	Principle	Balance	Interest	Principle	Balance	Interest	Principle	Balance
	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
2024	138,000	96,689	4,503,311	149,500	92,836	4,507,164	161,000	89,108	4,510,892	172,500	85,503	4,514,497
2025	135,099	99,589	4,403,722	146,483	95,853	4,411,311	157,881	92,227	4,418,665	169,294	88,709	4,425,787
2026	132,112	102,577	4,301,145	143,368	98,968	4,312,343	154,653	95,455	4,323,210	165,967	92,036	4,333,751
2027	129,034	105,654	4,195,491	140,151	102,185	4,210,158	151,312	98,796	4,224,414	162,516	95,487	4,238,264
2028	125,865	108,824	4,086,667	136,830	105,506	4,104,652	147,855	102,254	4,122,161	158,935	99,068	4,139,196
2029	122,600	112,089	3,974,579	133,401	108,935	3,995,718	144,276	105,833	4,016,328	155,220	102,783	4,036,413
2030	119,237	115,451	3,859,127	129,861	112,475	3,883,242	140,571	109,537	3,906,792	151,365	106,638	3,929,775
2031	115,774	118,915	3,740,213	126,205	116,131	3,767,112	136,738	113,370	3,793,421	147,367	110,637	3,819,139
2032	112,206	122,482	3,617,730	122,431	119,905	3,647,207	132,770	117,338	3,676,083	143,218	114,785	3,704,353
2033	108,532	126,157	3,491,574	118,534	123,802	3,523,406	128,663	121,445	3,554,638	138,913	119,090	3,585,263
2034	104,747	129,941	3,361,632	114,511	127,825	3,395,580	124,412	125,696	3,428,942	134,447	123,556	3,461,708
2035	100,849	133,840	3,227,793	110,356	131,980	3,263,601	120,013	130,095	3,298,847	129,814	128,189	3,333,519
2036	96,834	137,855	3,089,938	106,067	136,269	3,127,332	115,460	134,648	3,164,198	125,007	132,996	3,200,523
2037	92,698	141,990	2,947,947	101,638	140,698	2,986,634	110,747	139,361	3,024,837	120,020	137,983	3,062,539
2038	88,438	146,250	2,801,697	97,066	145,270	2,841,364	105,869	144,239	2,880,598	114,845	143,158	2,919,381
2039	84,051	150,638	2,651,060	92,344	149,992	2,691,372	100,821	149,287	2,731,311	109,477	148,526	2,770,855
2040	79,532	155,157	2,495,903	87,470	154,866	2,536,506	95,596	154,512	2,576,799	103,907	154,096	2,616,759
2041	74,877	159,812	2,336,091	82,436	159,899	2,376,607	90,188	159,920	2,416,878	98,128	159,875	2,456,884
2042	70,083	164,606	2,171,485	77,240	165,096	2,211,510	84,591	165,517	2,251,361	92,133	165,870	2,291,014
2043	65,145	169,544	2,001,941	71,874	170,462	2,041,049	78,798	171,310	2,080,051	85,913	172,090	2,118,924
2044	60,058	174,630	1,827,311	66,334	176,002	1,865,047	72,802	177,306	1,902,744	79,460	178,543	1,940,381
2045	54,819	179,869	1,647,442	60,614	181,722	1,683,325	66,596	183,512	1,719,232	72,764	185,239	1,755,142
2046	49,423	185,265	1,462,176	54,708	187,628	1,495,697	60,173	189,935	1,529,297	65,818	192,185	1,562,957
2047	43,865	190,823	1,271,353	48,610	193,726	1,301,971	53,525	196,583	1,332,714	58,611	199,392	1,363,565
2048	38,141	196,548	1,074,805	42,314	200,022	1,101,950	46,645	203,463	1,129,251	51,134	206,869	1,156,695
2049	32,244	202,444	872,361	35,813	206,523	895,427	39,524	210,584	918,667	43,376	214,627	942,068
2050	26,171	208,518	663,843	29,101	213,235	682,193	32,153	217,955	700,712	35,328	222,676	719,393
2051	19,915	214,773	449,070	22,171	220,165	462,028	24,525	225,583	475,129	26,977	231,026	488,367
2052	13,472	221,217	227,853	15,016	227,320	234,708	16,630	233,479	241,650	18,314	239,689	248,678
2053	6,836	227,853	0	7,628	234,708	0	8,458	241,650	0	9,325	248,678	0

Table 5
Projected Future Water Improvement Plan Costs
Ski Ranches Water System Improvement Plan
Telluride Ski Ranches

