

MEMO



To: Mayor and Board of Trustees
From: Ted Cherry, Town Manager
Date: 07/23/2024
Re: NSA UPDATE / TOWN MANAGER
7:00 PM
Department: Town Manager
Time of Agenda Item: 7:00 PM
Agenda Request No. 7.

Subject
NSA UPDATE / TOWN MANAGER
7:00 PM

Summary

Due to progress on the North Service Area (NSA) Water Treatment Plant (WTP) staff thought it would be a good time to bring forward the group that is working on the plant, from design to financing, to give an update to the Board of Trustees. There are multiple items to discuss and this agenda item is intended to be encompassing of where we are with the process.

Outside Informational Memos

There are three memos provided to the Board for information purposes. The first memo is from Town Attorney Krob and Town Water Engineer Clements discussing the idea of combination of the North Service and West Service areas into one water service area. The second memo is from Kim Crawford acting as Town bond counsel regarding a large cash transfer to the NSA and the implications it could have on enterprise status for the project. Lastly, there is a memo from SGM regarding the differences between the Town's project and the water project being worked on in Kremmling.

Financial Update

There has been much discussion regarding the financial modeling of the project and how the Town could move forward on the project without having other rate increases.

The reason for the memo from Kim Crawford from staff is the discussion of the possibility of a large cash infusion from the General or Capital funds to the NSA. A model has been created that would include this cash transfer as a "down payment" on the project. For each \$500,000 that would be transferred, a reduction in increase to rates of approximately 3.75% is recognized, or \$11.23 per quarter on the base rate, per customer. If there is a cash transfer of between \$4 and \$4.5 million, limited to no rate increases would be needed in FY2025. This model assumes the Town receives its full request on Congressional Directed Spending (CDS) for \$5 million as well as an EIAF grant (asking for motion later in discussion), a SRF loan rate of 2.5%, loan forgiveness for disadvantaged communities, and a variety of other state related options. The CDS spending is the largest unknown at this time, but Sen. Hickenlooper's office is hopeful that we will hear if this project has been recommended by the Senate side within a few weeks. The CDS adds a Build America Buy America (BABA) requirement to the project, and an award amount would need to cover those costs (approximately \$3 million) plus some of the other costs to make sense to use it. This funding will continue to be monitored. There is approximately \$14.6 million in unrestricted funds in the general and capital accounts that would be available for transfer at the end of FY2023.

The cost of the plant, as designed currently, is approximately \$32 million. This includes the BABA requirement. There is still the possibility of further value engineering to drive costs down and by removing some of those items. A debt coverage ratio of 110% must be maintained for the SRF funding.

There is a need to apply in two weeks for a DOLA EIAF grant for \$1 million. This grant has a matching amount of \$1 million. These funds would be used for initial items at the end of FY2024 and beginning of FY2025 if awarded. This would act as a bridge for the project until the SRF funding is available for use beginning in late March 2025. SGM can speak more to this grant if there are questions.

Financial

None at this time

Recommendation

The first request is for a motion to be made that directs Town Staff to apply for a \$1 million matching grant from DOLA for EIAF funds

with matching funds from the Town for the North Service Area Water Treatment Plant.

Second would be for discussion on the concept of making a large transfer from General or Capital funds for the NSA funding to reduce or eliminate further rate increases in FY2025. This would need to be figured into budget items for FY2025 and the issue would need to be explored fully from an SRF perspective in regards to enterprise status.

Attachments

NSA/WSA combination Memo

Crawford - Enterprise Status Memo

Granby/Kremmling Water Comparison Memo

MEMORANDUM

To: Board of Trustees of the Town of Granby

From: Douglas Clements, Town Water Resource Engineer
Nathan Krob, Town Attorney

Date: July 9, 2024

Re: Viability of serving the Town of Granby North Service Area through water treated at the Town's West Service Area

I. Introduction

This memorandum is intended to discuss the viability of utilizing the West Service Area ("WSA") treatment plant to treat and serve potable water to the North Service Area ("NSA"). In order to serve the NSA with water treated, the Town must have the legal and contractual rights to do so, as well as the necessary infrastructure. Town staff considered and discussed in depth with its consultants the ability of the Town to either (1) utilize the WSA water rights to serve the NSA, or (2) utilize the NSA water rights to be treated at the WSA plant to serve the NSA. This issue is extremely complicated and requires a detailed technical discussion of the water systems and water rights involved. Our apologies for this level of detail, but it is necessary for us to evaluate the complex elements involved in each of the alternatives.

