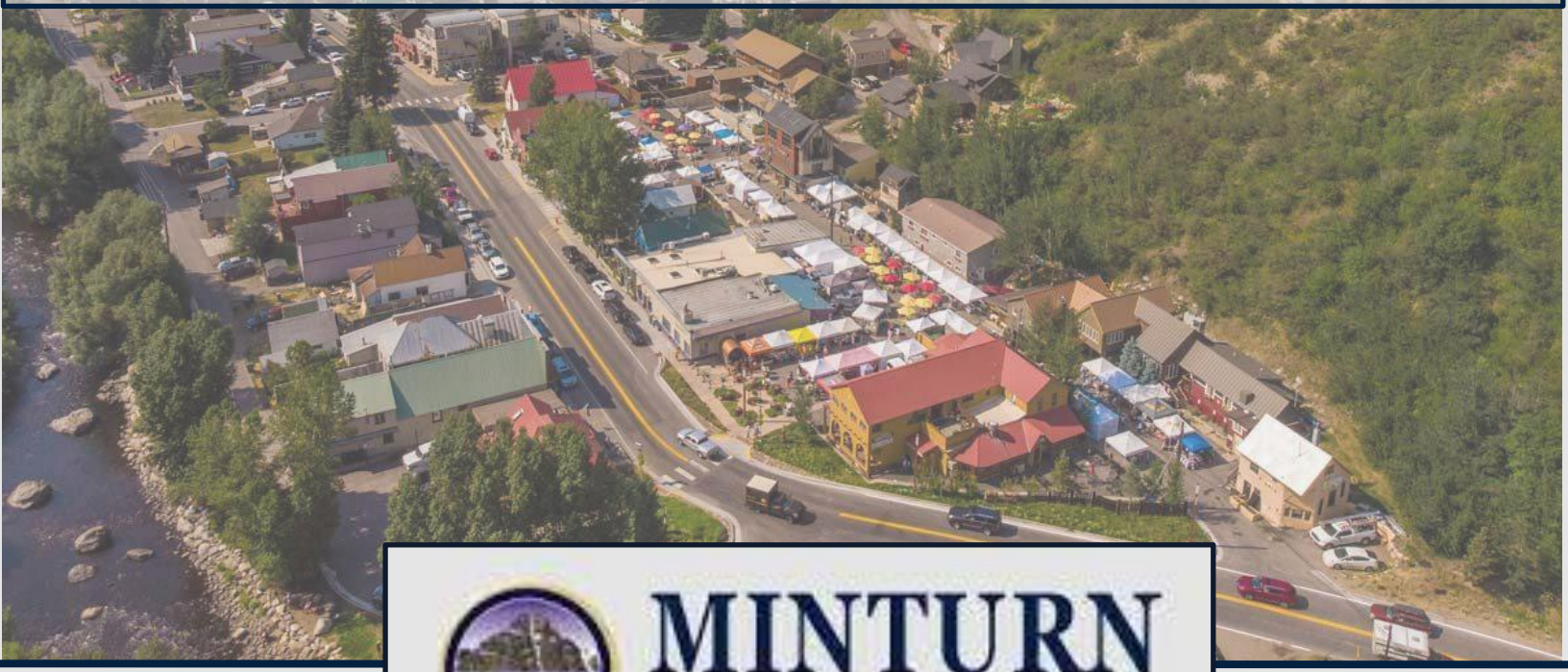
MINTURN WATER TREATMENT PLANT MODERNIZATION INITIATIVE



MINTURN
COLORADO

USBR WaterSMART Drought Response Program:
Drought Resiliency Projects for Fiscal Year 2025

Town of Minturn, Colorado
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Minturn, CO 81654

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Executive Summary

Date: October 2, 2024
Applicant Name: Town of Minturn, CO
Town: Minturn
County: Eagle
State: Colorado

Applicant Eligibility: The Town of Minturn, a unit of local government with water delivery authority in the State of Colorado, is eligible for this Drought Resilience funding as a ***Category A applicant***.

Task: The Town of Minturn, CO, seeks WaterSMART: Drought Resiliency Project funding to modernize its 60+-year-old water treatment plant (WTP) under ***Drought Resiliency Projects Task A: Increasing the Reliability of Water Supplies Through Infrastructure Improvements***.

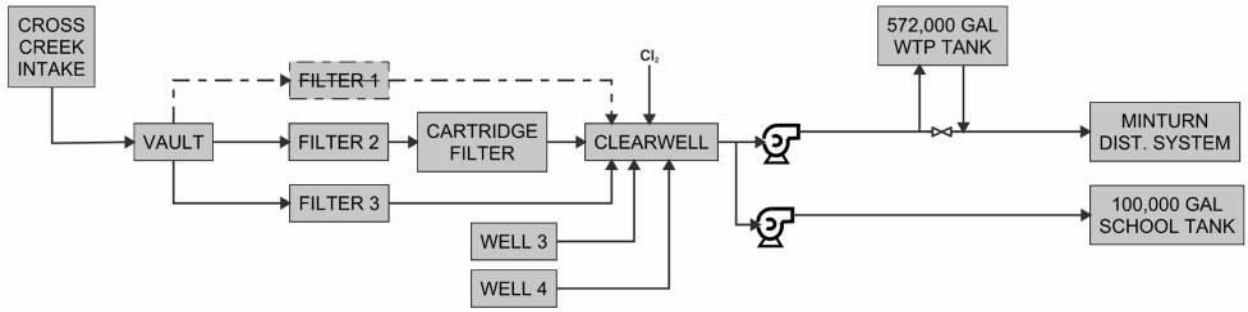
Funding Group: The Town of Minturn seeks WaterSMART funding under ***Funding Group II,*** with a request of $3 million for a project that will be completed within three years of award.

Project Summary: The Town of Minturn seeks $3 million in U.S. Bureau of Reclamation (USBR) WaterSMART Drought Resiliency funding with $10,103,325 in match to modernize and enhance the efficiency and capacity of its over 60-year-old water treatment plant. Minturn is a one-of-a-kind Rocky Mountain town in Eagle County, CO, with a vibrant sense of community. The Town of Minturn has been evaluating the best way to improve the reliability of water production at its existing slow sand direct filtration water treatment plant (WTP). The Town has completed an alternatives analysis to determine the best path forward to ensuring reliability of its water supplies amid worsening drought conditions. According to the Eagle County Community Resilience Plan, the County has experienced an estimated 6-8% decline in water supply since 1980, with drought conditions as recently as 2020 resulting in low streamflows and wildfires. By 2050, Colorado's average annual statewide temperature is projected to increase by 3.5°F to 6.5°F. Due to climate change, drought conditions vary yearly, and projections indicate that precipitation patterns will become more variable for Eagle County over the coming decades. This change and continual climactic variations add complexity to water supply, quality, and demand, affecting water operations in Minturn and presenting challenges related to inadequate streamflows to fulfill the Town's normal water consumption needs. The Town is now at 30% design and engineering for the construction of a new WTP with membrane filtration. Membranes represent best available filtration technology that offers an absolute barrier to particles and pathogens common in surface water while reducing the need for chemical use. This WTP modernization project is supported by recommendations in the 2023 WTP Alternatives Analysis Report, the Town of Minturn's 2019 Water System Capital Improvement Plan, the 2023 Imagine Minturn Community Plan, and the Eagle River Community Water Plan (CWP), among others.

Project Start & Completion Dates:
October 2025 - September 2028 (includes permitting and construction)

Located on Federal Land/Facility: N/A

Background: The Town of Minturn presently operates a direct filtration WTP and over 7 miles of potable water distribution piping. The WTP consists of an intake structure off of Cross Creek, two groundwater wells (Well 3 and 4), Filters 1 and 2, which are earthen pits located outdoors, Filter 3, which is a below-grade concrete tank located indoors, miscellaneous yard piping, and a 572,000-gallon unbaffled concrete storage tank. One slow sand filter (Filter 3) is capable of producing 60 gpm as well as one 1.0-micron cartridge filter (Harmsco PPFS-HC-170-1) that is fed by Filter 2 and is capable of producing 50 gpm of treated water. A process flow diagram of the existing process is presented below. Water treated through Filter #3, and the cartridge filter comes from a surface water diversion on Cross Creek. During spring runoff, turbidity increases in Cross Creek, and Filter 3 struggles to maintain turbidity compliance at higher solid loading levels. Filter 3 is subsequently taken offline for filter skimming (approx. 2-3 months). Groundwater is used as the source of supply during these events. Groundwater wells #3 and #4 provide water to the WTP clearwell where chlorine is applied for disinfection. Wells #3 and #4 can produce up to 80 gpm each (approx. 0.25 mgd).



