

Barr Lake/Milton Reservoir Watershed Association  
BMW Board Meeting  
January 22<sup>nd</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 (phone)  
Julie Tinetti – Centennial (phone)

Chris Douglass – ECCV  
Michelle Neilson – Metro  
Ashley Rust – United

**Public Attendance:**

Amy Conklin – BMW Coordinator

---

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

**Optimal Corrosion Control Treatment (OCCT) Update** – Dan gave an update on the OCCT developments. Denver Water (DW) has been working on a cost model. They’re looking at the different doses and concentrations along with accelerated lead line removal. The model should be ready for presentation on Feb. 6<sup>th</sup>. Colorado Parks and Wildlife (CPW) has been asking about recreational impacts in the model. It’s possible that in-canal treatment may mitigate recreational impacts for Barr and Milton.

The Source Control group has also been meeting to review the issues of: adding phosphorus-free residential fertilizers as a mitigation effort; information and education efforts; and the impact of OCCT on the Regulation 85 credit program. The group discussed that most residential fertilizers already are phosphorus-free. Steve is skeptical and the BMW intern, Sam, will be doing some ground truthing at lawn and garden stores this spring to verify that most residential fertilizers don’t include phosphorus.

The Technical Advisory Group has also met and looked at Integral’s model for the TMDL. The model would take a lot of work to simulate OCCT because it’s calibrated for agricultural land uses rather than urban settings. The in-lake model may be easier to use. Because of that, the group has moved towards a spreadsheet model. Steve and Dan met with Gabe Racz and Kelly DiNatale to review the spreadsheet model. It is intended to provide a high level of analysis, rather than detailed. It is hoped that some graphics can be incorporated into the model. Kelly may be able to help with that.

DW has confirmed that 2 mg/L of phosphate is as effective as 3mg/L for OCCT. They are also running pilot studies for 1 mg/L and 0.5 mg/L of phosphate. CSU soil scientists have been invited to the next Technical Advisory Group meeting to talk about phosphorus retention in soils and leaching into groundwater. The Technical Advisory Group will be studying the potential for the soil to act as a phosphorus sink and absorb phosphorus in Lawn Irrigation Return Flows (LIRF). The amount of phosphorus bound up in the soil could be a sensitive variable in the spreadsheet loading model.

The Stay on the district court proceedings has been extended to September 2019. There are deadlines in June to request a modification to the CDPHE decision and to request a variance from EPA. Depending on results from DW's pilot testing, DW is likely to request a modification to CDPHE's decision to require OCCT using phosphate. The modification request will likely include a request to use an amount less than 3 mg/L. Any modification request would be to CDPHE. If DW wants to include a component of point of service filtration and accelerated lead line removal, they will need to request a variance from EPA. DW is hoping to wrap up pilot testing by June so they can make their request for modification or variance.

The source control group is also looking into phosphorus loading from de-icers. Joni Nuttle is going to reach out to CDOT to try to get an estimate of the number of pounds of phosphorus applied in de-icers. CDOT is sensitive to phosphorus loading and uses a product relatively low in phosphorus. The group hopes to engage other municipalities to follow CDOT procedures and use low phosphorus de-icers.

Dan walked the Board through his spreadsheet loading model. The goal of the model is to provide a reliable estimate of phosphorus loading from DW phosphate dosing for OCCT. He included three (3) scenarios to simulate low, medium and high runoff. The model includes water DW sells to others. The group discussed the importance of continuing to consider the high runoff scenario. There is a lot of variability in the assumptions about how much phosphorus is included in stormwater runoff. A higher runoff value may be more realistic.

The middle scenario, Scenario 2 uses LIRF numbers directly from DW. There is some confusion about what assumptions were made to calculate their LIRFs. How much of the groundwater returns to the surface water is one question. The phosphorus concentration in the groundwater is another question. For the surface water, the model assumes that the concentration in the groundwater inflow is the same as that in the surface water. However, phosphorus concentrations in groundwater are likely controlled by the soils' retention of phosphorus. It is hoped CSU can provide data and input needed to understand good assumptions for soil phosphorus retention.

The Buildup/Runoff Component of the model is where the soil retention assumptions are made. Currently the model assumes that 25% of DW's service area is impervious surface. The model also assumes that the phosphorus accumulation occurs in the first 6 inches or 10 cm of the soil. The Buildup/Runoff Component is a really sensitive variable in the model. The current assumptions focused on local soils data as well as looking at results from other Colorado cities such as Colorado Springs and Brighton. The component also assumes that some of the phosphorus is removed from the watershed as grass clipping and leaves. The component also includes an option for assuming how long the phosphorus accumulates in the soil. The number of years the phosphorus has been accumulating in the soil will help assess when the soil is 'full' and can't retain any more phosphorus. It is possible, maybe likely, that the soil is already full. The model does not account for the reality that many people have been adding fertilizer to their lawns for years.

The Board discussed that some of the stakeholders may be unconvinced that the loading from OCCT will be significant. Some of the stakeholders may be assuming that whatever the

additional load is wastewater treatment plants can just remove it. What Dan's model shows is the loading from water that never goes to the wastewater treatment plant. Additional phosphorus will be going to the wastewater treatment plants from OCCT. The additional loads may impact Regulations 85 and 31 and the incentive program for wastewater treatment plants meeting their targets.