II. Background, NSA and WSA Water Systems and Rights

A. NSA

The NSA consists of the original Granby boundaries (i.e. Old Town) located north of the Fraser River. Water is diverted from the Fraser River at a point immediately downstream from the Highway 40 bridge over the river. The raw water is run through the NSA filter plant where it is treated and then distributed to the Town's NSA customers. In addition to distribution of treated water, a raw water non-potable irrigation system is also served from the same diversion point. Water used in the NSA is primarily diverted under the Town of Granby Water System right, which was decreed in Civil Action No. 814 by the Grand County District Court on November 7, 1952 with an appropriation date of January 1, 1906 and a diversion rate of 3.34 cfs¹. A second water right that can be diverted by the Town for use in the North Service Area is the Church Ditch water right, with a very senior priority date of July 1, 1890. This water right historically diverted from Pole Creek, a tributary to the Fraser River near Tabernash. The right was changed from irrigation to municipal and all other uses to be diverted at the Town's point of diversion on the Fraser River in Division 5 Water Court Case No. W-3172 (decree entered on April 29, 1977).

¹ Cubic feet of water per second of time. Diversion of 1.0 cfs for one day represents a volume of water of 1.9835 acre-feet.

B. WSA

The WSA encompasses the lands within the original Shorefox Development, generally located north of Highway 34 and East of Highway 40, which were annexed into the Town in 2005. Current customers in the WSA include residential uses in the Smith Creek Crossing area and commercial/recreational uses in the Sun Resort. The potable water use for the development is derived from three shallow wells completed in the Colorado River alluvial aquifer. A fourth well can be added if needed in the future. The water is treated at the WSA water treatment plant and is distributed to the WSA customers. Stream depletions from the wells are replaced primarily by consumptive use credits derived from changed senior irrigation rights, junior storage water rights that are released from reservoirs on the property, and water leased from the Colorado River District out of Wolford Reservoir. The WSA also includes a non-potable irrigation system that draws water from the South Shorefox Pond.

Water rights for the West Service Area were decreed in eight Water Court cases. The following provides a brief summary of those cases:

03CW333 – Adjudicated a right to irrigate 25 acres from the South Shorefox Pond.

03CW334 – Adjudicated groundwater rights for the Shorefox Wells, and a plan for augmentation to replace depletions from the wells.

03CW335 – Adjudicated groundwater rights for a well field north of the Colorado River for 50 residential lots and a plan for augmentation to replace stream depletions from the wells.

03CW336 – Adjudicated storage water rights on the property and changed water rights from senior irrigation rights to augmentation uses.

05CW288 – Added filling sources and points of diversion for reservoirs on the property.

06CW257 – Adjudicated storage rights for two augmentation reservoirs.

19CW3083 – Adjudicated a plan for augmentation to replace evaporation from unlined reservoirs on the property and adjudicated a seepage right and exchange right.

19CW3161 – Adjudicated a right to use water from the Shorefox Wells in the Town's NSA on a limited basis during emergency conditions, as discussed further below.

III. Potential to Use the WSA Water Treatment Plant to Serve the NSA

A. Utilizing the Town's Existing WSA Water Rights to serve the NSA

The first question is whether the Town has sufficient and legally available water rights in the WSA to serve the NSA. The Town pledged 969 of the EQRs² decreed in Case No. 03CW0334 to Sun and retained the remaining 231 EQRs. Pursuant to the decree in 03CW0334 one EQR is defined as sufficient water to serve 350 gallons per day plus irrigate 1,000 square feet. Such an amount would be insufficient to serve the Town's NSA.³

The Town's WSA water insufficiency to meet the NSA water requirements is further shown by the decree obtained by the Town in Case No. 19CW3161. In that case, the Town applied to add the NSA as an additional permitted place of use of the Town's WSA rights. The decree limited the use of water to:

“indoor municipal use during an emergency situation. During such time, when Granby uses water from Shorefox Well Nos. 2 through 5, Granby shall prohibit outside water use from the potable water distribution system.”