Process Flow Diagram - Existing WTP Process

Minturn's Existing Slow Sand Filter (Filter 3)

Minturn assigns Single Family Equivalents Equivalent Residential Units (SFEs) to its customers and the Eagle River Water and Sanitation District (ERWSD) handles the billing for the Town,

which also provides records for SFE counts. Currently, there are approximately a total of 730 SFEs served by Minturn, 35.6 SFEs of which are in the Maloit Park Service Area and 693 SFEs in the Town Service Area. The primary water uses for WTP customers are commercial, mixed-use, and residential. No agricultural producers utilize water from the Minturn WTP. In 2023, approximately 134.6 acre-feet of drinking water was treated and distributed.

The Town is at a crossroads and has limited ability to meet additional demand with current water resources and treatment capacity. At over 60 years old, the existing plant struggles to meet Colorado Department of Public Health & Environment (CDPHE) regulations, limiting the quantity of water it can produce. While the Town has addressed the immediate need to bring the plant into compliance with CDPHE, the age and deficiencies at the plant have strained Minturn's water system. The Town installed a cartridge filter to treat surface water diverted from Cross Creek; it is limited to about 50 gallons per minute and is only used in emergencies. It does not provide adequate treatment during spring runoff when there's an abundance of turbidity in the Cross Creek surface water. Minturn is limited in its ability to produce water under its most constrained scenario due to removing two slow sand filters from service due to liner deficiencies. In a worst-case scenario where only one well is operational while Cross Creek is simultaneously experiencing high turbidity, the town cannot meet its average daily water demands.

The slow sand filtration used by the WTP is a biological process that is difficult to control and is not adaptable to changing circumstances. Rehabilitation of the filters carries significant risks that will not solve the underlying issues at the plant. The Town now seeks to replace the existing slow sand filter WTP with a new WTP with a membrane filtration system that will provide resiliency to the water supply, support long-term reliability for the water system, can be modified to adapt to more stringent water quality regulations and added water sources, and provides flexibility in treatment capacity to Minturn.

Minturn Water Supplies (2014-2023):

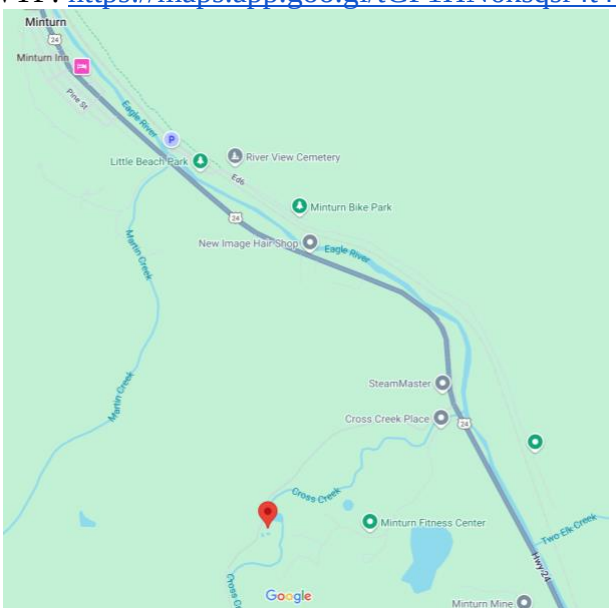
Year	Surface Water Total (acre-feet)*	Agency Groundwater (acre-feet)	Recycled M&I Water (acre-feet)	Other (acre-feet)	Total (acre-feet)
2014	75.7	82.7	0.0	0.0	148.4
2015	68.2	83.3	0.0	0.0	151.5
2016	47.8	142.7	0.0	0.0	190.5
2017	68.7	131.2	0.0	0.0	199.9
2018	106.6	77.0	0.0	0.0	183.6
2019	44.9	132.4	0.0	0.0	177.3

2020	28.6	113.4	0.0	0.0	142.0
2021	51.8	72.5	0.0	0.0	124.3
2022	52.7	106.9	0.0	0.0	159.6
2023	38.3	96.3	0.0	0.0	134.6
Total Average Annual Water Supply for 2014-2023 in AFY =					162.2

Average Annual Water Supply = 162.2 acre-feet (Divide Total Supplies for 2014-2023 above by 10)

Project Location

The Minturn Water Treatment Plant Modernization Initiative is located in Eagle County, Colorado approximately 2 miles south from Minturn's Main Street. The project latitude is [39.56509989203307 N] and longitude is [-106.4182376125237W]. The following link shows the location of the existing WTP: https://maps.app.goo.gl/tGP1HN6ksqsr4t4W9.



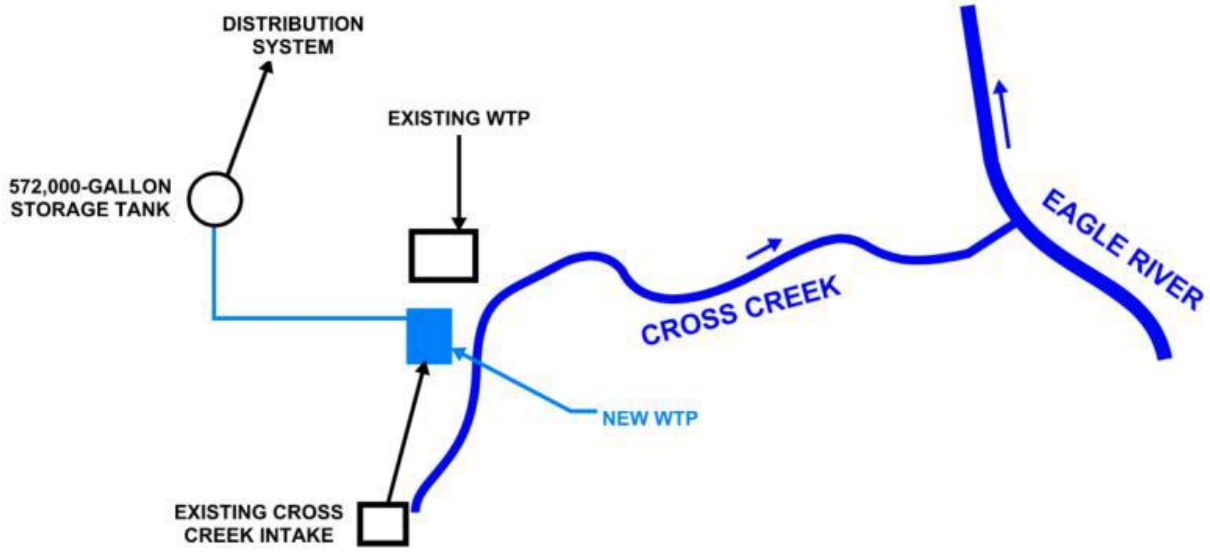
Minturn WTP Location Map

Watershed Area: Upper Eagle River: Cross Creek to Gore Creek:
https://waterplan.eagleriverco.org/reach_2.html

Project Description

The slow sand filtration WTP has served the Town for many years. However, several factors and indicators suggest this technology is dated, not sustainable, and does not reliably produce high-quality drinking water to meet CDPHE regulations and future growth. To address current and future water needs, the Town has completed a Treatment Process Alternatives Analysis as well as 30% design plans for a new membrane WTP. Minturn seeks $3 million in USBR WaterSMART funds with $10,103,325 million in match to complete the following scope of work for the establishment of a new membrane WTP to ensure efficient, manageable operations and reliable regulatory compliance:

- Install two (2) 0.3 mgd membrane skids to provide capacity to meet max day conditions equivalent to 729 SFEs
- Construct a new 3,200 sf building to house the membrane skids and requisite chemical storage systems
- Convert the existing sand filter #3 into residuals treatment for backwash waste
- Provide new diesel generator and electrical entry gear for the new building



Diagrammatic Overview of Proposed WTP

The treatment plant would include two (2) 0.3 mgd membrane skids. Membranes typically operate as a direct filtration process and can effectively operate with little to no pre-treatment, depending on the influent water quality parameters. Direct membrane filtration can effectively handle influent turbidity up to 20 NTU without the need for pre-treatment. Skids are highly automated, simplifying their operation compared to a conventional filtration treatment plant. The proposed two 0.3 mgd rated skids were selected to provide water at the design WTP capacity of 0.6 mgd. The proposed membrane skids can meet the demand of the existing Minturn distribution system with room to spare.

Direct filtration is proposed as Cross Creek water has little dissolved inorganic contaminants throughout much of the year and well usage is planned for periods of high TOC, which membranes struggle to remove without pre-treatment. This will help maintain water quality and capacity when the Cross Creek runoff is too turbid, causing the Town must use its wells, and adding pressure on a limited production capacity.

