

Barr Lake/Milton Reservoir Watershed Association  
 BMW Board Meeting  
 April 23<sup>rd</sup>, 2019 9:00 am – Noon  
 Metro Wastewater

Minutes

**Board Attendance:**

Dan Delaughter – SPWR Partners  
 Curt Bauers - FRICO  
 Sarah Reeves - SPCURE  
 Steve Lundt – Metro  
 Donny Roush – Denver PW  
 Michelle Seubert – CPW

Aimee Konowal – CDPHE  
 Joni Nuttle – CDPHE  
 James Boswell – Thornton  
 JM Grenbenc – S. Adams (phone)

**Public Attendance:**

Amy Conklin – BMW Coordinator

Dan welcomed the group and everyone introduced themselves, while enjoying delicious burritos.

Sarah shared that SPCURE has had interest from Adams County and potentially other stormwater groups to join because of the Segment 15 e coli TMDL issues.

**Regulatory Conversations –**

Amiee Konowal handed out a flyer describing the Water Quality Roadmap developed by CDPHE. Dan went through his slides reviewing the history of BMW. The resolution of the uncertainty questions was reviewed including a review of the many studies that have been done and the information gathered. The results of the studies to resolve uncertainties has supported the target in the TMDL of 100 ug/L of Phosphorus (P) attaining the Chlorophyll a (Chlor a) goal of 20 ug/L growing season average. There is still uncertainty about how the lakes will respond when the target P is attained.

**Water Quality Roadmap Overview**

**Top many nutrients can impact the quality of our drinking water, impair recreational boating and fishing experiences, and harm native fish. Colorado has been directed by the EPA to adopt nutrient goals to protect our streams and lakes. In October 2017, we established a water quality roadmap that outlines our strategy for developing nutrient goals and other water quality priorities over 10 years from 2017 to 2027.**

**Focus areas**

- Goal development:** The Water Quality Control Commission's plan to adopt water quality goals for nutrients (nitrogen, phosphorus, and chlorophyll a), cadmium, temperature, arsenic, ammonia and selenium through 2027.
- Evidence development:** The technical work and scientific evidence that needs to be developed in order for the commission to adopt water quality goals.
- Goal implementation:** The water quality goals established by the commission are translated into permits that allow discharge of acceptable levels of pollutants. These permits sometimes result in water quality treatment being required to address permit requirements. Nonpoint sources, like farming runoff, can also release nutrients, so we will consider how to decrease nutrients from nonpoint sources as well.
- Outreach:** There will be several ways to participate in shaping the efforts that will happen over 10 years from 2017 to 2027.

**Timeline:**

- 2018:** 10-Year Roadmap journey begins!
- 2019:** Review nutrient progress. Release draft cadmium and arsenic criteria.
- 2020:** Release draft total nitrogen and total phosphorus criteria for lakes. Adopt cadmium, arsenic, temperature standards statewide.
- 2021:** Adopt chlorophyll a for streams statewide. Adopt total nitrogen and total phosphorus for high priority lakes. Address nonpoint source controls & incentive program progress.
- 2022:** Release draft ammonia criteria.
- 2023:** Release draft selenium criteria.
- 2024:** Review nutrient progress.
- 2025:** Release draft total nitrogen and total phosphorus criteria for streams.
- 2026:** Adopt ammonia, selenium, total nitrogen and total phosphorus standards statewide.
- 2027:** (Final year of the roadmap)

Contact: [CDPHE\\_nutrients@state.co.us](mailto:CDPHE_nutrients@state.co.us) | [www.colorado.gov/cdphe/WQ-10-Year-Roadmap](http://www.colorado.gov/cdphe/WQ-10-Year-Roadmap)

The Board discussed the relationship of Regulations 85 and 31 to the TMDL. In many TMDLs, once the targets have been achieved, the effort is complete. In the case of the BMW TMDL, Regulations 85 and 31 complicate the TMDL. The regulations have been incorporated by reference in the wasteload allocation tables. Therefore, the Incentive Program included in Regulation 85 is also part of the BMW TMDL.