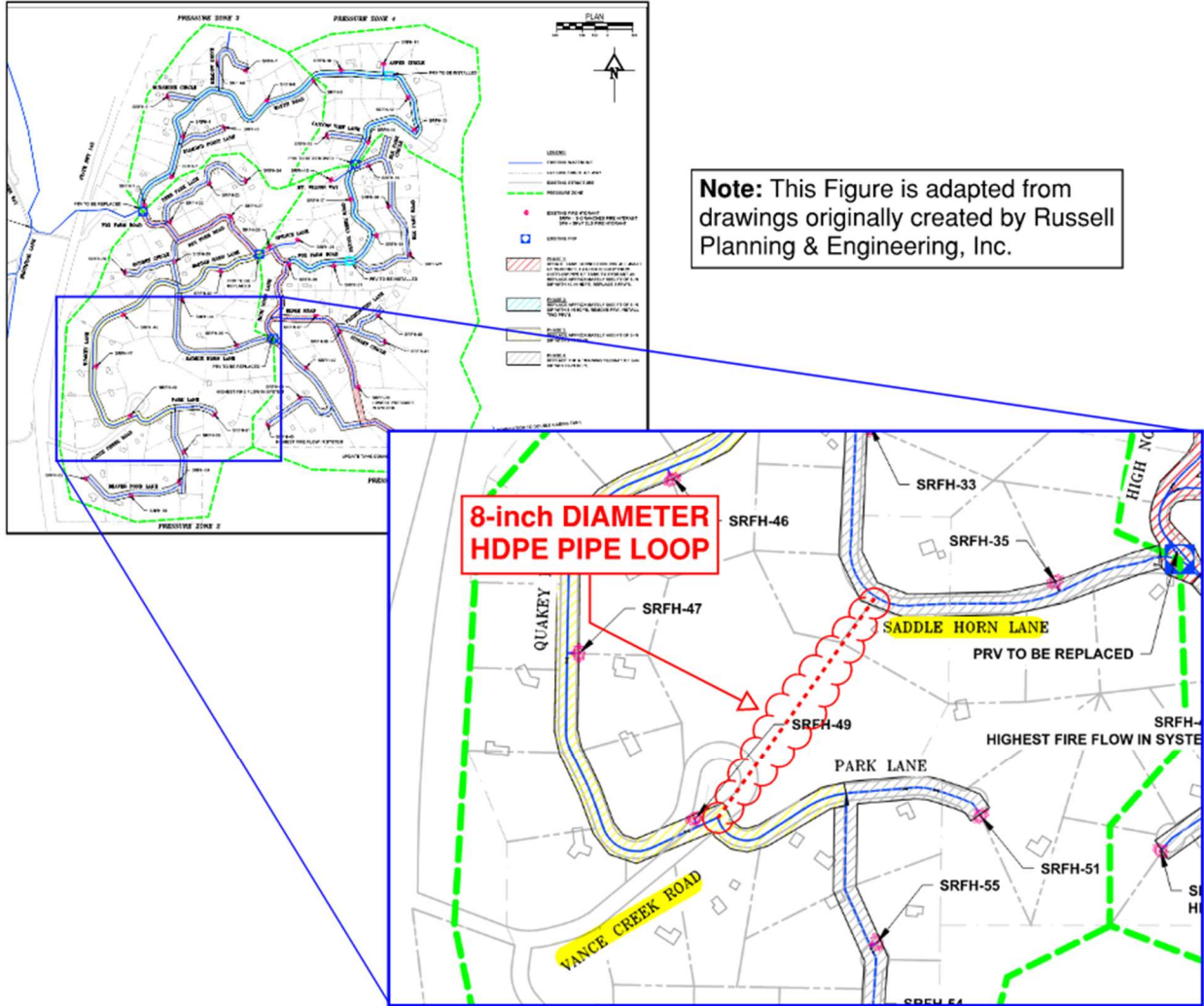
Assumptions			Notes / Comments
Annual Inflation Rate	3%		Assumed Annual Inflation Rate. Current Average Annual CPI Over last 10 years (2013 to 2023). https://www.bls.gov/cpi/ Current 30-year interest rate for a Non-Disadvantaged Community SRF Loan. https://www.cwrpda.com/current-interest-rates
Loan Interest Rate	3.25%		
Loan Term	30 year		