To achieve adequate disinfection of membrane-treated water with a residual of 1 mg/L chlorine, 80 minutes of disinfection contact time is required. This time is determined by dividing the CTrequired value (8) by the baffling factor (0.1). Under these conditions, the existing 572,000-gallon unbaffled storage tank provides ample contact time at the max design flow of 0.6 mgd. The use of membranes to treat surface water effectively allows the filtrate, or treated water, to have the same disinfection requirements of groundwater, which significantly simplifies the management of chlorine dosing and reporting.

Construction activities would include site civil work comprising filling in the existing slow sand filters that are out of service, new connective yard piping between the new WTP and the existing slow sand filter #3, and storage tank. A new pre-engineered metal building will provide superstructure to house the process treatment equipment, instrumentation, and analyzers which allow for process automation. The project will also include new electrical service from the existing overhead power lines to run a new pad mount transformer and a state-mandated diesel generator will be installed near the new WTP building in case of power failure.

Applicant Category and Eligibility of Applicant

The Town is a Category A applicant. The Town meets the requirements of a Category A applicant since it 1.) is municipality located in the State of Colorado; 2.) owns and manages Minturn's water utility; and 3.) possesses the authority to manage water resources within its jurisdiction.

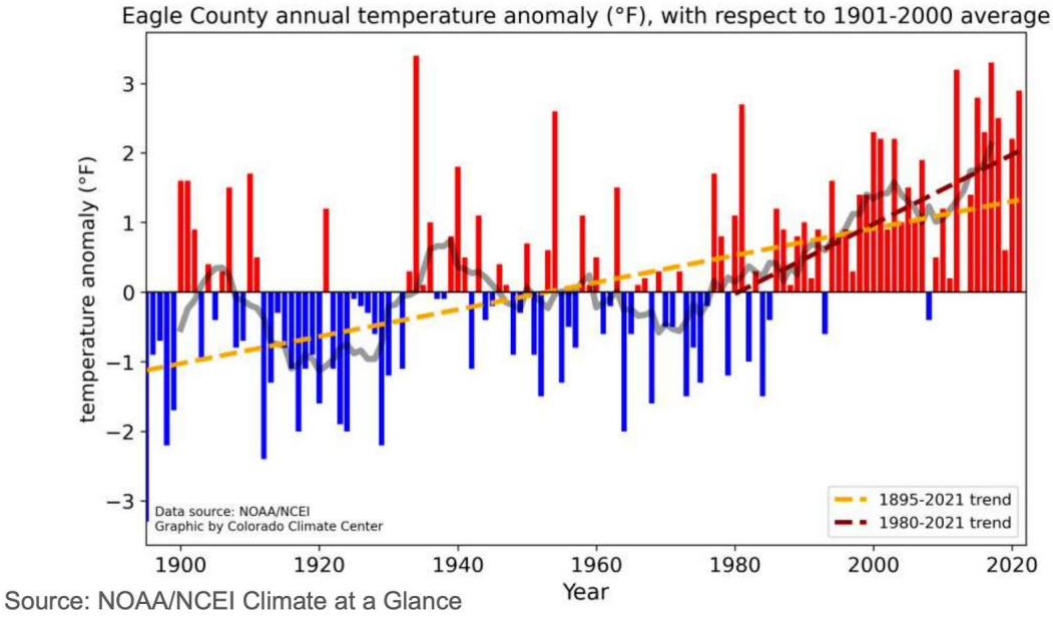
Evaluation Criteria

Evaluation Criterion A. Severity of Drought or Water Scarcity and Impacts

Drought Conditions in the Project Area: Drought conditions are the new normal in Colorado and throughout the West. According to the Eagle County Community Resilience Plan, the County has experienced an estimated 6-8% decline in water supply since 1980, with drought conditions as recently as 2002, 2012, and 2020 resulting in low streamflows and wildfires. Elevation, combined with mountain ranges, results in large statewide differences in yearly precipitation, temperature, humidity, and wind, among other variables. Minturn, with its rugged mountainous landscape, river

valleys, and dense forests, is particularly susceptible to substantial impacts during periods of drought and development conditions that have impacted water availability and flows. Upstream total maximum daily loads (TMDLs) and reservoirs have influenced changes in water flow. The frequency of the natural 1-in-4-year peak flood flow has significantly decreased compared to historical conditions due to water use and management. Peak flow magnitudes during typical and dry years have decreased by 24-30%, respectively. Total annual flow volumes in dry years have declined by 32%, based on findings from the Eagle River Water Plan.

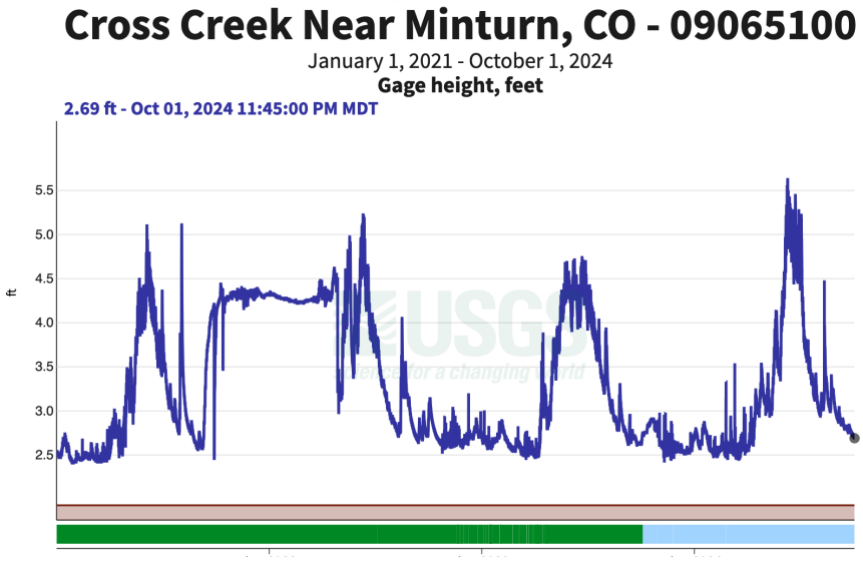
Temperatures in Colorado continue to increase, with a nearly 2-degree change over the average of 1900 to 2000. This has dramatically impacted the length and severity of drought periods. The General Manager for the Colorado River District, Andy Mueller, has noted that for every 1 degree Fahrenheit rise in temperature, streamflow in rivers is reduced by 3% to 9%, though recent studies show that 9% is the more accurate figure. Eagle County continues to experience a trend of high-temperature anomalies that have created and exacerbated drought conditions. The difference now is that even when the precipitation rate is normal or above normal, the higher temperatures cause the land to become "thirstier" and require greater amounts of water to sustain non-drought conditions. This has placed Colorado and many of the Western states in a constant state of drought for most of the 21st century, a 22-year-long "megadrought" that has surpassed the previous worst drought on record.



As record drought persists, West will have to live with less water (Vail Daily, 2022)

USGS findings for Cross Creek Near Minturn Gage height data from 2021 to the present reveal that the river experienced multiple instances of dropping below 2.5 ft. These occurrences had a significant impact on water availability, water quality, and treatment needs. The reduced water flow during these periods placed considerable strain on Minturn's water treatment facilities, exacerbating the challenges posed by the Town's already stressed water treatment capacities. This strain is particularly acute during times of drought and high water demand, as the decreased water availability limits the treatment capacity. Additionally, the low-flow conditions during these periods lead to higher pollutant concentrations, further burdening the Water Treatment Plant's

capacity. Lower river levels typically result in higher water temperatures due to shallower water, which has negative implications for the aquatic ecosystem and can promote the proliferation of harmful bacteria and algae, posing risks to drinking water safety.



USGS Gage Height Data for Cross Creek Near Minturn 1/1/2021 to 10/1/2024

Recognizing its capacity constraints, Minturn has had to limit development and existing customers are subject to water restrictions. This has prompted the Town to stop the issuance of new water tap permits to construction projects involving more than three single-family homes. That moratorium was first issued in 2020 and is ongoing.

Projected Increases in Drought Conditions/Water Scarcity: The Eagle County Community Resilience Plan found that by 2050, the average annual statewide temperature in Colorado is projected to increase by 3.5°F to 6.5°F. Due to climate change, drought conditions vary yearly, and projections indicate that precipitation patterns will become more variable for Eagle County over the coming decades. Rapid temperature escalation and continual climactic variations reduce water supplies, impair water quality, and increase potable water demand.

The slow melting of the snow in the high-country areas is crucial for maintaining consistent water flow in the mountain streams and rivers all year round. When a drought causes low snowpack, it leads to reduced streamflows. Inadequate streamflows will reduce the raw water available to meet the daily water use of Minturn. While drought is a natural phenomenon, its prolonged presence will require Minturn to diversify water sources and increase the Town's ability to process water with increased turbidity.