The 19CW3161 decree at ¶7.B permits the Town to divert and use up to 0.232 cfs (150,000 gallons per day) to serve the NSA for in-house use only, not to exceed 60.2 acre-feet in any year. The NSA currently uses an average of over 200 acre-feet per year. Therefore, even if the Town's WSA rights could be used to serve the NSA during non-emergency periods, there would not be sufficient water to do so.

In addition to the WSA water rights being insufficient in terms of amount of water needed to serve the NSA, the WSA water rights would also have to go through a water court case to change the allowed place of use of the WSA water rights to include the NSA. Specifically, the change case would need to authorize use of the Town's WSA rights in times of non-emergency, including for outdoor uses. Such a change case would be ardently opposed, expensive, time consuming, and not guaranteed to obtain the desired results. The Town's previous 19CW3161 change case and Sun's more recent application suggest how a new change case might progress. Four parties opposed the 19CW3161 change case, which was significantly less complicated due to its limitations of emergency use for indoor purposes only. Nevertheless, the case lasted four years between application and entry of final decree. Sun recently filed an application for storage rights, appropriative rights of exchange, approval of points of diversion, and plan for augmentation, many of the same elements a Town application would include. Thirteen statements of opposition were filed in the Sun case. These cases suggest that a change case to allow the use of the Town's WSA water rights to be used regularly, including outdoors, would be expensive and unlikely to be resolved for a significant period. Even if the change case was ultimately successful, as discussed above, it would not provide enough water to serve the NSA.

Since the WSA wells are relatively close to the Colorado River, it is possible at some point in the future that the CDPHE⁴ could consider the WSA wells to be diverting surface water. If that occurs, the current WSA water treatment plant would not be adequate, and additional treatment processes would be required, including filtration. As it now stands, the customers in the WSA

² EQR = Equivalent Residential Unit

³ Using the assumptions in the Shorefox decrees, water yields capable of serving on the order of 650 EQRs or more would be needed in a high water use year.

⁴ CDPHE = Colorado Department of Public Health & Environment

would be required to pay for any such upgrades. In trying to avoid construction of a new water treatment plant for the NSA, the Town could end up having to pay for some significant portion of the cost of a new treatment plant for the WSA.

Furthermore, the Town's use of the WSA water rights is subject to the Water Service Agreement between the Town and Sun River Run Ranch RV, LLC, which was executed in May 2018 and has since been amended five times (Water Service Agreement). The Water Service Agreement has a list of priorities for use of the WSA water rights and water infrastructure. While this agreement contemplates use of water from the WSA wells in the NSA for non-emergency purposes, such use is given the 11th and lowest priority (i.e. operation of the WSA water system would need to meet the demands of all other water uses in the WSA for both potable and non-potable uses before non-emergency use in the NSA could occur). This would result in a very unreliable source of water for the NSA. Renegotiating that agreement would be complicated, the result would be uncertain, and any increase in priority would likely be costly to the Town in terms of sharing costs to increase the WSA's capacity and to operate and maintain the water system.

B. Use of Town's NSA Water Rights, Treated at the WSA Water Treatment Plant to Serve the NSA Through the Interconnect by Changing the Point of Diversion.