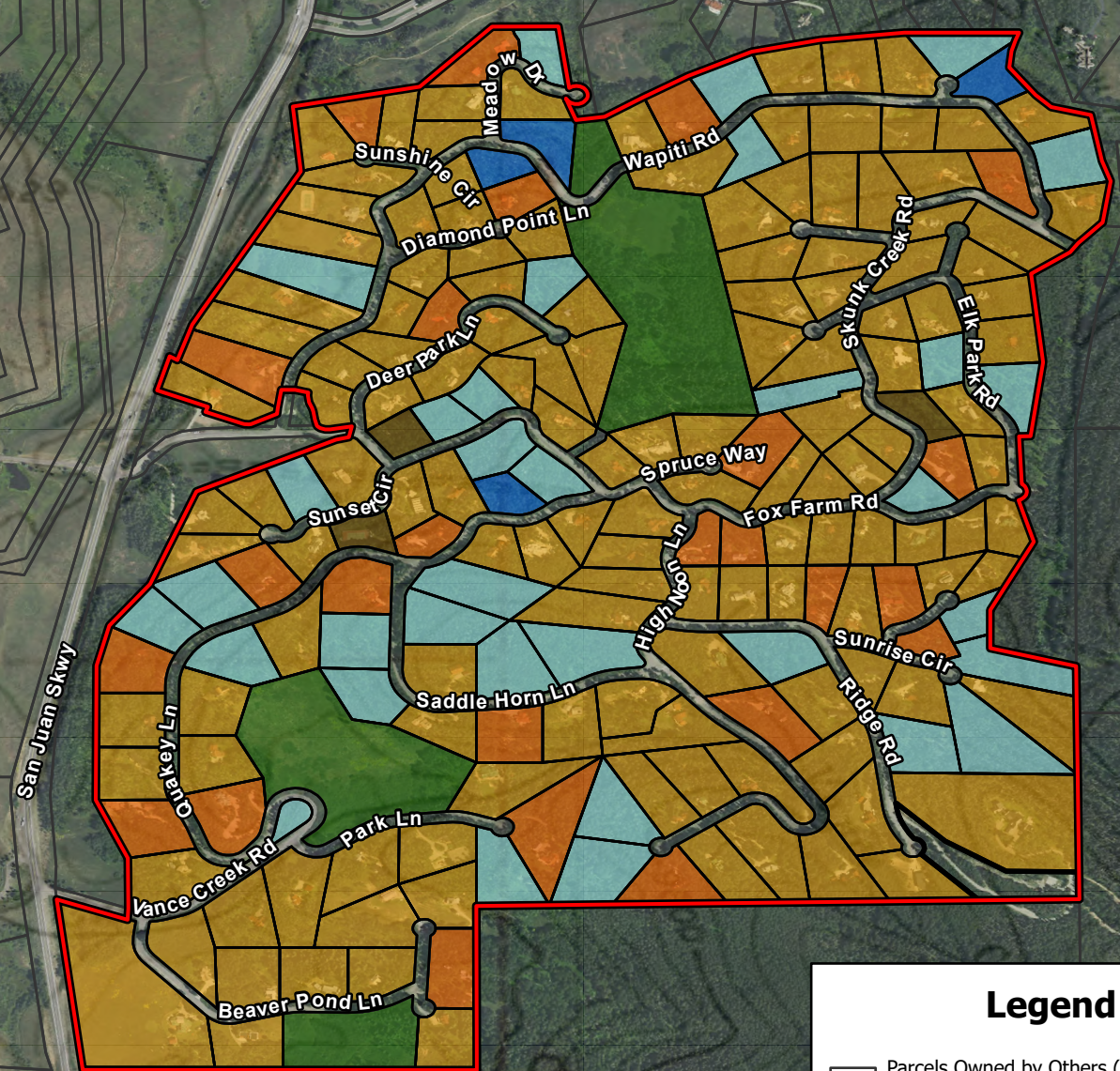
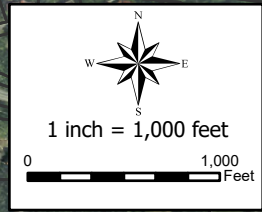
Year	Project Costs Through Phase 3		Project Costs Through Phase 2 with Loop		Project Cost All Phases (1 through 4)	
	Principal	Annual Loan Payment	Principal	Annual Loan Payment	Principal	Annual Loan Payment
	(1)	(2)	(3)	(4)	(5)	(6)
2023	\$5,300,000	\$279,213	\$4,600,000	\$242,336	\$8,900,000	\$468,867
2024	\$5,460,000	\$287,642	\$4,740,000	\$249,711	\$9,170,000	\$483,091
2025	\$5,620,000	\$296,071	\$4,880,000	\$257,087	\$9,450,000	\$497,842
2026	\$5,790,000	\$305,027	\$5,030,000	\$264,989	\$9,740,000	\$513,120
2027	\$5,960,000	\$313,983	\$5,180,000	\$272,891	\$10,040,000	\$528,924
2028	\$6,140,000	\$323,466	\$5,340,000	\$281,320	\$10,350,000	\$545,256
2029	\$6,320,000	\$332,948	\$5,500,000	\$289,749	\$10,670,000	\$562,114
2030	\$6,510,000	\$342,958	\$5,670,000	\$298,705	\$10,990,000	\$578,972
2031	\$6,710,000	\$353,494	\$5,840,000	\$307,661	\$11,320,000	\$596,357
2032	\$6,910,000	\$364,031	\$6,020,000	\$317,144	\$11,660,000	\$614,269
2033	\$7,120,000	\$375,094	\$6,200,000	\$326,627	\$12,020,000	\$633,234

Column Notes:

- (1) First Row - See Table 3 For 2023 Project Costs.
Subsequent Rows = (previous year principal) x ((1 + Annual Inflation Rate)^(Current Row Year - Previous Row Year)) rounded to nearest 10,000.
- (2) Equals calculated annual loan payment for current row principal based on loan assumptions.
- (3) First Row - See Table 4 For 2023 Project Costs.
Subsequent Rows = (previous year principal) x ((1 + Annual Inflation Rate)^(Current Row Year - Previous Row Year)) rounded to nearest 10,000.
- (4) Equals calculated annual loan payment for current row principal based on loan assumptions.
- (5) First Row - See Table 3 For 2023 Project Costs.
Subsequent Rows = (previous year principal) x ((1 + Annual Inflation Rate)^(Current Row Year - Previous Row Year)) rounded to nearest 10,000.
- (6) Equals calculated annual loan payment for current row principal based on loan assumptions.

Figure 1. Proposed Pipe Loop Schematic Saddle Horn Lane to Vance Creek Road Telluride Ski Ranches Association





Legend

- Parcels Owned by Others (San Miguel County Assessor's Office GIS Data)
- Ski Ranches Service Area (San Miguel County Assessor's Office GIS Data)
- Developed Lot - No ADU (138 Lots)
- Developed Lot - With ADU (25 Lots)
- Vacant Undeveloped Lot (34 Lots)
- Lots Pending or Under Construction (4 Lots)
- Open Space Lots - Not Developable (4 Lots)
- Contiguous Lot (3 Lots)
- Utility Lot (1 Lot)

Date: 8/7/2023 Document Path: P:\221-084 Telluride Ski Ranches\000\Mapping\Telluride Ski Ranches.aprx

User Name: dneilson



Wright Water Engineers, Inc.