During the spring runoff, the raw water often becomes more turbid, leading to shorter filter run times. Historically, Minturn has not experienced turbidity levels exceeding 5 NTU in the water from Cross Creek during spring runoff. However, these conditions pose the highest challenges and coincide with the beginning of the high water demand season in Minturn. If there are disturbances in the Cross Creek watershed, such as a forest fire due to drought conditions, managing spring runoff conditions will become more difficult in the future.

Drought and Water Scarcity Impacts: Ongoing and potential drought and water scarcity impacts would further strain Minturn's already stressed and aging water treatment plant. At present, Minturn relies solely on water sourced from Cross Creek and groundwater wells and does not have a backup water source available. It is the intention of the Town to add redundancy and increase WTP capacity with a new source from the Eagle River as a later phase of development; however, the Town's location near the Eagle Mine Superfund Site has resulted in high metal levels in Eagle River waters, which would necessitate pretreatment. Additionally, the Town's water plant struggles to meet CDPHE regulations during spring runoff and is limited in the quantity of treated water it can produce. While currently able to meet demand, the Town has been forced to turn down both businesses and housing development which is further straining the Town's economy. Due to a lack of a reliable water supply, the Town has turned down a hotel development, multiple downtown commercial building sales with the potential to redevelop, and phase 2 of a workforce housing project.

This trend continues with a risk to new developments to the north and west parts of the town, which require an estimated 729 single-family equivalents (SFEs), and would provide additional housing for new residents and sources of revenue for the Town

Drought conditions would also negatively impact the Town's economy, particularly the tourism sector. As a small mountain town, Minturn's economy heavily depends on the recreation economy, including riverine activities like fishing and snow-based activities, including skiing and snowboarding, with the Vail Ski and Snowboard Academy located within the Town. These activities rely on a healthy, stable water supply and favorable weather conditions to maintain economic activity. Yet, in times of drought or water scarcity, snowfall is often reduced, resulting in smaller snowpacks and shorter seasons with limited numbers of open trails, directly reducing the number of visitors to the area and driving down sales and revenues at area businesses, including restaurants, shops, and lodging.

Other Water Related Impacts: The Town has worked through settlements and contracts on servicing and utilizing water. In recent years, the Town has settled disputes with Battle Mountain and Eagle River Water and Sanitation District (ERWSD) to reduce water-related conflicts. All parties have agreed to these conditions. The Town entered into an IGA with ERWSD in the spring of 2021 which allows for a regional water storage reservoir to be built by ERWSD and in exchange the Town will receive storage space in the reservoir for much needed augmentation water.
https://portal.laserfiche.com/Portal/DocView.aspx?id=9728&repo=r-6d769c14

Mintuan has also been supporting ERWSD's efforts to utilize historic Bolts Ditch as a means to gravity fill the future Bolts Reservoir:
https://portal.laserfiche.com/Portal/DocView.aspx?id=9950&repo=r-6d769c14;
https://www.vaildaily.com/news/eagle-county-bolts-ditch-water/

In 2024, the Town and Battle Mountain settled a years long dispute over the 2008 Annexation Agreement which was to provide a new water treatment plant and wastewater treatment plant. Although neither of those pieces of infrastructure are being provided through the settlement, the town hopes to sell parcels of land which are being conveyed and may help to bring town exceptionally high water utility rates for the residents and businesses.

https://portal.laserfiche.com/Portal/DocView.aspx?id=11126&repo=r-6d769c14

Evaluation Criterion B. Project Benefits

Sub-Criterion B.1. Project Benefits (Tasks A, B, D only)

The new water treatment plant (WTP) is anticipated to increase Minturn's water treatment capacity by 414.8% and will be capable of generating 672 AFY (0.6 million gallons per day), whereas the current WTP produces 162 AFY or 0.1 million gallons per day. This estimate was calculated based on the capacity of the lone remaining slow sand filter still in operation, which is limited to 60 gpm (or approximately 0.1 mgd). The 672 AFY is based on the assumption that the WTP will operate at maximum capacity throughout the year; however, WTPs typically adjust production to meet the system's demand. The demand aligns with the average annual supply, which is based on data collected from 2014 to 2023.

Total Project Water Yield in AFY	672
Average Annual Water Supply in AFY (From Table in *Section D.2.2.2. Technical Proposal*, Executive Summary)	162
Percentage Yield (Divide Total Project Water Yield by Average Annual Water Supply)	414.8%

Long-Term Resilience to Drought and Water Reliability Issues: The Minturn WTP Modernization Initiative is designed to significantly enhance the town's water treatment capabilities, which is crucial for building long-term resilience to drought and ensuring water reliability. By adopting an advanced membrane treatment system, this initiative addresses the challenge of increased NTU (Nephelometric Turbidity Units) in water sources, which can be a result of various factors including drought conditions that concentrate pollutants. The enhanced reliability and efficiency of the membrane treatment system mean that it can effectively remove more contaminants from the water, ensuring a consistent supply of clean, safe drinking water even under challenging conditions. This is particularly important in the context of climate change, where unpredictable weather patterns and extended periods of drought can compromise water quality and availability.

Membrane skids can also be successfully turned down to least 50% of their design flow rate, meaning that each skid could run as low as 0.15 mgd. This flexibility means that periods of low demand would not be a major issue. Further, membrane skids are highly resistant to complications associated with starting and stopping. In fact, a membrane skid may start and stop every 20 minutes as it goes through a short backwash cycle. However, membrane systems are designed for continuous operations, meaning both skids would need to run year-round, even during the winter when flows are minimal. In winter months, the two skids would operate in a cycle with one skid operating and one backwashing or primed to come online when the operating skid requires backwashing. This will ensure that both skids remain in continuous operation to reduce the likelihood of interruptions or failures.

This modernization initiative lays the groundwork for Minturn to adapt to future water demand and potential scarcity scenarios. By improving the treatment process, the town is better equipped to manage its water resources sustainably, ensuring that it can meet the needs of its population without over-relying on external water sources, which may also be under strain.

Project Useful Life: The useful life of the new membrane WTP is estimated to be 30 years. The skids include structural framing, supports, and valves that should last up to 30 years with proper maintenance. The membrane modules' expected lifespan, which comprises the skid, are approximately 7 to 10 years before needing to be replaced. The stated membrane replacement interval is typical and consistent with industry standards.

Benefits Associated with Additional Water Supplies: Minturn has had a strict water moratorium in place since 2020. Other than previously approved projects, development is allowed except for unless an existing lot has an allotted SFE or is on an empty lot where one SFE is allowable. The moratorium is in place since the community is at risk of running out of water, which is being exacerbated by increasing heat and growing irrigation needs.

Luckily, the Town has two pre-approved projects that will help support Minturn's current housing needs, the Minturn North project and the Maloit Park Workforce Housing Project. The Minturn North PUD encompasses approximately 12.581 acres stretching along the valley floor between existing Taylor Avenue and Minturn Road. The property is bifurcated by existing Fourth Street. The plan seeks to acknowledge the rich heritage of the Minturn area by providing an appropriately scaled built environment interconnected by low-impact infrastructure, appropriate drainage, cohesive streetscape, open space and community-focused play space. Resident lifestyle and service needs are fulfilled by the existing Town of Minturn commercial activities located a short walk or bike ride away. This proposal seeks to find common ground between future development, existing resident and stakeholder desires along with the need for a diverse, vibrant and eclectic Town of Minturn. The Minturn North Project includes a new 39 single-family residence neighborhood being developed by Resort Concepts. The Town of Minturn approved the Minturn North neighborhood plan on November 17, 2023. Resort Concepts purchased the property on December 12, 2023 and will be breaking ground in Spring 2024.

Minturn North Conceptual Plan

The Maloit Park Workforce Housing Project is a proposed subdivision located on approximately 19.1 acres of Tract A, a 46.9-acre parcel that was created by the 2011 Maloit Park Exemption Plat. The subdivision accommodates lots and tracts that will allow for a total of 137 housing units. This level of development was established in the 2011 Annexation Agreement that gave Eagle County School District (ECSD) the right to develop 120 housing units in addition to the 17 existing units. A combination of duplex lots and parcels for townhomes and multi-family development is proposed. The project is within the Maloit Park Character Area and is zoned mixed-use.