Once DW starts adding phosphate for OCCT, the motivation to accelerate lead line removal may be significantly reduced. In addition to the lead lines, there is lead solder in the lines that is a separate concern. DW's results show that pH adjustment alone can reduce lead from the solder. However, once phosphate is added, it might not be realistic to ever stop adding it. There is also the uncertainty of how the phosphate, pH adjustment or any other OCCT will work in the service area as opposed to the small subset of pipes in the pilot test.

The Board discussed how they want to proceed with the information from the spreadsheet model. First, we want to be sure that everyone agrees that the loading from OCCT is significant. Even if the spreadsheet model is an overestimate the load, the results still show a significant load. Any amount of additional load is important. Drinking water concerns are only about getting the lead out of the water. All the stakeholders are focused on getting the lead out of drinking water. Some of the stakeholders are also concerned with the secondary impacts of more phosphorus in the water. We need to get all the stakeholders to understand and agree that the phosphorus loading from OCCT is significant.

BMW needs to continue to be talking about the secondary impacts of the additional phosphorus load. We want to be sure all the stakeholders are clear that once an OCCT is selected, the work is not over. The stakeholders will be working on a cost model that will translate the impacts into dollars. That will help to describe the impacts in readily understood terms. One option for reducing the impacts to the BMW TMDL could be to approach DW and CDPHE about in-canal treatment. The work done to date indicates that in canal treatment could significantly improve water quality in Barr and Milton. The impacts to the river would not be mitigated though.

**Dan and Steve** will reach out to CDPHE staff and DW to start exploring how the responsibility for mitigating the OCCT load will be decided. **Amy** will reach out to Lisa Carlson and request a standing agenda item for all stakeholder meetings of the regulatory impacts of the OCCT loads.

**Modeling Effort Update** – Steve Lundt reported that Integral ran into a problem with the model reflecting reality in Milton since 2013. The modeling results are just not matching up with Milton data. They should be providing report soon. Hopefully by the end of march, in time for the next Technical Committee meeting. Integral estimated that recalibrating the watershed model for urban, rather than agricultural conditions could cost as much as \$100,000.

Ken Wagner, the BMW limnologist, is finishing up his report on the loading to the lakes. Ken is reviewing current loading and the loading needed to meet the targets in the TMDL. This may be the last work Ken does for BMW as he is trying to succeed at retirement.

**Regulatory Conversations** – **Dan and Steve** will continue side meetings with CDPHE and DW staff regarding how to handle the specific loading from OCCT. **Chris** has begun working on the

External Influences white paper and will provide a draft for review probably at the March Board meeting. His concept is that the white paper would outline the decision-making process BMW would use to determine if an external influence qualified for BMW resources. One question Chris is wrestling with is if the external influences should be just to the existing TMDL or should the decision making include parameter, such as ammonia, that are likely to be added to the TMDL in the future. The Board noted that a reserve is being funded to provide resources to address external influences.

**I&E Update** – Steve reported that the I&E Committee met on Jan. 8<sup>th</sup>. Samantha McKinney has a good list of projects. She’s working to design a new website and logo for us. The I&E Committee also went through the events for the year. **Amy** will work with Steve to put together a calendar of the BMW I&E events.

Steve reported on the CSU Denver class projects. It is the third year BMW will be working with Professor Briles. The kick off next week. There will be three (3) groups working on projects. Steve will give them some options. He is hoping they will continue previous work of interviewing home owner about their fertilizer use and collecting soil samples. Their work might be helpful in refining the variables surrounding the phosphorus carrying capacity of the soil in the spreadsheet model.

### **Updates/Action Items**

- Chair’s Report – Dan reported that the WQCD issued a modification to the McDonalds discharge to segment 14. SPWRP chose not to comment because McDonalds reduced their discharge. McDonalds hasn’t had a discharge yet. Their discharge will be somewhere near the bottom of segment 14.
- Treasurer’s Report - Chris has been working with Amy and bookkeeper to get up to speed. The BMW budget is about \$130,000 per year and we have spent about \$47,000 so far. The BMW Budget Committee will form in March to review what the long-term goals are and where the funding will come from. All the membership dues invoices were sent out in December. Please contact Amy with any questions.
- Coordinator Updates (Amy C.)
  - Approval of the November 28<sup>th</sup> Meeting Minutes – There was a thumbs up approval of the minutes.
  - Water Conference concept – Amy has requested a standing agenda item of organizing a water conference to capture the momentum resulting from the OCCT stakeholder process. Different water interests seem unaware of the challenges faced by their colleagues. Amy wants to organize a forum where drinking water, wastewater, stormwater and agricultural water users can continue to discuss water issues.
  - Pelican Lake Ranch beginning to sell more homes – Amy shared a flyer that was she was sent regarding continued building around Milton Reservoir.
  - Tri-County Health has been working to build a Hazardous Waste collection site. They are applying for a grant to hire a coordinator to shepherd application through the process. BMW would be willing to write letter of support and contribute \$100. When there is a permanent hazardous waste collection facility, hazardous collection jumps to over 50% effective compared to 2% effective without one.

Steve reported that the stormwater monitoring station is up and running and will be starting to collect samples soon. The data could provide a good baseline for pre-OCCT conditions.

**Next Meetings**

- I/E Committee Meeting – **March 5<sup>th</sup>, 2018 10 am to noon, Barr Lake Nature Center**
- Technical Committee meeting – **January 24<sup>th</sup>, 9 am, Metro**
- Board Meeting – **March 26<sup>th</sup>, 9 am Metro – Filming Sarah Reeves**
- Stakeholder Meeting – **February 26<sup>th</sup>, 2018 9:30 am, South Platte Water Renewal Partners, Filming, maybe Dan**