



# SPECIAL UTILITIES COMMISSION MEETING MINUTES

Wednesday, May 22, 2024 at 5:30 PM

Baxter City Hall, 13190 Memorywood Drive, Baxter, MN

*"A Growing Community"*

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## CALL TO ORDER

The special meeting of the Baxter Utilities Commission was called to order at 5:30 p.m. by Chairman Rock Yliniemi.

## ROLL CALL

**Members Present:** Commissioners Douglas Stenberg, Jack Christofferson, Chairman Rock Yliniemi and Council Liaison Mark Cross.

**Members Absent:** Commissioners John Brenny.

**Staff Present:** Public Works Director/City Engineer Trevor Walter, Assistant City Engineer Trevor Thompson, City Administrator Brad Chapulis, and Lead Water and Sanitary Sewer Worker Scott Shelito.

**Others Present:** SEH Consulting Engineers Scott Hedlund & Kevin Young, Widseth Consultant Engineer Aric Welch, and Brainerd Dispatch Representative Renee Richardson.

## CONSENT AGENDA

### 1. Approve the Utilities Commission Minutes from May 8, 2024

**MOTION** by Commissioner Stenberg, seconded by Commissioner Christofferson to approve the Utilities Commission Minutes from May 8, 2024. Motion carried unanimously.

## BUSINESS ITEMS

### 2. 2024 Well Rehabilitation Project Update

SEH Consultant Engineer Young provided an overview on the well rehabilitation project status from the rehabilitation of Wells 2 and 3. Mr. Young explained the rehabilitation of Well 3 resulted in a 25% increase in well specific capacity, increasing the specific capacity from 12.9 gpm/ft to 16.1 gpm/ft. However, due to the reduction in specific capacity that occurred during the 2023 and the state of the well prior to rehabilitation the 25% increase only brings the well specific capacity back to nearly 46% of the January 2023 value, which was 34.9 gpm/ft.

Mr. Young informed the commission that prior to January 2024, the specific capacity of Well 2 has been recorded between 19.6-39.0 gpm/ft. The annual wellhead inspection completed in January 2024 indicated that the Well 2 specific capacity had decreased to 19.8 gpm/ft from 34.9 gpm/ft in March 2023. The recent rehabilitation effort increased the specific capacity by 6% to 21 gpm/ft.

Chairman Yliniemi inquired if the aquifer is being depleted or if the issues are related to the well locations and their proximity to each other. Public Works Director/City Engineer Walter stated the issue is not with the entire aquifer that consists of thousands of acres but only to probably 300 – 400 feet around the well field. Mr. Young stated the capacity issues is from the gravel formation near the

well. He informed the commission that the water samples confirmed the right chemicals were specified and used. Rehabilitation options moving forward include using new chemicals and/or new rehabilitation methods such as using air to purge the wells.

3. **2024 Well Rehabilitation Project Status Update / Water Supply Presentation**

Consultant Engineer Young presented his PowerPoint as shown in the packet, the discussion below will correlate with the slide from the presentation, which was included in the Utilities Commission Packet.

“Well Field History” slide - Public Works Director/City Engineer Walter informed the commission that well No. 4 was seldomly used the first few years the plant was in operation because of the higher organics in the water compared to the other three wells. It is believed the organics are higher due to the closer proximity to the wetland to the north.

“Well Field History” slide – Commissioner Stenberg inquired on why the City’s water use was so high last summer. Mr. Young stated it was likely due to the drought. Mr. Walter stated another factor is development and the type of development. An example is Zip’s Car Wash that uses approximately one-million gallons of water per month. Additionally, commercial development often includes irrigation so commercial development generally speaking results in higher water use during drought conditions.

“Historical Annual Water Use” slide – Mr. Young presented the increased use of 17% from 2022 to 2023 (Approximately 375 Million to 460 Million gallons) and how this resulted in the City needing to run 3 wells all summer and even 4 wells for a portion of the summer which really stressed the wells. Mr. Young showed how the graph has ebbs and flows but has been consistently averaging around 350 million gallons per year, this is consistent with other communities that are growing. Mr. Young stated the growth of communities have been offset by the increased efficiency of plumbing fixtures over recent years. Mr. Young informed the commission the transducer to monitor the draw downs failed in July of 2023, staff immediately ordered a new transducer but due to the lead time it was not delivered until September and installed in October so the operators were unable to see the deficiencies that were stressing well 3 during peak water use. Mr. Walter stated that staff ordered an extra transducer to keep on hand in the event another transducer fails due to the long lead time that was experienced last summer.

“Well Production & Run Time” Slide – Mr. Walter pointed out the peak day from 2023 and stated the 2.9 million gallon day was the Monday after the 4<sup>th</sup> of July and how Baxter is a regional hub that requires higher peak flows than what most communities would experience who don’t get the influx of users on weekends specially on holidays and special events in the area. Commissioner Stenberg inquired if the water plant shuts down at night or if the production is reduced, Lead water and Sanitary Sewer Worker Shelito stated the irrigation use at night does not allow for a break overnight in water production.

“Well Production & Run Time” Slide - Council Liaison Cross asked if a new well is drilled it would be assumed the next well would be separated from the other 4 wells, Mr. young stated this is addressed in a future slide but they will be proposing a separation from the current well field by 500 feet. Mr. Walter stated the original 4 wells were never supposed to supply the current needs of the water plant, 2 new wells should have been drilled by now and no more than two wells were supposed to be used at one time and the City has been using 3 wells during the peak summer months since 2017.

“2024 Well Rehab” slide – SEH is recommending to reduce the pumping rates of the wells to monitor the draw downs to limit the stress on the wells. If the draw downs are not managed the wells will be stressed and will likely fail.