These projects sets the stage for a new chapter in Minturn's history, promising a harmonious blend of contemporary architecture and the pristine beauty of the Rocky Mountains and helping to combat a period of population decline due to the high cost of living. However, these new residents will require a stable, affordable source of water that Minturn now lacks. The community relies on one aging sand filter at an outdated and failing water plant. While Minturn has approved these developments, new and existing residents face an uncertain future without reliable water production. Minturn is currently declining at a rate of -2% annually, and its population has decreased by -8% since the most recent census, which recorded a population of 1,033 in 2020. At the same time, median household income in Minturn rose by over 14% from $90,521 to $103,333.

Outside of these two new developments, affordable housing badly needed by Minturn will not occur without the new water plant. Demand for housing is high and these projects illustrate how Minturn could provide affordable housing for residents, bringing down housing and cost of living for the badly cost-burdenerd community.

Project Supply Benefits: Providing adequate water supplies to the Town of Minturn is critical to buffering against water shortages and enhancing the resilience of the water system. Minturn's existing plant, at over 60-years-old has reached the end of its useful life, and due to limitations imposed by CDPHE, could face a worst-case scenario situation in which only one well is operational while Cross Creek is simultaneously experiencing high turbidity, leaving the town unable to meet its average daily water demands. The project will allow the town to lift the water moratorium it has been under since the spring of 2020 by ensuring reliable water production year-round and improving reliability for maintaining a constant maximum water storage supply. The system's resilience will be further buffered with the membrane plant which comes with replaceable parts in a timely manner, unlike slow sand filters, which can take months to return online due to bacteria regeneration. Given the costs and the risks of filter rehabilitation, the ability of membranes to manage a wide range of variable raw water parameters and the ability to easily expand plant capacity membranes are the most reliable technology to produce water for current and future conditions.

Sub-Criterion B.2. Project Benefits (Task C only)
This Minturn Water Treatment Plant Modernization Initiative is not a Task C project request.

Sub-Criterion B.3. Additional Project Benefits (All Tasks)
Sub-Criterion B.3.a. Climate Change
Upgrading the Minturn Water Treatment Plant (WTP) is crucial to prepare for and adapt to changing hazards, such as increasing drought and wildfire conditions. The Minturn WTP Modernization project aims to enhance drought resiliency and ensure that the Town has sufficient water supplies to address hazards, including wildfires. According to the USBR Water Reliability

in the West, 2021 SECURE Act Report, the Colorado River Basin has been experiencing consistent drought since 2000, with the period from 2000 through 2020 being the driest 21-year period in the Colorado River Basin in more than 100 years of record-keeping. As drought concerns become more prevalent in and around Minturn, it is essential for Minturn to upgrade its WTP to easily expand plant capacity to treat additional water from a new source, the Eagle River.

Wildfires have a range of both short- and long-term effects on watersheds, as per findings from the Water Research Foundation. In the event of a wildfire, these effects may alter source water quality and quantity enough to require utilities to adjust their treatment processes. Currently, the Town is limited to treated water from Cross Creek and two groundwater wells. Modernizing the WTP will also support risk reduction in times of flooding, when the turbidity of the Cross Creek may be high, by providing a backup source through the Eagle River. The new membrane plant brings Minturn one step closer to allowing for the treatment of a secondary water source (which a slow sand filter would be incapable of supporting). The town is currently seeking a 4.0 cfs water right on the Eagle River to create redundancy in the system by providing a secondary water source. The new membrane plant, with specific modifications, would be able to treat Eagle River water, whereas a slow sand filter could not. Therefore, ensuring redundancy in the water system is essential for adequate water supply and demand management measures and this expanded capacity could not be accomplished under present WTP conditions.

Sustainable Infrastructure: The Climate Action Collaborative completed a Water-Energy Nexus Report for the Town of Minturn to provide linkages between water and greenhouse gas emissions for the Town and offer tailored recommendations for water provider operations and customer water conservation strategies. This report found that between 2018 and 2022, emissions per kilogallon in Minturn ranged between 1.6 and 2.25 lbs CO2e. While slow sand filtration provides a less energy-intensive system than a membrane filtration WTP, the new plant will incorporate energy efficiency upgrades such as the installation of efficient technologies, including LED lighting, weatherizing the WTP building structure, and purchasing of energy-efficient all-electirc equipment, wherever possible. These upgrades will reduce associated operational emissions. Minturn is also considering utilizing energy generation from a future solar array to offset the energy consumption of water treatment operations.

Water Pollution Mitigation: The Minturn Water Treatment Plant Modernization Initiative has been designed to address the presence of water pollutants, particularly metals, in the Cross Creek River. Advanced membrane filtration systems achieve high removal efficiency while minimizing the use of chemicals, thereby effectively reducing the levels of pollutants in the water. This method is particularly effective because it targets a wide range of pollutants, ensuring a comprehensive purification process. The use of membranes to treat surface water effectively allows the filtrate, or treated water, to have the same disinfection requirements of groundwater, which significantly simplifies the management of chlorine dosing and reporting.

By minimizing chemical usage in the water treatment process, the project will contribute to the Town's overall goal of reducing water pollution. Traditional water treatment methods often rely heavily on chemicals, which can leave residual pollutants in the water and create additional environmental concerns. By limiting chemical use, the Minturn Water Treatment Plant not only addresses the existing pollution but also prevents the introduction of new pollutants, supporting

overall environmental sustainability. Combining high-efficiency pollutant removal with minimal chemical use promises to enhance the quality of water in the Cross Creek River.

Climate Change Resiliency: Improving the efficiency and capacity of the Minturn WTP is critical to ensuring climate change resilience. As drought and wildfire conditions become more frequent and intense, the Town will need to ensure it can provide an adequate, safe drinking water supply while also addressing its development needs and additional pressures on the water system. The proposed membrane skids can meet the demand of the existing Minturn distribution system with room to spare. Membrane filtration provides good resiliency and would, with proper operation, produce high-quality finished water. The new skids can also be monitored and controlled remotely, favoring Minturn's contract operations model and potentially limiting operational support and providing continuity during emergencies as operator involvement is expected to be less than a conventional treatment process.

Sub-Criterion B.3.b. Ecological Benefits

The enhanced water treatment capacity provided by the Minturn WTP Modernization Initiative will help to promote more sustainable and efficient water use practices, ensuring that the local ecosystem of Cross Creek is not over-extracted and degraded, especially in times of drought. The membrane filtration plant will have a higher water recovery rate, allowing for more efficient use of available water resources relative to the aging slow sand filtration plant. The membrane filtration plant will require fewer chemicals for disinfection, lowering the risk of chemical runoff and reducing potential harm to local ecosystems. As described above, the new plant will incorporate several energy efficiency measures designed to help reduce greenhouse gas emissions and mitigate climate impacts from plant operation as Minturn seeks to ensure that the Town remains an area of pristine wilderness.

The Town is dedicated to minimizing ecological impacts during the design and construction of the WTP. The new WTP will be constructed within the existing plant's footprint, repurposing infrastructure to support new membrane treatment and avoiding disruption to sensitive habitat and wildlife corridors. Erosion and sediment controls will be used to prevent runoff into waterways during construction to minimize impacts to soils and to avoid indirect water quality impacts to Cross Creek, located approximately 120 feet east of the project area. Wildlife-friendly fencing, noise, and light pollution controls will also be implemented to minimize project impacts and support wildlife protection. By prioritizing sustainability and ecological preservation, the project aims to protect Cross Creek in the Holy Cross Wilderness, which is home to a diverse range of aquatic and terrestrial species including 10 species listed, proposed, or candidates for listing under the Endangered Species Act (ESA) such as the Canada lynx, Mexican spotted owl, gray wolf, and yellow-billed cuckoo. The surrounding environment, from alpine meadows to dense forests, supports this diverse array of wildlife and will be further supported by the WTP modernization effort. The construction of the WTP, while near these important habitats, is not identified as critical habitat, according to the U.S. Fish and Wildlife Service (USFWS) Information Planning and Conservation (IPaC) System.

Sub-Criterion B.3.c. Other Benefits

In light of the costs and risks associated with filter rehabilitation, the use of membranes to handle a wide range of variable raw water conditions and to easily expand plant capacity makes

membranes the most reliable technology for producing water to meet both current and future demands. The anticipated expansion of the housing development in the northern region of the Town, coupled with the upcoming construction of additional housing for teachers, is expected to place additional strain on the water system, necessitating an increase to 729 single-family equivalents (SFEs). The proposed modernization of the water treatment plant (WTP), estimated at $13 million, will impose a significant financial burden on this small, rural community. Consequently, homeowners in Minturn may potentially face a substantial monthly rate increase of over $115.