An alternative solution considered by Town staff and its consultants is to use the Town's NSA water rights to serve the NSA after treatment at the WSA water treatment plant. Under this alternative, the Town's NSA water rights would be changed through the Water Court for diversion at the WSA wells. The well water would be treated at the WSA water treatment plant for delivery to the NSA through the emergency interconnect between the WSA and the NSA. As discussed above, the primary water source of Granby's North Service Area water rights is the Town of Granby Water System water right. This is a year-round water right which is protected by Green Mountain Reservoir pursuant to Senate Document 80 and the rules of the US Bureau of Reclamation for the Colorado-Big Thompson (CBT) project. In simple terms, this Green Mountain Reservoir coverage protects the right from senior Colorado River water calls that would otherwise prevent the right from diverting, e.g. from the downstream senior Shoshone hydro power water right or from senior irrigation rights near Grand Junction. As such, the Town of Granby Water System water right is and has been a reliable source of water for the NSA.

Diversion of the Town's Fraser River surface water rights at the WSA wells would require Water Court approval in a proceeding that would include a change of water rights and a plan for augmentation. Such a proceeding would subject the Town to significant risks as set forth below. The Water Court case would involve changing the point of diversion (from the Town's point of diversion on the Fraser to the WSA wells), the source of water (Fraser River vs Colorado River), and the means of diversion (surface diversion vs groundwater diversion). The following describes some of the challenges and risks associated with this alternative.

Changing a Surface Diversion to a Groundwater Diversion. In the relatively distant past, surface diversions have been often changed to groundwater diversions at wells. However, in recent times such changes are seldom, if ever, accomplished. Such a proposal today

would likely be viewed as unusual by other water users, and an application to the Water Court as discussed herein would likely draw substantial opposition.

Water Service Agreement. Any use of the Shorefox Wells and associated WSA infrastructure would require renegotiation of the Water Service Agreement. As discussed above, the renegotiation of that agreement would be complicated and likely costly to the Town.

Historical Use. In a change of water rights case, the amount of water the Water Court allows to be changed would almost certainly be limited to historical use of the water right. Whereas the Town's use of the Town of Granby Water System water right is now only limited by the diversion rate of 3.34 cfs, in a change of use case, it is very likely that going forward the right would be limited with maximum and average monthly and annual volumetric limits based on historical use. This would have the effect of "locking in" the Town's use of the water right to historical levels and not allow the Town to serve additional or increased uses in the future. In addition, the diversion rate may be reduced to the rate at which the Town can demonstrate has historically been diverted. Such a change case as discussed herein would be complicated and expensive to prosecute, and the outcome is not certain, and after many years of prosecution, could be unsuccessful.

Lagging of Groundwater Depletions. Typically, the stream depletions⁵ from well pumping occur on a lagged basis over a period of months or years. In Case No. 03CW334, mentioned above, the stream depletions were considered to occur in the month of pumping, and no lagging was assumed. It is likely that this assumption would be challenged in a new change case. Lagged depletions would complicate the operations and accounting for the WSA system. The Town's stream depletions from use of the wells would need to be replaced with historical credits from the Town of Granby Water System Water Right and other sources of augmentation water available to the Town. Such replacement would likely require construction of a storage reservoir to replace some level of the stream depletions⁶.

CWCB Instream Flow Right. The points of stream depletion on the Colorado River for the Shorefox Wells are located upstream from the Fraser River confluence. These points are located within a reach that has an instream flow right that is owned by the Colorado Water Conservancy Board (CWCB). By changing the point of diversion of the subject water right to the Colorado River alluvium upstream, Granby would subordinate its right to divert to the instream flow right. That is, Granby could only divert under its subject right at times when the CWCB instream flow right is satisfied. At times when the flow in

⁵ Stream depletions are the effect of well pumping on the river in time and amount. Pumping water on day 1, could cause stream depletions for the following days, month, or years depending on the proximity of the well to the river, and aquifer properties.

⁶ The Town has a contract for Windy Gap water from the Middle Park Water Conservancy District that could potentially be used for replacement of depletions. Currently that water is not reliable and is not available in "wet" or "dry" years. When the Windy Gap Subdistrict of the Northern Colorado Water Conservancy District completes its "firming project", that Windy Gap water may become a reliable supply. The timing and ability of the Town to use the water as a reliable augmentation supply remains uncertain.

the Colorado River is less than the CWCB instream flow right, the Town would need to replace its diversion from the wells at or above the points of depletion. This may require construction of storage at a location capable of making such replacements. The costs of acquiring land, constructing storage and the various appurtenances are not known at this time, but they would certainly be substantial.