1666 N. Main Avenue, Suite C
Durango, Colorado 81301
(970) 259-7411 TEL
(970) 259-8758 FAX

www.wrightwater.com
e-mail:hlenhart@wrightwater.com

December 14, 2022

Via email: scott@tellurideconsulting.com

Scott Bengé, Chief Operations Officer, and
Members of the Telluride Ski Ranches Association
Telluride, CO 81435

Re: Summary of October 6, 2022, Site Visit to Telluride Ski Ranches Water System

Dear Scott and Members of the Telluride Ski Ranches Association,

Wright Water Engineers, Inc. (WWE) is pleased to provide the Telluride Ski Ranches Association (Ski Ranches) with this letter report summarizing our field observations from an October 6, 2022, site visit to the Ski Ranches water system. WWE reviewed the following documents prior to our site visit:

- *2022 Ski Ranches Improvements – Water Line Replacement* design drawings prepared by SEH, Inc., dated January 11, 2022 (2022 Design Drawings).
- *Draft – Town of Mountain Village, Ski Ranches Water System Capital Improvements Plan*, prepared by Russell Planning and Engineering, Inc. (Russell), dated November 9, 2017 (2017 Water System Improvement Plan).
- *Water System Network Analysis, Recommendations and Costs – Town of Mountain Village Colorado*, prepared by SEH, Inc (SEH), dated 2009 (2009 Water System Analysis).

The following people attended the October 6, 2022, site visit:

Name	Representing
Bob Haining – Ski Ranches Water System Operator	Telluride Mountain Village
Peter McGinty – Ski Ranches Facilities Manager	Ski Ranches
John Knowles – Retired Ski Ranches Facilities Manager	Ski Ranches
Michael Johnson – Property Owner	Ski Ranches
Keith Hampton – Property Owner	Ski Ranches
Hayes Lenhart, P.E.	WWE

WWE’s field visit focused on the following two items: 1) observe active construction of the water line replacement project associated with the 2022 Design Drawings on behalf of the Ski Ranches, and 2) develop a better understanding of the Ski Ranches existing water system to help inform WWE’s continued review of the 2009 Water System Analysis and the 2017 Water System Improvement Plan recommendations.

In accordance with our Scope of Work and Agreement with the Ski Ranches, the intent of this letter report is to summarize WWE’s field observations associated with active construction of the

water line replacement. Additionally, a summary of initial water system observations based on our field visit is also provided in this letter report. The remainder of this letter report is separated into two sections: 1) Construction Observation Summary and 2) Initial Water System Observation Summary.

Construction Observation Summary

During the site visit WWE observed an active construction zone associated with a portion of the Ski Ranches water line replacement project covered in the 2022 Design Drawings. The onsite general contractor performing the water line replacement was Telluride Gravel. Based on verbal communication with Bob Haining, WWE understands that Telluride Gravel constructed all the Ski Ranches water system improvements within the last six years. During the site visit, construction was occurring near the intersection of Fox Farm Road and High Noon Lane, and WWE compared our visual observation of the construction activities with the 2022 Design Drawings. Notable observations during our field visit included the following:

- The distance between the top of the pipe and the finished grade surface was at least 6 feet in accordance with the 2022 Design Drawings to help minimize the potential for the distribution piping to freeze during the winter. This minimum depth requirement is consistent with the current Town of Mountain Village Water and Sewer Rules (Ordinance No. 2016-11).
- Tracer wire and buried marking tape were present on top of the replacement pipeline in general conformance with the 2022 Design Drawings.
- The distribution pipe staged onsite consisted of a 10-inch diameter High Density Polyethylene (HDPE) DR-11 that meets the requirements of American Water Works Association (AWWA) C906. The pressure rating for this pipe is 200 pounds per square inch (PSI).
- The bedding materials staged onsite consisted of a fine-grained sandy material. WWE observed evidence of this material below and surrounding the newly installed distribution pipeline. Based on WWE's experience, the onsite bedding material appeared suitable for use with HDPE pipe.
- The contractor took care to minimize the potential for contamination of the distribution pipeline during installation. WWE observed the installation of temporary pipe caps at the ends of open pipe segments to prevent loose debris from entering the pipeline.

WWE understands that Bob Haining is serving as the Owner's representative during construction of the distribution system improvements. Based on conversations with Bob Haining, WWE also understands the Contractor is performing the following:

- Pressure testing new sections of the pipeline in accordance with AWWA requirements before putting the new sections into service.

- Compacting the pipeline bedding material and backfill material in accordance with 2022 Design Drawings.
- Members of the contractor's crew performing the pipeline installation are certified HDPE pipe welders.
- Disinfecting the new sections of pipeline in accordance with AWWA requirements before putting the new sections into service.
- Bob Haining was unaware of any post-construction issues associated with water system improvements installed by Telluride Gravel over the last six years.

Based on WWE's field observations and verbal communication with Bob Haining, it appears that the general contractor is constructing the pipeline in general conformance with the 2022 Design Drawings.