Evaluation Criterion C. Planning and Preparedness

This WTP modernization project is supported by the Town of Minturn's 2019 Water System Capital Improvement Plan, the 2023 Imagine Minturn Community Plan, and the Eagle River Community Water Plan (CWP), and the WTP Alternatives Analysis Report completed in August 2023. The WTP Alternatives Analysis Report serves as the basis for this application and can be found attached as **Appendix C**. This Alternatives Analysis assessed the best path forward for improving the reliability of water production as the existing water treatment plant (WTP) is nearing the end of its serviceable life. A new WTP was proposed to replace the existing one which uses slow sand filtration to treat the surface water. Several alternative treatment process technologies are were considered by Minturn for the new WTP. The treatment technology alternatives under consideration included:

- Alternative A: Rehabilitation of existing slow sand direct filtration WTP
- Alternative B: Construction of new WTP using packaged conventional treatment units with dual-media filters
- Alternative C: Construction of a new WTP with membrane filtration with consideration for expansion and future preliminary treatment

The project team first went through a qualitative exercise to determine the top priorities for Minturn in the selection of the new treatment technology using criteria including resiliency (35%), operations and maintenance (26%), long-term reliability (22%), process modifiability (13%), and capacity flexibility (3%). Their relative importance was developed jointly by HDR and the Minturn Water Committee during a workshop on January 12th, 2023. The criteria below are listed in the order of importance to Minturn.

The Minturn Water Committee included Council members Gusty Kanakis and Lynn Feiger along with Town contract engineer Jeff Spanel, Town WTP operator John Volk and Town Manager Metteer.

The final score provides a qualitative ranking of the alternatives to showcase which treatment technology best meets the priorities of Minturn.

Criteria	Alternative A: Slow Sand Filtration	Alternative B: Packaged WTP	Alternative C: Membrane WTP
Resiliency (35%)	Moderate	Strong	Very Strong
Operations & Maintenance (26%)	Strong	Moderate	Moderate
Long Term Reliability (23%)	Strong	Strong	Strong
Process Modifiability (13%)	Very Low	Strong	Very Strong
Capacity Flexibility (3%)	Low	Moderate	Very Strong
FINAL SCORE	**56**	**64**	**75**

Based on the results of this alternative analysis, it was recommended that Minturn move forward with construction of a new membrane filtration plant. It resulted in the highest qualitative score and is recognized to best address Minturn's priorities for providing a resilient and reliable treatment system. While rehabilitation of the slow sand filters ultimately had the lowest cost of the alternatives, the drawbacks of continuing to rely on an aging technology and cutting off the option for adding Eagle River water in the future far outweigh the cost savings associated with the option. Membrane filtration allows Minturn to address the needs of its existing customers while leaving open the option for future development and water rights.

Evaluation Criterion D. Readiness to Proceed and Project Implementation

Project Schedule: Major Tasks/Milestones:

Major Tasks/Milestones	Planned Start Date	Planned Completion Date
Task 1: Project Management	November 2024	September 2028
Construction Management Contract Awarded	September 2025	
Kick Off Meeting	October 2025	
Oversight of Construction	October 2025	September 2028
Task 2: Environmental Compliance	October 2024	October 2025
NEPA Completed	October 2024	October 2025
Close Out Reporting	June 2028	September 2028
Task 3: Design and Engineering	November 2024	October 2025
60% Design	November 2024	April 2025
90% Design	April 2025	July 2025
100% Design	July 2025	October 2025
Task 4: Permitting	October 2024	May 2026
CDPHE Permit	July 2025	October 2025
Local Permits	October 2025	December 2025
Eagle County 1041 Permit	April 2025	January 2026
Army Corps 404 NWP Permit	April 2025	December 2025

Task 5: Bidding	October 2025	February 2026
Compile Bid Documents	October 2025	November 2025
Bid Released	December 2025	
Bid Awarded	February 2026	
Task 6: Construction	June 2026	September 2028
Ground Breaking	June 2026	
50% Construction	July 2026	January 2027
Construction Completed	January 2027	June 2028
Ribbon Cutting	July 2028	
Task 7: Project Close Out	July 2028	September 2028
Final Report	August 2028	September 2028

Permits and Approvals: The Town will need to obtain several permits before initiating construction and before the new water plant can be brought online. These include:

- **Environmental Protection Agency (EPA) NEPA Permit:** NEPA permitting is required as the project is anticipated to be classified as an Environmental Assessment (EA) due to increasing production capacity over 30%. Tribal consultation on the project is already underway and the Town anticipates completion of NEPA review by October 2025.
- **Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD) Plan and Construction Approval:** Minturn will apply for a CDPHE WQCD Permit upon completion of 90% of the design in July 2025 and anticipates approval by October 2025. The Town and engineering design firm are in consultation with CDPHE concerning the design and anticipate no issues with final approval.
- **Town of Minturn Building Permit:** The Town will apply for a building permit when the design is 100% completed in October 2025. Staff anticipates that the Town Board of Trustees will approve the building permit in December 2025.
- **Eagle County 1041:** Minturn will apply for an Eagle County 1041 Permit in April 2025. The Town anticipates being approved by the County Planning Commission by January 2026.
- **US Army Corps of Engineers 404 Nationwide Permit (NWP) Preconstruction Notice:** The Town will apply for a NWP permit at 60% design in April 2025. The Town has been in communication with the Corps of Engineers and anticipates approval of the permit by December 2025.

Engineering & Design Work: The Town of Minturn has procured HDR Engineering, Inc. through a competitive public bidding process. HDR has completed a project alternatives analysis and 30% design. The Town anticipates that 60% of the design will be completed by April 2025, 90% by July 2025, and 100% by October 2025. Staff, including the Town's Manager, has a bi-weekly meeting with HDR to address on-going concerns and keep the project moving forward. Design elements will be brought to Town Council at 60% and 90%, with final staff review and approval in September 2025.

Land Acquisition: No land needs to be purchased to implement the project.

Federal Lands & Facilities: Minturn's current and proposed water plants are sited on Town-owned land adjacent to the White River National Forest. The Forest Service's Vail Area Holly Cross Office is located just outside Minturn. Many Forest Service employees live within Minturn, and the two organizations have a supportive relationship. The Federal agency supports the new water plant, which will help provide water to suppress community fires before they become wildfires. Since the project is a municipal water supply project, the Forest Service will not contribute funding and is unable to support its completion.

New Policies or Administrative Actions Required: The Town is currently pursuing State Revolving Loan Funds and private loan funds for construction that will serve as the local match. The Town Council will need to approve the final loan before project construction can move forward in mid- 2026. The Town anticipates approving the final loan in Fall 2025 after the project is bid to ensure the correct amount of funding is available to move the project forward in June 2026.

Evaluation Criterion E. Presidential and Department of the Interior Priorities

Climate change and mitigating its impacts on the water supply and region drive the need for Minturn's new water plant. Due to a warming climate, the community will see an extended fire season, decreased snowfall, and increased severity of drought, creating conditions ripe for catastrophic wildfires and increasing pollutants in the water supply. Minturn is also keenly aware of climate change's impacts on Eagle County's water supply, as discussed in **Evaluation Criterion A. Severity of Drought or Water Scarcity and Impacts.** Peak flow magnitudes during typical and dry years have declined 24-30%, respectively. Total annual flow volumes in dry years declined 32% from previous years. Minturn is preparing for a hot, dryer, more fire-prone future. The new water plant will be able to process water with increased pollutants and can be modified to treat water from the Eagle River, increasing long-term resiliency with a second source of drinking water.

As discussed below in the section on disadvantaged communities, the region is at significant risk because of wildfire, flooding, and proximity to the Eagle River Mine Superfund Site. With elevated turbidity levels in Cross Creek, Minturn's drinking water is increasingly impacted by spring runoff. The existing slow sand plant struggles to meet the permit turbidity limits during high turbidity events, forcing the Town to utilize emergency well water.

Before climate change increased temperatures and reduced precipitation in the Colorado Rocky Mountains, Minturn's elevation (7,861 feet) insulated the community's watershed from the impacts of wildfire. According to the Eagle River Fire Protection District, the region sees fires burning hotter and faster; the greatest change in that regard is occurring in areas above 8,000 feet. An example of the growing risk to elevated communities' watersheds in the White River National Forest is the Grizzly Creek Fire in Glenwood Canyon.

2020 Grizzly Creek Fire

The Grizzly Creek wildfire was the largest and most expensive fire in the White River National Forest to date, consuming over 32,000 acres and burning from 5,700 feet to over 10,000 feet. The damage from the Grizzly Creek fire was directly responsible for the major debris flows in Glenwood Canyon in 2021.