Aimee asked about our goals with our modeling effort. The Board responded that the model has been used to: estimate the amount of loading from the watershed; relate the watershed loads to the in-lake concentrations; model different management scenarios; and model the amount of load reduction required to attain water quality targets. BMW follows an approximate 5 year cycle to update the models with new information.

Dan talked about the implementation plan and potential projects. The big question is always how to fund the projects. Dan presented the P growing season average over time showing a steady decline in P levels. The reductions are thought to be related to the Burlington pumps being turned off and improvements at Metro. FRICO is also a factor; how they manage the flows into Barr. There may also be impacts from P removal from fertilizer. South Platte water Renewal Partners (SPWRP) will be implementing improvements that will continue to reduce P levels. pH has responded and is going down, hovering around 9. Much of the water quality is dependent on the quality of the inflow water. According to Steve's tattoo, Feb. 10<sup>th</sup> 2012 the Burlington pumps were turned off and the impacts to water quality have been profound.

Dan went over the White Papers that have been completed; Phased/Staged TMDL, Uncertainty, and Site Specific UAA. Our TMDL is both staged and phased. The staged part includes Regulations 85 and final TMDL targets but other things have to happen besides just point sources achieving effluent standards. In addition to P, Nitrogen (N) is also a parameter of concern. BMW has been monitoring for and analyzing N and it's species for years. We have found that the N:P ratio is an important parameter to attaining Dissolved Oxygen (DO) and pH. Milton has been put on the 303 (d) list for Ammonia, but that standard should be attained as the P loads are reduced. What has been learned from the experiences at other lakes is that as the N is reduced, different, less desirable types of algae (cyanobacteria) can dominate. As we move forward it is important to continue measuring and evaluation N.

The model is predicting that as the point sources continue to reduce P and N loads, the nonpoint sources will become increasingly important. Since there is so much loading to reduce, any additional loading is important. It is not known at this time how implementation of Regulation 31 will impact the TMDL or the Implementation Plan (IP). Once the TMDL targets are attained, do we re-evaluate and consider that effort Phase 2?

The Chlor a standard is expected to be adopted in 2022. When it is adopted, it is assumed it will be adopted statewide rather than rolled out in tri-ennial reviews. The first year that Barr or Milton could be put on the 303 (d) list for not attaining Chlor a is 2023. It's unlikely that Milton and Barr would be a high priority because they already have a TMDL. We might be able to addend the TMDL to add Clor a or leave it hanging in Reg. 93 as an alternative plan to resolve the issue of being included on the 303 (d) list. The best use of BMW's limited resources is to address issues that arise through revisions to the IP. Aimee and Joni indicated that we probably don't want to spend a lot of time and resources on the Chlor a standard specifically because we are already addressing the cause of the chlor a exceedance through the TMDL.

Dan evaluated the relationship between maximum growing season Chlor a values and growing season averages. His analysis shows that a growing season maximum concentration of 25 ug/L would be comparable to a growing season average concentration of 17 ug/L. We will continue

to collect data and assume that the targets in the TMDL should be adequate to achieve the standards for both Regulations 85 and 31.

BMW has an opportunity to comment on Denver's Phase 1 MS4 permit. What BMW needs is quantification of the improvement to stormwater quality being made through construction of stormwater management projects. **Dan** will be attending the May meeting of the Colorado Stormwater Council. **Amy, Sarah and Chris** will go with him. Dan will send out some talking points for review before the meeting. It is important that the TMDL language developed for MS4 permits also be included in Industrial Permits issued in the watershed.

The impact of the OCCT litigation was discussed, concluding that Denver Water (DW) is much more aware of the water quality issues than they were before. One of the biggest issues to resolve is who will pay for the load reductions that have to happen. There will be hundred of millions of dollars spent. How will those costs be divided?

The group discussed pursuing a Use Attainability Analysis (UAA) for Barr and Milton. Joni and Aimee shared that they expect a Technical Advisory Committee (TAC) to be formed this summer in anticipation of the statewide Chlor a lake values expected to be adopted in 2022. After the statewide evaluation has been concluded, then it might be appropriate to revisit the potential for a UAA. The work of the TAC is expected to take about a year.

Dan suggested that by the end of the year the BMW Board may be able to develop a draft of the IP update. In the meantime, the WQCC would appreciate annual updates.