Initial Water System Observations Summary

WWE toured elements of the Ski Ranches water system, including the water storage tank, an existing pressure reducing valve vault, and interviewed Bob Haining and John Knowles on current and historical operation of the Ski Ranches water system. The following provides an initial summary of our preliminary observations and findings from the site visit, more detail on WWE's review of the Ski Ranches water system will be provided in a subsequent report:

- The Ski Ranches water system does not have its own public water system identification number (PWSID). The Ski Ranches water system is covered under the Town of Mountain Village PWSID.
- Bob Haining indicated the average day water demand of the Ski Ranches community under full buildout conditions would be approximately 150,000 gallons per day.
- According to Bob Haining, if fire suppression water is needed within the Ski Ranches community, the Ski Ranches water storage tank can be bypassed to allow water to flow directly from the Town of Mountain Village System to the Ski Ranches distribution system. The bypass piping is sized to facilitate a fire flow demand of 1,440 gallons-per-minute (gpm). WWE has not had an opportunity to confirm this statement with engineering calculations or the distribution system model developed to support 2009 Water System Analysis.
- Bob Haining indicated that the annual budget for implementing the capital improvements identified in the 2017 Water System Improvement Plan is currently approximately \$250,000 per year.
- During the tour John Knowles provided a map showing the approximate locations of water main breaks that occurred between 2011 and 2022 in the Ski Ranches distribution system (see Attachment A). Bob Haining indicated that the water main breaks typically consist of an approximately 1-inch diameter hole that forms in the existing pipe. This failure

mechanism is consistent with corrosion issues. The existing pipe is a 6-inch diameter Class 50 ductile iron pipe (DIP), and the broken pipe section is typically replaced with a 6-inch diameter Class 52 DIP.

- Bob Haining stated that the existing DIP water line was buried directly and does not appear to be wrapped in polyethylene to protect the pipe from corrosion due to direct contact with the soil. Wrapping buried DIP with polyethylene is a typical modern-day standard of practice. As part of the water main repair, Bob Haining typically installs a 60-pound sacrificial anode to provide cathodic protection to the existing pipeline and minimize the potential for further corrosion of the existing pipeline in the vicinity of the break.

Please feel free to call or email me if you have any questions regarding this letter.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By 

Hayes A. Lenhart, P.E.

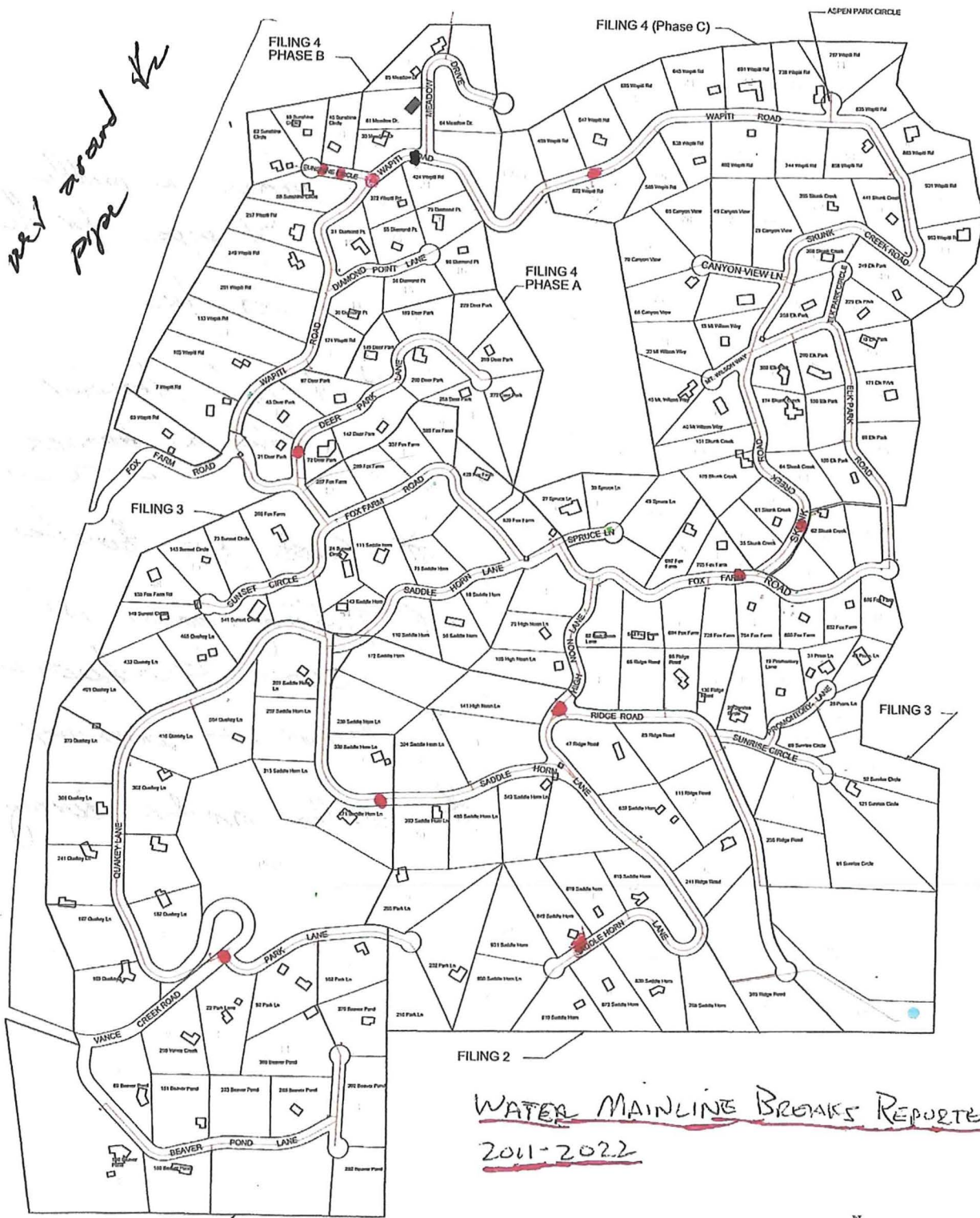
Senior Water Resources Engineer

Attachments:

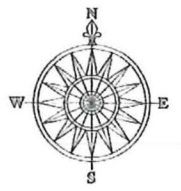
Attachment A. Illustration of water main break locations in the Ski Ranches distribution system that occurred between 2011 and 2022, prepared by John Knowles.

Telluride Ski Ranches

new road to pipe



WATER MAINLINE BREAKS REPORTED
2011-2022



FEET 250 0 250
GRAPHIC SCALE
SCALE: 1 INCH = 250 FEET

**A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF MOUNTAIN VILLAGE,
COLORADO AMENDING THE TOWN OF MOUNTAIN VILLAGE FEE SCHEDULE TO ADJUST
WATER AND SEWER FEES AND CHARGES**

RESOLUTION NO. 2023-1116-25

WHEREAS, the Town of Mountain Village (the "Town") is a duly organized and existing home rule municipality of the State of Colorado, created and operating pursuant to Article XX of the Colorado Constitution and the Town's Home Rule Charter (the "Charter"); and

WHEREAS, pursuant to C.R.S. § 31-35-402(1)(f) and Section 10.3 of the Charter, the Town may from time to time establish rates, fees, tolls, and charges for the services furnished by its water and sewer facilities; and

WHEREAS, Chapter 13.08 of the Mountain Village Municipal Code outlines the Town's rules and regulations concerning tap fees and service charges to residents of the Town, which fees and charges are as established in the Town of Mountain Village Fee Schedule and amended by resolution ("Fee Schedule"); and

WHEREAS, the Town has not adjusted its tap fees since 2007; and

WHEREAS, at Town Council's direction, the Town engaged engineers at SGM, Inc. ("SGM") to assess the Town's infrastructure, estimate costs for identified capital improvement projects, and provide a comprehensive water and sewer rate study ("Rate Study"); and

WHEREAS, per the Rate Study, SGM estimates that to adequately fund the Town while maintaining the recommended reserve balance and implementing planned capital projects, the Town needs to increase water and sewer fees and charges; and

WHEREAS, upon review of the Town's tap fees and service charges for water and sewer and with consideration of the Rate Study, the Town Council finds and determines that the Town's current fees and charges are low compared to other similar mountain communities and should be adjusted to provide for current operating costs and future capital reserves as described in the Rate Study; and

WHEREAS, an increase in the tap inspection fee for new development is necessary and appropriate to cover the Town's increased costs in inspecting new taps and support existing infrastructure; and

WHEREAS, increases in the monthly base fees for water and sewer services are necessary and appropriate to cover rising operations and maintenance costs and build reserves for planned capital projects; and

WHEREAS, the implementation of a monthly surcharge on top of the sewer base rate is necessary and appropriate to fund necessary upgrades to the Town's sewer collection and treatment system; and

WHEREAS, the Town Council conducted a work session at its October 19, 2023, public meeting to discuss the Rate Study; and

WHEREAS, after comments from Town staff and review and discussion of the Rate Study, the Town Council hereby approves the Rate Study and finds and determines that it is necessary to increase the base monthly water and sewer rates and tap inspection fees to remain adequately funded so as to continue to provide water and sewer services to residents of the Town.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Mountain Village, Colorado, that:

Section 1. Recitals. The above recitals are hereby incorporated as findings of the Town Council in support of the enactment of this Resolution.

Section 2. Adoption of Rate Study and New Rates and Fees. The Town Council hereby approves and adopts the Rate Study. Based on the Rate Study, the Town Council approves and adopts, effective immediately, the following water and sewer rates and fees:

Effective immediately, there shall be a 4.76% per year increase in both the water base fee and usage charges. As of January 1, 2027, the water base fee and usage charges shall increase by 3.0% per year (or as determined by the Town based on real-time inflation).

Effective immediately, there shall be a 4.76% per year increase in both the sewer base fee and usage charges, in addition to a monthly surcharge of \$10 per EBU per month (or as determined by the Town to account for increasing capital costs). As of January 1, 2027, the sewer base fee and usage charges shall increase by 3.0% per year (or as determined by the Town based on real-time inflation).

Effective immediately, the water and sewer tap fees shall be adjusted as outlined in the Fee Schedule, attached hereto and incorporated herein as Exhibit A.

Section 3. Amendment of Fee Schedule. The Town Council hereby amends the Fee Schedule as outlined in Exhibit A.

Section 4. Severability. If any part or provision of this Resolution is adjudged to be unenforceable or invalid, such judgment shall not affect, impair, or invalidate the remaining provisions of this Resolution, it being the Board's intention that the various provisions hereof are severable.