“Recommendations” slide – Mr. Young stated that the Well 3 rehabilitation did not result in favorable results. Mr. Young provided alternative methods for rehabilitating wells that have been discussed and the risks associated with the alternative methods.

“Summer 2024 Operations” slide – Mr. Young discussed the options for how to proceed with 2024 operations for managing the well and discussed it is likely additional well rehabilitation work will be required in 2025 and 2026 to keep up with water demands and how purchasing water from the City of Brainerd is likely going to be required. Mr. Walter asked Mr. Shelito what the current water demand has been, Mr. Shelito said the water plant is currently averaging around 1.5 million gallons per day and is running between 14-18 hours a day. Council Liaison Cross inquired if the static water levels in wells 2 & 3 has rebounded since they are not running. Mr. Shelito stated the static water level is around 60 feet and holding steady while running wells 1 & 4.

“Other 2024 Water Supply Measures” slide – Mr. Walter stated water conservation education includes working with customers to install rain sensors so irrigation systems do not water during rain. Cross inquired on the cost, Mr. Walter stated his recollection when the City converted the irrigation systems to include the rain sensor it was around \$100 per system but this included having staff install the sensor, it would be more to hire a contractor. Mr. Cross inquired if this is something the City could buy and provide to the water customers. Mr. Walter stated we could, and we could reach out to commercial users with water use on their irrigation meters from Tuesday when it rained 2.5 inches.

“Other 2024 Water Supply Measures” slide – Mr. Cross inquired on buying water from Brainerd and rehabilitating all 4 wells now to help spread the chemicals to all the wells since they are so close. Mr. Shelito stated the wells were shut off overnight for close to 30 hours at a time when the chemicals were in the wells so the acid could do it’s job in the well being rehabilitated. The commission held an extensive discussion about rehabilitating wells 1 & 4 now instead of waiting for fall since wells 2 & 3 didn’t rehabilitate well. Mr. Shelito provided the benefits of getting more capacity in wells 1 & 4 for water production. Right now the capacity in well 1 is around 630 gallons per minute and well 4 is around 580 gallons per minute. Assistant City Engineer Thompson inquired to Mr. Young if it would be his opinion that if we wait to rehabilitate Wells 1 & 4 if the capacity could drop to the point they are unable to recover well like wells 2 & 3. Mr. young stated managing the wells is most important and explained how well 3 was pumped really hard last year when the transducer was out. Mr. Cross stated he wants to rehabilitate all the wells now because it is generally cheaper to stay on site and finish the work and buy water from Brainerd when needed if Brainerd has the capacity to assist the City of Baxter.

“Other 2024 Water Supply Measures” slide – Mr. Cross asked if the well screens are clean, Mr. Young stated the televising shows the screens are clean, it is the gravel pack outside the screen that is the problem. Mr. Cross asked if we could drill a 1” well around the outside of the well to inject the chemical, Mr. Young stated he has never heard of anyone doing that in the industry. Commissioner Stenberg asked about the process and how the rehabilitation and chemicals are applied, Mr. Young explained the process and the additional methods that are recommended in well 3.

“Other 2024 Water Supply Measures” slide – Additional discussion regarding the well screen occurred with discussion of being able to drill the well deeper, pull the well up to allow the screen to be above the gravel formation and if more screen during installation would have helped. Mr. Young

stated the well screens were likely sized based off a geologist's evaluation of the borings and said when geologists review borings Mr. Young has seen where they recommend different slot sizes in screens within the same well. Mr. Walter said pulling a well up would be like pulling a 130-foot piling out of the ground, almost anything is possible now days but it would not be easy if it was possible.

"Other 2024 Water Supply Measures" slide – Mr. Young discussed using additional measures to rehabilitate well 3 which include using a different chemical from what is currently being use and continue to apply the chemical until the acid is no longer being neutralized (meaning the acid is no longer productive) and then jetting and continuing the process until the acid is no longer neutralizing after jetting. The new chemical being proposed is the same chemical that was used in 2021 with good success.

"Replacement Wells" slide – Commission Christofferson inquired on drilling new wells on the north side of the property where it would be less header pipe. Mr. Young stated they were trying to get 500 feet away from the current well locations which requires drilling further east. Mr. Walter stated the header pipe, even though it is a cost is not a large contributor to the overall cost of drilling the wells on the proposed parcel.

**MOTION** by Commissioner Stenberg, seconded by Commissioner Christofferson to proceed with additional rehabilitation to well 3 in the estimated amount of \$20,860 to \$28,560. Motion carried unanimously.

**4. Request for Approval of SEH Contract Amendment No. 1 in the Not to Exceed amount of \$27,605.00 for 2024 Well Rehabilitation Project**

Mr. Young stated that SEH has used up it's budget with the issues that have been encountered and is seeking additional compensation to rehabilitate well 3 a second time along with rehabilitating wells 1 and 4. Mr. Cross asked why wells 1 and 4 are in the fee amendment when they were originally included in the project scope, Public Works Director/City Engineer Walter stated that SEH has been very involved in assisting the City with the issues that have occurred since beginning the rehabilitation project. He stated unfortunately the work was required to get all the information for this meeting and to provide recommendations.

**5. MOTION** by Commissioner Stenberg, seconded by Commissioner Christofferson to approve the Request for Approval of SEH Contract Amendment No. 1 in the Not to Exceed amount of \$27,605.00 for 2024 Well Rehabilitation Project. Motion carried unanimously.

## INFORMATIONAL ITEMS

## ADJOURN

**MOTION** by Commissioner Stenberg, seconded by Commissioner Christofferson to adjourn at 8:15 p.m. Motion carried unanimously.

Approved by:

Respectfully Submitted,

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Rock Yliniemi

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Trevor Thompson

Chairman

Assistant City Engineer