Green Mountain Reservoir Protection. As discussed above, the stream depletions from the Town's diversion and use of the Town of Granby Water System water right are protected by releases from Green Mountain Reservoir. That protection is provided to water rights that were in use as of October 15, 1977. It is not known if such protection would continue if the location and manner of diversion was changed to wells at a new location. The Town would certainly argue that such protection should continue, but others, including the State, may argue the opposite.

Possible Need for a Filter Plant for the WSA. As discussed above, there is a risk that water diverted from the Shorefox Wells may be classified as surface water by the CDPHE at some point in the future. Consequently, a new filter plant could be required in which the Town would be responsible for some substantial portion of the costs if it is using the WSA plant to treat NSA water.

C. Use of Town's NSA water rights, treated at the WSA treatment plant to serve the NSA by piping water to the WSA.

Piping water from the Town's current point of diversion on the Fraser River to the WSA Treatment facility was also considered. However, such a solution appears infeasible because the WSA treatment plant is not designed to treat diverted surface water. The WSA treatment plant was constructed to treat well water. Well water generally contains significantly fewer contaminations and particles due to natural filtration processes as the water percolates underground. Water diverted at the NSA point of diversion and piped to the WSA treatment facility could not be adequately treated by the WSA plant due to its design and build limitations. In addition, significant costs would be incurred in conveying the water to the WSA treatment plant, and the Water Service Agreement would need to be renegotiated as discussed above.

IV. Conclusion

It is not feasible to use the Town's WSA water rights to serve the NSA for a number of reasons as noted above, most significantly that the yield of the rights is significantly less than what is needed to serve the NSA.

It is also not reasonably feasible to convey the Town's NSA water rights diverted from the Fraser River to the WSA treatment plant for treatment and delivery to the NSA. As noted above, the WSA water treatment plant is not designed to treat surface water diversions.

Although perhaps technically feasible, changing the point of diversion of the Town's Fraser River water rights to the Shorefox Wells for treatment at the WSA water treatment plant for subsequent delivery to the NSA would involve significant technical and legal challenges to solve. The Town would need to renegotiate the Water Service Agreement with Sun, a complicated and likely costly process. The Water Court case would be complicated, contentious, and costly to the Town. The process would result in terms and conditions being placed on the Town's water rights that do not exist today. The Town would likely need to construct storage and associated facilities to be able to replace stream depletions from the wells, particularly when CWCBC instream flow rights are not satisfied. The risks to the Town's water rights associated with that alternative would be significant, and a successful conclusion is far from certain.

Any or all of the alternatives discussed above could be undertaken by the Town. However, in light of the time, expense, uncertainty of outcome and, ultimately, the possible loss of substantial portions of the water rights the Town is currently able to use, we recommend the Town not pursue any of these alternatives, and continue down the path of replacing the NSA water treatment plant to meet modern standards.

MEMORANDUM

To: Mr. Ted Cherry
Town of Granby, Colorado

From: Kim Crawford
Butler Snow LLP

Re: Enterprise Status

The Town of Granby, Colorado (the “Town”) is a statutory town organized and existing under the laws of the State of Colorado. Article X, Section 20 of the Colorado Constitution (“TABOR”) imposes spending and revenue limitations on local governments, including the Town. If a local government function qualifies as an “enterprise,” it is excluded from the requirements of TABOR. TABOR defines “enterprise” as “a government owned business authorized to issue its own revenue bonds and receiving under 10% of annual revenue in grants from all Colorado state and local governments combined.” The Town has considered its North Area Water System (the “System”) as an enterprise and has operated the System as such for TABOR purposes at least since approximately 2011. I have been asked whether a transfer of \$4 million from the Town’s general fund to the System would impact enterprise status under TABOR, and if so, the consequences.