**Modeling Effort Update** – Steve Lundt explained that the model is not longer calibrated to the latest data. Kelly DiNatale has offered to help review the input files that were sent to the modelers in the hope that an easy fix might be found. We know that there is a discrepancy in the flow from the BB pipeline. Turning off the Burlington Pumps created a big change to water quality and that is reflected in the model. Steve doesn't have time to carefully review the data. **Chris** offered to ask United, FRICO and ECCV to help fund Kelly reviewing the data. The BMW Board gave a unanimous Thumbs Up approval to fund the other part of Kelly's efforts for an amount not to exceed \$5,000.

Ken Wagner has been reviewing the sources of loading in the watershed. **Steve** will send Amy Ken's report to distribute. **Steve** will also send Amy the presentation on the WQCD Roadmap from the CLRMA luncheon. He analysis shows that loads from the watershed have been reduced from 63,000 kg/yr to 30,582 ky/yr. The target load in the TMDL is 6,133. To achieve 100 ug/L P in the lakes, the loads can be as high as 10,332. Metro's loads have decreased by about 50%. South Adams County loads have also been reduced. The only loads that have increased are from Lochbuie.

**Update on Senate Bill SB19-186** – The Board decided not to comment on the bill at this time.

**BMW providing input to Denver's MS4 permit** – The groups suggested that Dan consider reviewing who BMW is and the realities of our TMDL. He could also consider talking about the monitoring station BMW installed at the Burlington Ditch and share some of the data. Some of

the talking points should include that every pound of P matters in our TMDL because we have so much to remove. We need to measure every source of P, including stormwater. There are already studies underway including efforts by CSU and Denver. CU Denver Graduate students have been working with BMW for three (3) years to quantify P coming from lawn fertilizer. We should also explain the loading model developed as part of the OCCT litigation. The additional load is a stormwater load.

**I&E Update** – Amy shared some of the Google Analytics for the site. There are over 200 visitors per month, most from desktop computers. A desire to use off the shelf templates with plug ins was expressed instead of a site written in HTML code. **Michelle** will ask her website volunteer, Carol, to attend the next meeting to talk about the Friends of Barr Lake website. SPWRP has an employee who may be willing to keep the site updated. **Amy** was asked to request **Sam** to lay out as much of the website she envisions before she leaves.

**Updates/Action Items**

- Chair’s Report – The Chair had not report.
- Treasurer’s Report
  - As of the March 31<sup>st</sup>, the balance is \$220455.77
  - All expenses since the last meeting are within budget and will be recorded as part of the minutes.
  - All the membership dues invoices were sent out in December. Please contact Amy with any questions.
- Coordinator Updates (Amy C.)
  - There was a Thumbs up Approval of the March 26<sup>th</sup>, 2019 Meeting Minutes.
  - Amy reported on Bike Tour progress.
  - The Sales Tax exemption letter has been sent.
  - Amy was directed to get information on BMW membership dues.
  - Water Conference concept – Amy is planning to meet with Jeff Shoemaker and Dana Coelho from Metro DNA to discuss the topic with them.
  - Board meeting schedule of topics was delayed until the next meeting.
  - The Board gave a Thmubs Up approval to extending the internship for an amount not to exceed \$2,000 through the end of the summer. **Amy** was asked to set up interviews for interested candidates.

April Checks to Sign	
2070 - Amy Conklin, March coordinator	\$ 4,174.68
2071 - Carp Solutions, box net	\$ 7,720.00
2072 - Metro DNA	\$ 100.00
2073 - CLRMA	\$ 85.00
2074 - DiNatale Water Consultants	\$ 1,165.00

Membership Dues Received 4/19	
Membership Name	Amount
Big Dry Creek WA	\$ 100
Friends of Barr Lake	\$ 100
North Front Range WQPA	\$ 100
SPLASH	\$ 100
Lochbuie	\$ 500
DPW	\$ 1,750
Denver Water	\$ 4,000
ECCV	\$ 12,000
FRICO	\$ 12,000
Metro	\$ 12,000
S. Adams County W&S	\$ 12,000
S. Platte Water Renewal P	\$ 12,000
United	\$ 12,000
<b>Total</b>	<b>\$ 78,650</b>