Section 5. Effective Date. This Resolution shall be in full force and effect upon its passage and adoption.


ADOPTED AND APPROVED by the Town Council at a regular public meeting held on November 16, 2023.

TOWN OF MOUNTAIN VILLAGE TOWN COUNCIL




By: _____
Martinique Prohaska, Mayor.

ATTEST:



Susan Johnston, Town Clerk

APPROVED AS TO FORM:



David McConaughy, Town Attorney

Exhibit A

EXHIBIT "A"

MOUNTAIN VILLAGE

Classification (Per LUO or other)	Tap Fee	Square	Extra	EBU	Water/Sewer Regs	Rate	Monthly	Monthly	Monthly	Notes
	per tap	Footage	Square footage	Factor (1)	Classification	Structure	Table	Water	Sewer	
Single Family	\$ 43,300	3,000	\$8,660 / 500 sf	100%	Residential	Seasonal	SF	\$ 83.01	\$ 83.01	
Sewer Surcharge				100%	Residential				10.00	
Condo	\$ 43,300	3,000	\$8,660 / 500 sf	100%	Residential	Seasonal	CD	83.01	83.01	
Sewer Surcharge				100%	Residential				10.00	
Guesthouse	\$ 21,650	1,500	\$8,660 / 500 sf	50%	Residential	Seasonal	SG	41.51	41.51	
Sewer Surcharge				50%	Residential				5.00	
Combined Rate Table (Main + Guest)	\$ 64,950	4,500	\$8,660 / 500 sf	150%	Residential	Seasonal	CRT	124.52	124.52	Each tap has separate meter - base fees 1 1/2
Sewer Surcharge				150%	Residential				15.00	
Subdividable Duplex - 2 taps	\$ 43,300	3,000	\$8,660 / 500 sf	100%	Residential	Seasonal	SF	83.01	83.01	Each tap has separate meter - base fees are per meter
Sewer Surcharge				100%	Residential				10.00	
Non Subdividable Duplex - 2 taps	\$ 43,300	3,000	\$8,660 / 500 sf	100%	Residential	Seasonal	SF	83.01	83.01	Each tap has separate meter - base fees are per meter
Sewer Surcharge				100%	Residential				10.00	
Hotel	\$ 8,660	500	\$1,083 / 50 sf	20%	Commercial	Seasonal	HO	16.60	16.60	5 hotel units equals 1 EBU Commercial
Sewer Surcharge				20%	Commercial				2.00	
Hotel Eff	\$ 12,990	750	\$1,083 / 50 sf	30%	Commercial	Seasonal	HE	24.90	24.90	3 hotel efficiency units equals 1 EBU Commercial
Sewer Surcharge				30%	Commercial				3.00	
Lodge Efficiency (Kitchen)	\$ 10,825	750	\$1,083 / 50 sf	25%	Commercial	Seasonal	EE	20.75	20.75	4 lodge units equals 1 EBU Commercial
Sewer Surcharge				25%	Commercial				2.50	
Emp Condo/Apartment	\$ 21,650	3,000	\$4,330 / 500 sf	50%	Deed Restricted	Seasonal	DR	41.51	41.51	
Sewer Surcharge				50%	Deed Restricted				5.00	
Emp Dorm	\$ 10,825	3,000	\$8,660 / 500 sf	25%	Deed Restricted	Seasonal	EA	20.75	20.75	
Sewer Surcharge				25%	Deed Restricted				2.50	
Commercial (per 2,000sf)	\$ 43,300	2,000		100%	Commercial	Seasonal	CM	83.01	83.01	
Sewer Surcharge				100%	Commercial				10.00	
Fireman	\$ 43,300	3,000	\$8,660 / 500 sf	100%	Residential	Seasonal	F1	-	n/a	Base water free then escalating rate structure
Construction	n/a	n/a	n/a	n/a	Construction	n/a	CT	-	n/a	structure
Snowmaking	n/a	n/a	n/a	n/a	Snow Commercial	n/a	Snow	-	n/a	Approximately \$3.37/1,000 gallons (pond) and \$3.67/1,000 gallons on hydrants
Common Irrigation (May thru Oct)	n/a	n/a	n/a	n/a	Irrigation	Seasonal	I1	83.01	n/a	Individual meters
Irrigation Added to House Usage	n/a	n/a	n/a	n/a	Irrigation	Seasonal	I2	-	n/a	Usage added to house meter
Common Irrigation - year round	n/a	n/a	n/a	n/a	Irrigation	Year Round	I3	83.01	n/a	Year round, for outdoor hot tubs or equivalent

Water/Sewer Classification Rates

Residential - Commercial - per EBU (1)

Deed Restricted - per EBU (1)

Irrigation

Winter - October thru May	\$/1,000 Gal
1 to 8,000 gallons	Base
8,001 to 16,000 gallons	\$6.29
16,001 to 24,000 gallons	\$8.38
24,001 to 32,000 gallons	\$10.48
32,001 to 40,000 gallons	\$12.57
40,001 plus	\$20.95
Summer - June thru September	\$/1,000 Gal
1 to 14,000 gallons	Base
14,001 to 16,000 gallons	\$6.29
16,001 to 24,000 gallons	\$8.38
24,001 to 32,000 gallons	\$10.48
32,001 to 40,000 gallons	\$12.57
40,001 plus	\$20.95

