



To: Mayor and Town Council
From: Michelle Metteer
Date: February 7, 2024
Agenda Item: Water Treatment Discussion

REQUEST:

Council to discuss the merits of the various future water treatment options and provide direction to staff as deemed appropriate.

INTRODUCTION:

In 2019, after extensive analysis including the 2019 Water Capital Improvements Plan which was followed by a variety of public outreach efforts that culminated in multiple public discussions surrounding the topic of Minturn's water, water production and water future, the Council decided to move forward with the design and construction of a secondary water source and membrane water treatment plant. Since that time, the original secondary water source, the decreed well field on the Eagle River, did not prove to be a viable long-term water source solution and in keeping with the Strategic Plan to make decisions that "...maintain the viability for Minturn's future..." the Council decided in 2021? to no longer pursue the Eagle River well field option. Instead, the Council negotiated an alternate option for a secondary water source through an IGA signed in 2022 with the Eagle River Water & Sanitation District and the Upper Eagle Regional Water Authority. This alternate option is referred to as the confluence diversion and is a surface diversion water right at the confluence of the Eagle River and Cross Creek. This water right is now moving through the water court process, led by the ERWSD/UERWA legal team and looking for approval sometime in 2024 or 2025.

Simultaneous to the secondary water source efforts, Council has tirelessly looked for ways to improve Minturn's water treatment system while keeping utility rates as low as possible. This included the Council's request for a Water Treatment Plant Alternatives Analysis when the updated cost estimates for a membrane plant and diversion structure came back higher than anticipated. This analysis included the review of a package plant as well as the rehabilitation of the slow sand filtration system. The package plant came back more expensive than a membrane plant and the slow sand filtration system is dated technology which is unlikely to keep up with ongoing state-level regulations. Therefore, for these reasons, neither the package plant nor the long-term reliance on only the slow sand filtration system was recommended by the engineers or the operations consultant. Lastly, Minturn's Well Nos. 3 & 4, both located on Cross Creek, were analyzed to see if their water production capacities could be increased to allow for the needed water and thus, make the need for a membrane plant moot. Both wells, as shown in the included memo, failed the testing process and cannot produce close to the amount of water required to support Minturn's long-term needs. The Minturn Well Nos. 3 & 4 Memo ends with the option for more wells and more testing along the Cross Creek well field corridor. Testing more wells remains an option, but there are a number of caveats to consider when making this decision.

ANALYSIS:

Water Treatment Options

The **2019 Capital Improvements Plan** recommended Minturn move to membrane filtration technology for the town's water treatment needs. The document is attached to this cover memo for review as

needed. Included with the Plan is Resolution ___ – Series 2019 which approved “Option 2” therein. Option 2 supported both the membrane plant and a secondary water source, albeit at much lower cost estimates than what the town is facing today.

The **Water Treatment Plant Alternatives Analysis** likewise recommended Minturn move to membrane filtration technology. This analysis was completed by HDR, Inc., and included the review by Minturn’s Water Committee who conducted a matrix analysis of the water treatment options based on the values identified within the document (see matrix included within the Water Treatment Plant Alternatives Analysis). Of note, one of the differences between the 2019 Capital Improvement Plan and the 2023 Water Treatment Plant Alternatives Analysis is the separation of the water treatment infrastructure and the secondary water source. For this analysis, the Water Committee determined financial constraints required a phased approach to the construction of a membrane plant and any potential secondary water source in the future. A key element was that a membrane plant leaves a secondary water source option viable into the future where other water treatment options do not.

Separately, and although this topic hasn’t arisen in years, there is merit in addressing the concept of an **interconnect** with the ERWSD/UERWA system. This concept was broached by the Minturn public in 2018 and was met with opposition. Residents identify Minturn as a “strong mountain town” which seems to coincide with having its own water treatment system. Additionally, any interconnect would require extensive costly infrastructure improvements all of which would be borne entirely by Minturn residents, not by the overall ERWSD/UERWA system. I would anticipate if this avenue were pursued for the purposes of costs savings, it would not be as financially beneficial as some might initially assume.

The **Minturn Well Nos. 3 & 4 Analysis** brought the Town further understanding on the limitations of Minturn’s current alluvial wells on Cross Creek and their volumetric production. Neither well can currently produce over 100 gpm reliably and maintain confidence of remaining within the GWUDI regulations. For the utilization of wells as Minturn’s sole water treatment option, additional exploratory wells are necessary within the Cross Creek wellfield decreed area (see included map). These additional wells would also need to be tested to estimate their yield and determine if the wells are under the influence of surface water (non-GWUDI). Assuming the testing results are favorable, a legal source of water would need to be obtained. There are several options for obtaining a legal source of water, which are detailed in the attached memo from Holland & Hart. Several of the options would require filing a water court action. The water court process may be time consuming and could result in new risks to and limitations on the Town’s existing water rights. Exposing the Town’s existing water rights to the risks associated with a water court proceeding should be carefully considered when weighing this option. The Town’s water attorney, Susan Ryan, is available to discuss this topic in more detail during the executive session.

COMMUNITY INPUT:
Extensive and Ongoing

BUDGET / STAFF IMPACT:

Dependent upon the direction from Council. See attached materials for the most recent cost estimates associated with a membrane water treatment plant option. Jim Mann will be available the evening of February 7th for questions pertaining to rates and debt service and financial aid options for seniors as well as other discount programs/options for those in need.

STRATEGIC PLAN ALIGNMENT:

A water utility is a long-term investment into the viability of a community and decisions affecting the utility must align with the Town's goals and strategic plan for the long-term community objectives to be realized.

Minturn's four Key Strategies to guide the town efforts as identified in the 2023-25 Strategic Plan are:

- Practice fair, transparent and communicative local government
- Long-term stewardship of the natural beauty and health of Minturn's environment
- Sustain and invest in the things that define Minturn as a proud, sturdy mountain town to "keep Minturn Minturn"
- Advance decisions/projects/initiatives that expand future opportunity and viability for Minturn

RECOMMENDED ACTION OR PROPOSED MOTION:

The membrane water treatment plant option is most in alignment with the Council's Strategic Plan Strategies and long-term goals, especially toward "expand(ing) future opportunity and viability for Minturn." Staff and consultants therefore recommend the Council direct the staff to begin the efforts toward securing the funding, design, and engineering for a membrane water treatment plant.

ATTACHMENTS:

- 2019 Water Capital Improvement Plan
- Water Treatment Plant Alternatives Analysis
- Wells 3 & 4 Memorandum
- Cross Creek decreed wellfield
- Water Rate Impact Memo
- Water Rate Study