Membership Dues 2016 - 2019		
Date	Name	Amount
8/11/2016	Friends of Barr Lake	\$ 250.00
1/5/2017	Friends of Barr Lake	\$ 500.00
3/8/2017	SPLASH	\$ 100.00
3/13/2017	CMF	\$ 4,850.00
9/14/2017	Friends of Barr Lake	\$ 250.00
7/3/2018	CMF	\$ 4,850.00
2/5/2019	SPLASH	\$ 100.00
3/26/2019	CMF	\$ 5,402.84
	Subtotal	\$16,302.84

**Next Meetings**

- I/E Committee Meeting – **May 7<sup>th</sup>, 2018 10 am to noon, Barr Lake Nature Center**
- Technical Committee meeting – **May 23<sup>rd</sup>, 9 am, Metro**
- Board Meeting – **May 28<sup>th</sup>, 9 am Metro**
- Urban Water Cycle Bike Tour – **June 4<sup>th</sup> SPWRP to Metro**

- Stakeholder Meeting – June 25<sup>th</sup>, 2018 9:30 am, Barr Lake State Park Tour

**BMW I/E Events for 2019**

Date	Event	Activity	Name and contact
4/27/19	SPWRP Clean Up	South Platte River clean up	Deb
5/4/19	Furry Scurry	Washington Park	Sam, Donny
5/4/19	Spring Fishing Clinic	Barr Lake State Park	Michelle
5/8/19	CU Capstone Project	Presentations on Auraria Campus	Steve, Amy
5/16/19	Northglenn-Thornton-Westminster Water Festival	Front Range Community College	Michelle, James
5/18/19	Boat Safety Day	Barr Lake State Park	Michelle
6/1/19	Brighton Summer Fest	Booth, T-Shirts	Michelle
6/4/19	Urban Water Cycle Bike Tour	Bike Tour along Platte River	Steve, Amy, Sam
6/22/19	Greenway Foundation River Fest	South Platte River	Sam
6/25/19	BMW Watershed Tour	Barr Lake State Park	Amy
7/13/19	Lake Appreciation Day	Barr Lake State Park	Michelle, Steve, Amy, Sam
7/25-28	Arapahoe County Fair	Booth, t-shirts, Poop emoji balloon	Amy, Sam, SPLASH (?)
8/2/19	Adams County Fair	Booth, T-shirts	Michelle, Steve
August	Western Welcome Week	SPLASH booth	Amy
August	Commerce City Neighborhood Fest	Booth, T-shirt	Michelle
9/14/19	Birding Festival	Barr Lake State Park	Michelle

9/21/19	Bark in the Park	Barr Lake State Park	Michelle
9/28/19	National Public Lands Day/Shoreline Clean up	Barr Lake State Park	Michelle
10/12/19	Harvest Festival	Barr Lake State Park	Michelle
10/26/19	Halloween Trail	Barr Lake State Park	Michelle
November	CO Watershed Assembly	Conference	Amy?
November	Cherry Creek Stewardship Partners	Conference	Amy?

**BMW Board 2019 ‘Schedule’**

- *April 23, 2019 –*
  - *Invite DW to present their loading calculations and mitigation plan*
  - *Invite Meg Parish, CDPHE, to help in presenting TP mitigation plan*
  - *Invite WQCD staff, Aimee Konowal and Joni Nuttle, among others. Discuss concentration translator. Provide summary in advance.*
- **May 28, 2019 –**
  - Presentation on ECCV about the DW aquifer
- **June 25, 2019 – meet at Barr Lake**, take tour around the lake, stopping along the way for;
  - Water quality presentations
  - Presentations on where in canal treatment might be installed
  - Other improvements at the lake (yay! Michelle)
  - See eagles.
- **July 23, 2019 –** Metro presentation on their P recovery process
- **August 27, 2019 – meet at Daniels Fund**
  - Centennial presentation on improvements to comply with Regulation 85
  - Preparation for Annual meeting and BBQ
- **September 24, 2019 – meet at Barr Lake, try to engage more stakeholders**
- **October 22, 2019 –** Prepare for Annual Retreat and use as place holder for things that don’t follow the schedule. Go over IP Committee’s outline?