The first part of the enterprise definition is that such operation must be a “government-owned business.” The Colorado Supreme Court in Nicholl v. E-470 Public Highway Authority, 896 P.2d 859 (Colo. 1995) stated that in order to determine whether something is an enterprise for TABOR purposes, it is necessary to decide whether it is both government owned and a business “given the ordinary meaning and understanding of these terms.” The Supreme Court in Nicholl stated that the term business is “generally understood to mean an activity which is conducted in the pursuit of benefit, gain or livelihood.” Certainly the water and sanitation services constitute a business. In addition, the business must be “government-owned.” It is clear that a water and sanitation utility owned by a general purpose government, such as a municipality, is government-owned.

The second part of the definition is that the business must be authorized to issue its own revenue bonds. Pursuant to Part 4 of Article 35 of Title 31, C.R.S., the Town is clearly empowered to issue revenue bonds payable from net revenues of the System. There is some argument that this provision of TABOR requires that the System have a separate governing board independent from the Town board authorized to issue revenue bonds in its own name. However, we believe that this provision is better interpreted to mean that some entity, whether it

be the government or the business, be authorized to issue revenue bonds payable from the net revenues of the business.

The third part of the test is that the business must receive under 10% of its annual revenue in grants from all Colorado state and local governments combined. The term “grants” is not defined in TABOR. We believe that grants include any revenues received from any government which are not paid in consideration of services rendered by the System. As a result, this includes grants from the State of Colorado as well as other local governments and in our opinion includes transfers of governmental revenues from the Town’s general fund to the System. As a result, the transfer of Town general fund revenues in excess of 10% of the revenues of the System constitutes a grant for TABOR purposes.

Because the \$4 million transfer from the Town’s general fund is clearly a “grant” for TABOR purposes, and would be in excess of 10% of the System revenue, the second question is how that impacts the System’s ability to borrow funds without an election.

Our firm’s position is that we determine enterprise status for a borrowing based on the full calendar year prior to the borrowing, and we believe that enterprise status is determined annually. A “system” can go in and out of enterprise status based on sources of revenue. For example, if the System expects to incur a debt in 2025, we would look to the 2024 calendar year to determine enterprise status. If the System qualifies as an enterprise in 2024, then we believe it can incur the debt in 2025 without an election. However, if the System accepted a \$4m transfer from the Town’s general fund in 2024, then in 2025 it would not qualify as an enterprise and could not incur debt without voter approval. Depending on revenues in 2025, the System may be an enterprise again in 2026.

Another impact of the loss of enterprise status is that the System would need to maintain a TABOR reserve of 3% for the year in which it did not qualify as an enterprise.

TABOR and enterprise status is complicated and this memo is not intended to be an in-depth analysis. I am happy to answer further questions as they arise.

July 8, 2024

Ted Cherry
Town Manager
Town of Granby
PO Box 440
Granby, CO 80446

RE: Town of Kremmling WTP & Town of Granby NSA WTP Projects Comparison

Dear Ted:

It is SGM's understanding, based on conversations with you, that the Town of Granby is interested to understand the differences in the drinking water treatment plant projects being pursued concurrently by the Town of Granby and the Town of Kremmling. A specific interest is why the Town of Granby NSA WTP project would cost more.

Some things to note before reviewing our response below:

- SGM is not the engineer on the Town of Kremmling WTP improvement project, so we don't have an intimate understanding of the project or how the scope of plant improvements was established.
- We did have a chance to perform a cursory review of a set of 60% design milestone plans, which you provided to us from the Town.
 - This forms the primary basis for our understanding of what the scope of plant improvements will be.
 - It's important to keep in mind that the Kremmling WTP improvements design that we reviewed was a 60% milestone set – not 100%.
- I was able to have a conversation with the engineer in responsible charge of the Kremmling WTP Improvements design, Nick Marcotte, PE of Element Engineering, to form a general understanding of some of the decisions that drove the determination of the scope of plant improvements.
- We have not had access to any cost information for the Kremmling WTP project, other than Nick telling me that the estimated construction cost, based on a 30% milestone design, was in the range of \$14M. We therefore cannot comment on any cost specifics.