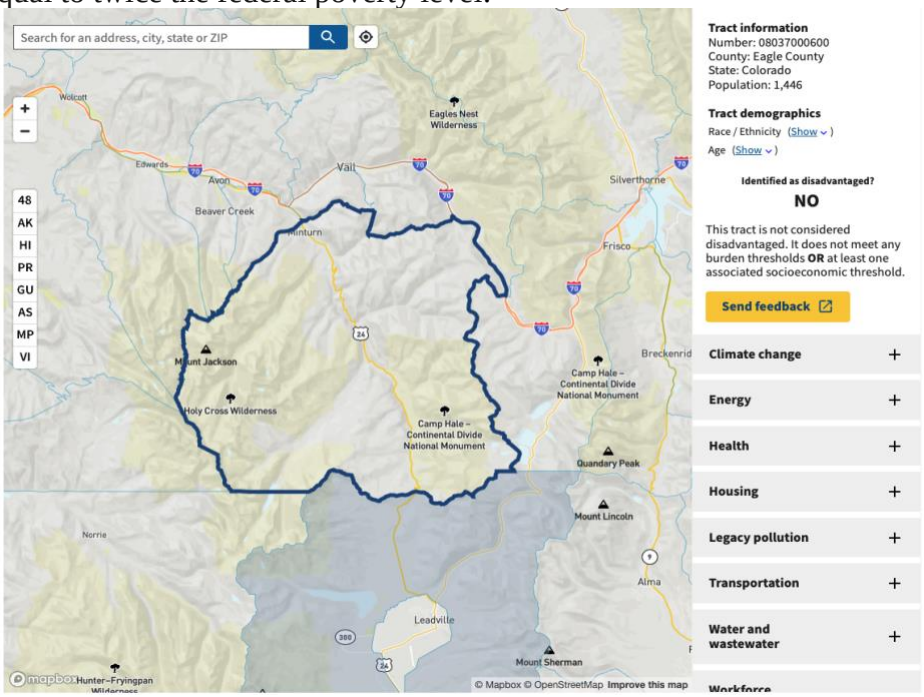
2021 Debris Flows

The Grizzly Creek Fire also burned the watershed for the City of Glenwood Springs and all municipalities that draw directly from the Colorado River. The City of Glenwood Springs had to build a new pre-treatment system and increased the community's use of a secondary water supply due to the fire.

Mintun is planning for a dryer, hotter, more fire-prone future today. The project builds resiliency in the community's water supply. The new water plant will meet the demand of existing customers and maintain treatment capacity during high turbidity events, such as spring runoff or future wildfires. The Town can add pretreatment trains to the plant, allowing future use of water from the Eagle River and a third water source for the community should the current water supply prove insufficient due to drought or untreatable due to a catastrophic wildfire.

Benefits for Disadvantaged Communities: Minturn (Census Tract 08037000600) is a small rural workforce community whose residents primarily serve the ski town of Vail. The proximity of the resort community increases residents' incomes but also exponentially raises housing prices, making the small community unaffordable. While the median household income is $103,333, residents struggle with the high cost of living since the average sales price of a residential home in 2023 was $1.35 million (REDFIN). The large gap between incomes and household expenses leaves residents struggling to pay for basic necessities and drives population decline. Since 2010, the population of Minturn has steadily declined by almost 15% (American Community Survey).

According to the White House Council on Environmental Quality's CEJST tool, Minturn residents, compared to other United States residents, are in the 99th percentile for expected population loss due to fatalities and injuries from natural hazards, the 92nd percentile for flooding, the 72nd for properties at risk from wildfires, and the 91st for homes without indoor kitchens or plumbing. The small rural community is highly vulnerable to natural hazards, and most residents lack the resources to recover following inevitable natural disasters. Latino households comprise 22% of the total population, and the community is in the 37th percentile for households that are less than or equal to twice the federal poverty level.



CEJST Map and Indicators

Income disparities and lack of housing affordability will cause large-scale displacement of residents following natural disasters. Residents who devote a significant portion of their income to housing have limited abilities to bolster their savings, leaving them with few choices following floods or fires. According to Minturn's Community Plan, over half of Minturn households are burdened with housing costs since they pay over 30% or more of their income towards housing (both renters and owners).

Pressure on housing prices also increases due to the lack of a resilient water supply. The Town has had a moratorium in place on water taps for new-build construction projects requiring more than three single-family equivalents since 2020 due to an inability to increase water production. Until Minturn is able to obtain additional potable water capacity and lift the existing water tap moratorium, significant new development is hindered, driving up housing costs and reducing affordability further.

The community also suffers from a legacy of pollution. Minturn ranks in the 86th percentile of communities within 5 kilometers of a listed Superfund or National Priorities List (NPL) site. The 235-acre Eagle Mine Superfund Site is located one mile from the Town, with the Eagle River

running through the site. Gold, silver, copper, and zinc mining and production occurred on the site at various times between the 1880s and 1984, leaving high levels of metals in soils, surface water, and groundwater. EPA placed the site on the NPL in 1986, and to date, cleanup has included the removal of contaminated soils and sediments, containment of mine seepage and runoff, monitoring of surface water, groundwater, pool water, and stream water, and land use controls.

While the CEJST Tool does not classify Minturn as a disadvantaged or historically underserved community, it is at extreme risk from natural disasters, including flooding and wildfire. These threats will make the production of drinking water more challenging and expensive for residents already struggling with basic household necessities. Minturn's new water treatment plant will be a lifeline for the community, allowing additional development, decreasing the cost of housing, increasing tax revenues, and providing safe and ample water for residents even as water grows harder to treat due to fires and flooding.

Tribal Benefits: The project does not serve or benefit a Federally Recognized Tribe.

Evaluation Criterion F. Nexus to Reclamation

The project does not have a nexus to a Reclamation Project.

Evaluation Criterion G. Stakeholder Support for Proposed Project

See **Appendix D** for letters of support from the following Stakeholders:

- Eagle River Fire Protection District
- Eagle River Coalition
- Eagle County School District
- Minturn Community Fund

Performance Measures

The project benefits will be assessed by quantifying the volume of water in acre-feet per year (AFY) to gauge the effectiveness of Task A: Drought Resiliency. This will help in evaluating the enhancements in the reliability of drinking water in Minturn. No grant funding is being requested for monitoring and data management, as the Town already keeps active records on AFY.

D.2.2.3. Budget Narrative

All costs associated with this WTP Modernization initiative are **construction costs**. Construction includes the following in alignment with the Section B of the SF424A:

Contractual Services: Construction Management, including construction oversight and inspection, is necessary to facilitate the successful implementation of this WTP modernization. Construction management was estimated at $250/hr x 4,800 hrs = $1.2 million.

Construction Materials & Equipment: The attached Opinion of Probable Cost, **(Appendix B)** provided to the Town by Glacier Construction, identifies all materials, supplies, and equipment needed for this project, estimated at $11,903,325.

The project budget includes $6 million in federal funding, including the $3 million requested from the USBR WaterSMART program and $3 million in congressionally-directed spending, EPA State and Tribal Assistance (STAG) funds. US EPA STAG funds require a $750,000 local match. In

addition, the Town plans to seek $1 million in Colorado Department of Local Affairs (DOLA) funds and apply for a $7 million loan to support construction activities, as depicted in the chart below.

Source	Federal	Non-Federal
WaterSMART Request	$3,000,000	
CDS funds	$3 million, including $1 million in FY23 funds; and $2 million in FY24 funds	$750,000
DOLA EIAF (Planned)		$1 million
SLFR or Private Loan (Planned)		$5,353,325
Total	$6,000,000	$7,103,325

D.2.2.4. Environmental and Cultural Resources Compliance

Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts, as well as any other past, present, or reasonably foreseeable future developments that you are aware of that will affect these same resources in the surrounding area.

All work, including earth-disturbing work, will occur within the existing Minturn Water Treatment Plant (WTP) property, which has been previously disturbed. As such, project impacts to the surrounding environment will be minimal. As discussed below under the discussion of threatened and endangered species, the area where the most ground disturbing activities will occur is where the existing filter ponds are, which will be filled and the new WTP will be constructed on top.

Earth-disturbing work within the WTP property will include some grading, excavation for the removal of existing pipe, filling of the existing filter ponds, and removal of sand, gravel, and PVC underdrain piping. Excavation will extend at least 3 feet in depth. Some soil will be removed from around the filter ponds and replaced with structural fill. While the project will include vegetation removal of grasses, forbs, and some shrubs, no tree removal will occur. These activities will temporarily disturb soils and subject them to erosion. During grading and excavating activities, erosion and sediment control measures will be implemented to minimize impacts to soils and to avoid indirect water quality impacts to Cross Creek, located approximately 120 feet east of the project area.

The new WTP will utilize the existing Cross Creek surface water intake. Compliance with all existing permit requirements for that intake will be maintained with the new WTP.

