



Annual Meeting & BBQ

September 26, 2023

Stakeholder Meeting Minutes

Welcome and introductions - Erin Sandos,
Chair of Barr-Milton Watershed
Association, led introductions.



Attendees: Donny Roush (City/County of Denver), Sami Miller (BMW), Erin Sandos (SPR), Steve Lundt (Metro), Michelle Seubert (CPW), Julie Tinetti (Centennial), Curt Bauers (FRICO), Kelly DiNatale (United, ECCV), Chris Newton (ECCV), Marcia (ECCV), Abigail Wright (Denver Water), Alex Ratcliffe (SPCURE), Caleb Owen (Thornton), Michael Prado (CDOT), Abbie Culbertson (Metro), Scott Harcus (Metro), Eleanora Borisova (Metro), Dan DeLaughter (SPR), Nicole Laurita (SPR), Chloe Lopez-Jauffret (SPR), Bill Caldwell (Citizen), Patty Caldwell (Citizen), Blair Corning (SPR)



Tour of Barr-Milton's new continuous water monitoring equipment on the water - The group took two waves of pontoon boat and kayaks out to see the new Aqua Trolls deployed by Colorado Pond and Lake. Steve Lundt led the tour explaining BMW's new continuous monitoring efforts.

Guest speakers

- **Overview of new Phosphorus removal project - Chloe Lopez-Jauffret** with South Platte Renew reviewed their recent phosphorus removal efforts.
 - Reg 85 required about a 93% reduction in phosphorus. The project timeline began in April 2019 and initially faced a lot of delays due to covid. In June 2021, the groundbreaking on physical construction took place and the final completion and ramping up of implementation took place in June 2023.
 - Below are some slides that showcase the process and key takeaways



SPR Facility Overview



Third Largest Facility in Colorado

- 53 acres
- 5,400+ assets
- 26 buildings & 50+ tanks

Treatment Capacity

- Approx. 20 mgd
- Capacity – 50 mgd
- 7,300,000,000 gallons/year

Treatment Process

- Water – 18 hours
- Solids – 28 days
- Gas – minutes



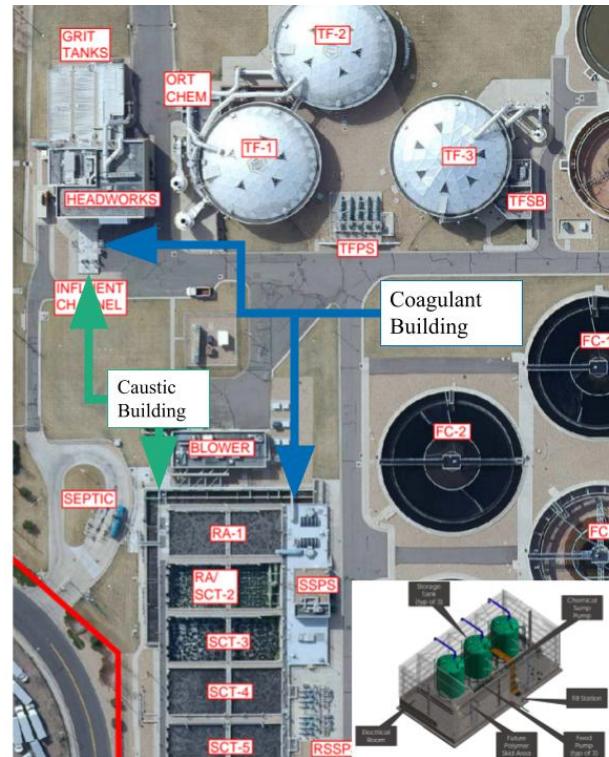
Scope of Work

Dosing Locations

1. Headworks (HVs)
2. Solids Contact Tanks (SCTs)

Chemicals

3. Ferric Sulfate
4. Aluminum Sulfate (Alum)
5. Sodium Hydroxide (Caustic)
6. ~~Ferric Chloride (not chosen)~~



Data Visualization – add picture of dashboard





Key Takeaways

Project Development

- Documentation (PMP, MOPs)
- Future Optimization and Pilots

Process Impacts

- Dose Determination
- VIP Scheduling (through 2027)

Staff Input

- Data Visualization
- All Staff Updates

- **Phosphorus removal update – Rudy Maltos** with Metro Water Recovery gave an overview of their phosphorus removal efforts.
 - MWR has two nutrient removal facilities, serving about a 2.2 million population.
 - Phosphorus objectives include a target of 0.3/mg/L-P and use a continuous year-round removal process.
 - Their efforts began in 2011 and MapPrex was decided on. The recovered struvite is sent to A1 Organics.
 - The south part of the Hite facility saw more Bio-P. MagPrex significantly decreased the phosphorus levels, and the overall performance was successful.
 - Currently, they are recovering about 500 lbs of struvite per day; crystals weren't heavy enough to separate from fluid and that's the biggest challenge and problem they are working on currently.