Winter - October thru May	\$/1,000 Gal
1 to 4,000 gallons	Base
4,001 to 8,000 gallons	\$6.29
8,001 to 16,000 gallons	\$8.38
16,001 to 24,000 gallons	\$10.48
24,001 to 32,000 gallons	\$12.57
32,001 plus	\$20.95
Summer - June thru September	\$/1,000 Gal
1 to 7,000 gallons	Base
7,001 to 8,000 gallons	\$6.29
8,001 to 16,000 gallons	\$8.38
16,001 to 24,000 gallons	\$10.48
24,001 to 32,000 gallons	\$12.57
32,001 plus	\$20.95

Seasonal Rate Structure-Summer	\$/1,000 Gal
May thru October	
1 to 12,000 gallons	Base
12,001 to 16,000 gallons	\$6.29
16,001 to 24,000 gallons	\$8.38
24,001 to 32,000 gallons	\$10.48
32,001 to 40,000 gallons	\$12.57
40,001 plus	\$20.95
Year Round Rate Structure	\$/1,000 Gal
1 to 10,000 gallons	Base
10,001 to 16,000 gallons	\$6.29
16,001 to 24,000 gallons	\$8.38
24,001 to 32,000 gallons	\$10.48
32,001 to 40,000 gallons	\$12.57
40,001 plus	\$20.95

Construction	\$/1,000 Gal
Year Round Rate Structure	
1 to 10,000 gallons	usage @ \$3.67
10,000 to 16,000 gallons	\$6.29
16,001 to 24,000 gallons	\$8.38
24,001 to 32,000 gallons	\$10.48
32,001 to 40,000 gallons	\$12.57
40,001 plus	\$20.95

Notes -

1. EBU = equivalent billing unit or 1 single family equivalent

SKI RANCHES

Classification (Per LUO or other)	Tap Fee per tap	Square Footage	Extra Square footage	EBU Factor (1)	Water/Sewer Regs Classification	H2O Rate Table	Base Rate Water	Notes
Single Family	\$21,650	3,000	\$4,330 / 500 sf	100%	Residential	W1	\$192.42	
Guesthouse	\$10,825	1,500	\$4,330 / 500 sf	50%	Residential	WJ	96.21	
Construction	n/a	n/a	n/a	n/a	Construction	WT	n/a	Usage billed \$5.50 / 1,000 gallons up to 10,000 gal then escalating rate structure
Fireman	\$21,650	3,000	\$4,330 / 500 sf	100%	Residential	F2	n/a	Base water free then escalating rate structure
Vacant Lot	n/a	n/a	n/a	n/a	Residential	ZZ	n/a	Proposed no charge after 12/31/03
Common Irrigation (May thru Oct)		n/a	n/a	n/a	Irrigation	I5	192.42	Individual meters
Irrigation Added to House Usage	n/a	n/a	n/a	n/a	Irrigation	SRI	n/a	Usage added to house meter

SKYFIELD

Classification (Per LUO or other)	Tap Fee per tap	Square Footage	Extra Square footage	EBU Factor	Water/Sewer Regs Classification	H2O Rate Table	Base Rate Water	Notes
Single Family	\$32,475	3,000	\$6,495 / 500 sf	100%	Residential	SK	\$192.42	
Guesthouse	\$16,238	1,500	\$6,495 / 500 sf	50%	Residential	SL	96.21	
Fireman	\$32,475	3,000	\$6,495 / 500 sf	100%	Residential	F3	n/a	Base water free then escalating rate structure
Vacant Lot	n/a	n/a	n/a	n/a	Residential	YY	n/a	\$52.50 monthly until meter is installed
Common Irrigation (May thru Oct)	n/a	n/a	n/a	n/a	Irrigation	I6	192.42	Individual meters
Irrigation Added to House Usage	n/a	n/a	n/a	n/a	Irrigation	I7	n/a	Usage added to house meter

Water Classification Rates

Residential - Per EBU (1)

Irrigation

Construction

Rate Structure-Winter October thru May		Rate Structure-Summer May thru October		Year Round Rate Structure	
	\$/1,000 Gal		\$/1,000 Gal		\$/1,000 Gal
1 to 8,000 gallons	BASE	1 to 12,000 gallons	BASE	1 to 10,000 gallons	usage @ \$5.50
8,001 to 16,000 gallons	\$9.43	12,001 to 16,000 gallons	\$9.43	10,001 to 16,000 gallons	\$9.43
16,001 to 24,000 gallons	\$12.57	16,001 to 24,000 gallons	\$12.57	16,001 to 24,000 gallons	\$12.57
24,001 to 32,000 gallons	\$15.71	24,001 to 32,000 gallons	\$15.71	24,001 to 32,000 gallons	\$15.71
32,001 to 40,000 gallons	\$18.86	32,001 to 40,000 gallons	\$18.86	32,001 to 40,000 gallons	\$18.86
40,001 plus	\$31.43	40,001 plus	\$31.43	40,001 plus	\$31.43
Rate Structure-Summer June thru September					
	\$/1,000 Gal				
1 to 14,000 gallons	BASE				
14,001 to 16,000 gallons	\$9.43				
16,001 to 24,000 gallons	\$12.57				
24,001 to 32,000 gallons	\$15.71				
32,001 to 40,000 gallons	\$18.86				
40,001 plus	\$31.43				

Notes -

1. EBU = equivalent billing unit or 1 single family equivalent