While the project will add additional impervious surface (3,200 square feet associated with the WTP building) within the project area, the development of the existing WTP has left the project area largely devoid of environmental resources. Reasonable measures have been taken to avoid environmental resource features within the project area (i.e., wetlands, trees, etc.), which could provide habitat for wildlife. The WTP design includes stormwater management measures.

Construction-related emissions from equipment and machinery and earthmoving activities would result in particulate matter from fugitive dust. Best management practices (BMPs) would be implemented during construction to reduce vehicle idle time, to ensure vehicles are well-maintained, to utilize dust reduction methods, and to utilize vehicles and machinery that comply with EPA emission standards.

With respect to other past, present, and reasonably foreseeable future developments near the project area, there is new residential development proposed in subdivisions approximately 1-2 miles away and a 250-acre expansion of the Beaver Creek Resort that was completed approximately two years ago. The Beaver Creek Expansion occurred over seven miles away from the project area and therefore did not affect the same resources. The proposed new residential development would be anticipated to impact surrounding air quality similar to the proposed WTP. Air emissions would increase temporarily during construction activities but will be below *de minimis* thresholds.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

According to the U.S. Fish and Wildlife Service (USFWS) Information Planning and Conservation (IPaC) System, 10 species listed, proposed, or candidate for listing under the Endangered Species Act (ESA) have the potential to occur within, or be impacted by, a project at this location (USFWS 2024a). Species include: Canada lynx (*Lynx canadensis*; Threatened), gray wolf (*Canis lupus*; Experimental Population), Mexican spotted owl (*Strix occidentalis lucida*; Threatened), yellow-billed cuckoo (*Coccyzus americanus*; Threatened), bonytail (*Gila elegans*; Endangered), Colorado pikeminnow (*Ptychocheilus Lucius*; Endangered), humpback chub (*Gila cypha*; Threatened), razorback sucker (*Xyrauchen texanus*; Endangered), monarch butterfly (*Danaus Plexippus*; Candidate), and the Ute ladies'-tresses (*Spiranthes diluvialis*; Threatened). There is no critical habitat within the project area.

Of these species, based on the habitat within and adjacent to the project area, the Canada lynx, gray wolf, Mexican spotted owl, and monarch butterfly have the potential to occur within or adjacent to the project area. The project will occur entirely within the Minturn WTP site and given the existing facilities on the site, there is limited habitat for species within the project area. While trees do occur within the project area, tree removal will not occur as part of the project. The area where the most ground disturbing activities will occur is where the existing filter ponds are, which will be filled and the new WTP will be constructed on top. The existing filter pond area is currently fenced off by a chain link fence and, combined with the lack of vegetation within that area, does not offer suitable habitat for any of the listed species. Other impacts, such as the increase of noise

during project construction, may have an effect on listed species with the potential to occur within or around the project area. However, impacts will be temporary and limited to the duration of construction activities.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States"? If so, please describe and estimate any impacts the proposed project may have.
One potential jurisdictional Waters of the U.S. (WOTUS) feature, Cross Creek, flows adjacent to the project area, approximately 120 feet east of the project boundary. The USFWS National Wetland Inventory (NWI) identifies palustrine scrub/shrub deciduous wetlands adjacent to Cross Creek, which approach the project boundaries in some areas (USFWS, 2024b). A site visit was conducted in September 2022 to document biological resources in and surrounding the project area, including wetlands. Several wetland areas were delineated adjacent to the project area including one large wetland between the project area and Cross Creek, similar to what is shown on the NWI mapping. The results of this delineation were utilized by the project team in order to avoid impacts to wetlands during project activities. All delineated wetlands have been avoided by the current design; therefore, no direct impacts to wetlands will occur with construction of the new WTP. Indirect impacts to adjacent wetlands will be avoided through the implementation of erosion and sediment control measures and other BMPs.

When was the water delivery system constructed?
The slow-sand water filtration and treatment plant was constructed in 1965. The original outdoor filters were built in 1965, and the indoor slow-sand filter was added in the 1990s.

Will the proposed project result in any modification of or effect to, individual features of an irrigation system (e.g. headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.
No modifications to irrigation systems are anticipated as a result of this project.

Are any buildings, structures, or features in the project area listed or eligible for listing on the National Register of Historic Places?
A review of the Colorado Office of Archaeology and Historic Preservation (OAHP) Compass database did not identify previously listed or eligible historic resources within or intersecting the project area (Colorado OAHP, 2024). While the existing water treatment plant is approximately 60 years old, no information was found indicating that this site has been previously evaluated for National Register of Historic Places (NRHP) eligibility.

Are there any known archaeological sites in the proposed project area?
Based on an archaeological review of the OAHP Compass database, two previously evaluated archaeological sites were identified within or intersecting the project area (Colorado OAHP, 2024). Both sites were determined Officially Not Eligible for listing on the National Register of Historic Places in 2020.

Will the proposed project have an adverse and disproportionate effect on communities with environmental justice concerns (as discussed in E.O. 14096)?
Based on a review of the U.S. Census Bureau's American Community Survey 2022 5-year data

for the census track and block group that covers the project area, there are no environmental justice populations present (U.S. Census Bureau, 2022).

Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands?

A review of Indian sacred sites and tribal lands was conducted in accordance with the *National Register Bulletin No. 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties* (National Park Service, 1998) and the "Fundamentals for Managing the Cultural Heritage Program: Traditional Cultural Places and Indian Sacred Sites" (Bureau of Land Management, 2024). There are no Indian sacred sites or tribal lands within or adjacent to the project area.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

Noxious weed species documented near the project location include dalmatian toadflax (*Linaria dalmatica*), Canada thistle (*Cirsium arvense*), oxeye daisy (*Leucanthemum vulgare*), and scentless chamomile (*Tripleurospermum inodorum*) (near US 24) (University of Georgia, 2024). Additionally, during a site visit conducted in September 2022, common mullein (*Verbascum thapsus*), musk thistle (*Carduus nutans*), and hairy willow herb (*Epilobium hirsutum*) were observed near the project area. The implementation of BMPs to be used throughout the duration of the project will prevent the introduction or spread of noxious weeds within the project area.

References

Bureau of Land Management, 2004. "Fundamentals for Managing the Cultural Heritage Program: Traditional Cultural Places & Indian Sacred Sites." Available at: https://www.ntc.blm.gov/krc/system/files?file=legacy/uploads/18293/GuidetoTCPs%26SacredSites.pdf.Accessed October 4, 2024.

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USFWS, 2024b. "National Wetlands Inventory: Wetlands Mapper." Available at: https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/. Accessed October

2024.

D.2.2.5. Required Permits or Approvals

The Town will need to obtain several permits and approvals before initiating construction and before the new water plant can be brought online, consistent with local, state, and federal requirements. These include:

- **Environmental Protection Agency (EPA) NEPA Permit:** NEPA permitting is required as the project is anticipated to be classified as an Environmental Assessment (EA) due to increasing production capacity over 30%. Tribal consultation on the project is already underway and the Town anticipates completion of NEPA review by October 2025. **Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD) Plan and Construction Approval:** Minturn will apply for a CDPHE WQCD Permit upon completion of 90% of the design in July 2025 and anticipates approval by October 2025. The Town and engineering design firm are in consultation with CDPHE concerning the design and anticipate no issues with final approval.
- **Town of Minturn Building Permit:** The Town will apply for a building permit when the design is 100% completed in October 2025. Staff anticipates that the Town Board of Trustees will approve the building permit in December 2025.
- **Eagle County 1041:** Minturn will apply for an Eagle County 1041 Permit in April 2025. The Town anticipates being approved by the County Planning Commission by January 2026.
- **United States Forest Service (USFS) Special Use Permit (SUP):** The Town will apply for a USFS SUP permit in October 2025 upon completion of design. Minturn anticipates having approval by May 2026. The Town has been in close communication with the Forest Service and anticipates no issues with approval.
- **US Army Corps of Engineers 404 Nationwide Permit (NWP) Preconstruction Notice:** The Town will apply for a NWP permit at 60% design in April 2025. The Town has been in communication with the Corps of Engineers and anticipates approval of the permit by December 2025.

D.2.2.6. Overlap or Duplication of Effort Statement

Minturn affirms that no overlap exists between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel.

D.2.2.7. Conflict of Interest Disclosure Statement

Minturn affirms that there is no actual or potential conflict of interest with any employees of Minturn as it relates to this application.

D.2.2.8. Uniform Audit Reporting Statement

Minturn is not required to submit a Single Audit report in Fiscal Year 2023 as federal funding did not exceed $750,000.

D.2.2.9. Disclosure of Lobbying

Minturn has submitted a completed and signed SF-LLL: Disclosure of Lobbying Activities form.