BMW water quality update - Steve Lundt updated the group on water quality in both water bodies and I&E efforts over the past year.

- It's highlighted that one in two Coloradans live in the Barr Lake/Milton Reservoir watershed!
- Steve shared some of the top highlights from the past year, including:
 - Barr-Milton's board toured the CSU Spur Hydro Building in June
 - We relocated our autosampler back to the South Platte River
 - Lake Appreciation Day, which is a big event each year, was successful this year on July 15, 2023
 - Our 2nd Annual Carp Tournament was also a success on June 3rd
- This year has been a pretty wet year, clocking in over 18 inches of precipitation in Denver as of the end of September! Overall, the observation has been that both Barr Lake and Milton Reservoir tend to have better water quality in wetter years over drier years.
- Water Quality sampling continues to take place in-reservoir, at the inlets and outlets, at the South Platte River (autosampler) and during storm events, and at ditch inputs (there are four of these). All of these samples aim to give a comprehensive picture of water quality for Barr and Milton, in order to meet our 92% reduction goal for the TMDL.
- BMW continues to support two campaign efforts for Phosphorus reduction: Phosphorus Free Lawn Fertilizers and Pick Up Your Pet Waste. Both of these efforts aim to reduce phosphorus and nitrogen non-point sources that contribute to an overload of nutrients in these bodies of water.



BMW committee updates:

- Overview of BMW accomplishments and preview of future activities – **Erin Sandos**

Updated BMW Goals



- As a key watershed association covering a significant portion of the Denver Metro area, collaborate with stakeholders, gain consensus, and provide education and outreach to inform and drive water quality stewardship.
- Drive water quality improvements so that Barr Lake and Milton Reservoir meet applicable water quality standards.
- Utilize a science-based approach to understand the biological systems of the Barr-Milton Watershed, measure changes and improvements, and inform planning and decision making.
- Develop and facilitate plans and actions for watershed-scale and in-reservoir projects to drive attainment of water quality standards. Currently, BMW is facilitating the efforts of its members to:
 - Limit sources of phosphorus to meet pH and DO requirements.
 - Limit the sources of nitrogen to meet ammonia requirements.

- BMW has an upcoming Treasurer transition with Michelle Seubert moving to Cherry Creek as the new Park Manager (congrats, Michelle!). There will be a new Barr Lake representative coming sometime around the end of the year.
- Erica Klein, our wonderful intern, left to finish her degree and work for Centennial!
- Updating our watershed plan is still a work in progress and we're aiming to complete it in early 2024. The first plan was finalized in 2006 and followed EPAs 9 requirements and was 88 pages long. In 2017 the plan was updated. It took about 2 years to finalize the update in part because it was shortened to 36 pages. The concept is to update the plan to make it a "living document" that is reviewed annually by either the board or technical committee. Each year, we will update links to completed studies or references to the implementation plan, and provide a schedule to represent past and ongoing efforts.
- Our stormwater monitoring contract remains with GEI and the autosampler found its new permanent home at the National Western Center.
- We have recently signed a contract with CO Pond & Lake and have deployed AquaTrolls which are providing continuous real-time data on several variables. This will help us understand the daily variability water quality within the lakes. Analytes include dissolved oxygen, temperature, blue-green algae, pH, total dissolved solids, chlorophyll-a. Sensors are currently deployed, and will be pulled in October for the winter season. Sensors will be deployed from March through October in 2024 and 2025.
- BMW gained party status in the Lakes Nutrients Hearing. Our primary concern was related to the implementation of potentially conflicting total maximum daily loads (TMDLs) associated with the adoption of the proposed revisions to the standards. The total phosphorus table value standard for warm water lakes is more stringent than the current TMDL targets. The proposed revisions to the standards were adopted for high priority lakes and reservoirs, and these will be adopted for Barr Lake and Milton Reservoir in the 2027 hearing. Prior to the 2027 hearing, BMW has decided that it will continue monitoring to collect a new dataset now that conditions have changed upstream in the watershed and all of the major water resource recovery facilities are meeting Reg. 85 limits and VIP targets. We will use these data to evaluate whether or not we would want to recalibrate our models in preparation for the hearing, and better assess how close we are to meeting TMDL targets.



- BMW will be hiring a new intern in the spring of 2024.
- Our second annual carp fishing tournament had 70 participants with 12 boat teams and 11 shore fisherman and 53 carp caught.

- BMW has reinstated the newsletter, which goes out three times a year.
- BMW Budget update – **Michelle Seubert** will send a recap of the budget summary as a follow up.
- Election of new At-Large Members – The stakeholders unanimously voted to maintain the existing three at-large members: CPW, Heritage Sporting Club and SPCURE.

Lunch and adjournment!