Why the Difference in Construction Cost?

Based on our current understanding of the Kremmling WTP project, the reason it will have a lower construction cost than the Town's NSA WTP project is that its scope is significantly smaller. The following points describe key project differences:

- **Pretreatment Process.** Kremmling is replacing its existing treatment process with a membrane filtration process without pretreatment other than a modest coagulant dose fed directly upstream of the membranes. The lack of significant pretreatment in Kremmling's new plant is one of the major

scope departures from the Town's NSA WTP project. The reasons Kremmling is not installing pretreatment appear to be:

- Unlike Granby's Fraser River source, Kremmling's primary raw water supply is a reservoir, Jones Reservoir. Water from the reservoir runs to the WTP site through a relatively short stretch of Sheep Creek. The design team's assessment is that the reservoir has provided, and will continue to provide, a high quality water supply, including during runoff season, and serves as a buffer against events that could otherwise degrade raw water quality.
 - The potential for a future wildfire and its effects on raw water quality were not a significant factor in design development. SGM surmises that this may be because the Town invested in an intake, pump station, and transmission pipeline 15-20 years ago to allow it to convey raw water from a backup source, the Colorado River, to the plant in the event that a problem arose with its primary source, Jones Reservoir/Sheep Creek.
- **Finished Water Pumping.** Kremmling's existing WTP is located in the hills northwest of town, at an elevation that is roughly 200 vertical feet above downtown. With the new facility located on the same site as the existing, treated water will continue to flow downhill by gravity to town. For this reason, no finished water pumping system, like that required at Granby's NSA WTP, is required. This reduces costs significantly as the treatment building can be smaller, the required electrical service and scope much reduced, and all the associated pumping equipment, piping, valving and instrumentation and controls avoided. Finished water pumping easily represents the largest electrical load at the Granby NSA WTP.
 - **Residuals Equalization & Pumping.** Kremmling's existing treatment building and the space available for the new facility are located roughly thirty (30) vertical feet uphill from its existing residuals handling lagoons. This position allows all process residuals to flow readily by gravity to the lagoons – no pumping is required. This is in contrast to the new Granby NSA WTP, the site for which is located roughly 1,400 linear feet down the road and sits within just a few vertical feet of the existing residuals handling lagoons, which are located at the existing NSA WTP site. Therefore, the Granby NSA WTP design requires a residuals equalization tank and a residuals pumping system to convey process residuals to the existing lagoons. This requires additional building footprint, excavation, dewatering, concrete construction, equipment, piping/valves, and electrical/controls work.
 - **Raw Water Pumping.** Because the Town of Kremmling WTP is located downhill from its raw water diversion point, raw water can flow to the WTP by gravity. There is not a raw water pumping system to replace. The need to replace the Town of Granby NSA WTP raw water pumping system to serve the new plant (while also simultaneously keeping the existing plant operational), adds significant equipment, piping/valving, electrical and controls/instrumentation costs that the Kremmling WTP project does not have.
 - **Coagulant Storage.** Because the Town of Kremmling WTP does not have a pretreatment particle removal process, as discussed above, the need for coagulation chemical use is less than that of the Granby NSA WTP. In Kremmling, the smaller coagulant volumes required can be received in drums

versus truck deliveries to fill dedicated tanks at the NSA WTP. This reduces associated storage equipment, secondary containment, and instrumentation/controls costs as well as building footprint relative to the NSA WTP.

- **Soda Ash Storage/Feed.** The existing Town of Kremmling WTP, unlike the existing Town of Granby NSA WTP and its proposed replacement, does not include a soda ash storage and feed system, or any other type of process system for adjusting pH and alkalinity of the treated water. SGM expects this is likely due to higher alkalinity in the Kremmling WTP's raw water, especially given the reservoir source, which would serve to buffer large decreases in alkalinity that might have otherwise occurred during spring runoff season. It may also be due to differences in local geology and/or the reduced need for coagulant dosing at the Kremmling WTP as higher coagulant doses can increase the need for alkalinity/pH adjustment. The need for a soda ash system at the Granby NSA WTP to ensure treated water is not corrosive and does not leach lead and/or copper from household plumbing, and which also supports the proper functioning of the pre-treatment process, adds significant costs related to the process equipment, controls/instrumentation, secondary containment, ventilation systems, and building footprint.
- **Chlorine Contact Basin/Clearwell.** Because there is not a major sewer line running adjacent to the Town of Kremmling WTP and because no finished water pumping system was needed for that project, the engineers had the flexibility to place a small chlorine contact basin below grade and below other parts of the building floorplan. This helped to minimize building footprint. For the Granby NSA WTP, the design team placed the chlorine contact basin above grade in accordance with current State Design Criteria to eliminate the possibility of cross-contamination from any leaks in the existing or future trunk sewers traversing the site. This configuration has the secondary benefits of reducing construction dewatering needs and allows for dry installation of the finished water pumps, which promotes ease of maintenance.
- **Building/HVAC System Scale.** Because the Town of Kremmling WTP building footprint (5,000 SF) will be able to be smaller than that of the Granby NSA WTP (9,500 SF) for the multiple reasons noted above, the scale of HVAC system serving the Kremmling WTP is also smaller, likely resulting in lower cost.
- **Site Differences/Pipelines.** The following important differences related to the plant site allow for the scope of Kremmling's WTP project to be smaller than Granby's NSA WTP project:
 - Kremmling's existing WTP site has the available space for a new treatment building of significant size to be added. The site is not encumbered with a raw water pond, residuals handling lagoons, a storage building, existing buried finished water transmission and trunk sewer pipelines, or a community amenity (ballfield parking), the way the existing Granby NSA WTP site is. This, along with the fact that the building footprint can be smaller than that of the Granby NSA WTP, has allowed the Town of Kremmling to build its new WTP building adjacent to the existing one on the same site. This eliminates the need for significant new lengths of buried raw or residuals pipelines.

- Kremmling’s WTP is not located adjacent to a major river and on top of an alluvial aquifer. This likely reduces costs for dewatering the excavations necessary to construct building foundations and buried pipelines.
- There is potentially a difference in the need for removing unsuitable soils and replacing them with structural fills to support the building foundation. We did not see any notes on the plans referring to significant sub-excavation of native materials.
- **Building System Type.** Another factor likely leading to reduced initial cost for the Kremmling WTP is that the new WTP building will be of steel construction. The Town of Granby NSA WTP will be of masonry construction with a metal joist/deck roof system. The decision to base the NSA WTP design on masonry construction for exterior walls was made in consideration of cost differences and on the basis that masonry construction will allow for improved long-term durability and reduced maintenance, better design definition prior to construction (fewer unknowns than with a steel building engineered by a vendor during the construction phase), and simpler integration of the interior masonry walls required to achieve fire separations between various rooms and pipe/equipment supports from the roof system.

Note that a major element of construction in the Town of Kremmling WTP project scope, but not in the Town of Granby NSA WTP project scope, is the construction of a 500,000-gallon steel water storage tank. This tank will be constructed on an existing site separate from the WTP site. The existing site contains two existing steel storage tanks of similar size. The existing site has ample space for the new tank and requires only minor grading, drainage and piping improvements. We would expect the combined cost of the elements of the Granby NSA WTP project mentioned above to far outweigh the cost of the new Kremmling water storage tank.

Please let me know if you have any questions regarding the contents of this letter. I can be reached at 970-384-9051. We look forward to continuing to serve the Town on this project. Thank you!

Respectfully submitted,

SGM



Digitally signed by
Warren J Swanson
Date: 2024.07.08
12:34:29-06'00'

Warren J. Swanson, P.E. - Project Manager & President

Cc (email electronic version only):

Town of Granby - Andrew Magas, Josh Broady, Doug Bellatty, Greg Hansen
SGM – Justin Kattnig, Alex Kordick, Dave Kotz