

## Barr Lake/Milton Reservoir Watershed Association

### Technical Committee Meeting

Thursday, May 23<sup>rd</sup>, 2013 (9:00am – 11:00pm)

Metro Wastewater Reclamation District, Denver

## Draft MINUTES

### In attendance:

Steve Lundt – Metro Wastewater

Laurie Rink –FRICO (phone)

Jordan Parman – Metro Wastewater

Linda Chynoweth – Aurora

Shelley Stanley – BDCWA

James Boswell – Thornton

Al Polonsky – Denver Environmental Health

### Guests:

Amy Conklin – BMW

James Boswell, City of Thornton, introduced himself. He will be Thornton's representative on the Board.

### 1. BMW WQ Modeling Update

- a. Task 1 and 2 Updates and next steps

Ken Wagner and Marcia Greenblat are continuing to work on the modeling effort but will not call in this morning because they don't have more to report. They will report in next month.

- b. Talk about Task 3 now that TMDL is off to EPA

The group discussed the potential components of management scenarios. The concern is that we need to have specific conditions to use with the model. The following scenarios were developed:

1. One scenario could be to assume that the limits of the *wasteload allocations (wlas)* have *been met* and see what the results of the in-lake concentrations would be.
2. A second scenario could be to model in-canal treatment, assuming the *wlas* have *not been met* and consulting with the wla owners first, assuming *in-canal treatment achieves a 75% reduction (2,500 kg/yr to 14,000 kg/yr)*.
3. A third scenario could be to assume *wlas are met* and *in-canal treatment achieves a 75% reduction (2,500 kg/yr to 14,000 kg/yr)*.
4. A fourth option could be *modeling internal loading* in both Milton and Barr. The limnocorral studies results should be particularly helpful, if that's a valid scenario.
5. We could leave the 5<sup>th</sup> *open* to be developed as the results from the other scenarios are being run.

Amy will present the scenarios to the Board at their June 28<sup>th</sup> meeting. The question was asked about a data request for 2011 and 2012 with the answer being not yet. We can wait a few more years and get more years of data.

### 2. Limnocorral Update

- a. Study Plan Update

- b. Application of Alum and Monitoring for the summer

Steve summarized the history of the limnocorral experiments beginning with using only aeration which had mixed results (pun intended) with the conclusion that aeration alone delayed the pH rise above the standard by approximately 1 month. Last year we put alum in 3 with 1 control. Alum kept the pH below the standard in all test corrals. This year we have new corrals that have been installed. Blair Wachar dove to the bottom to check on the limnocorrals and discovered that one was not flat on the bottom, which could explain the variations in the results from the corrals last year.

This year we're treating 2 corrals with alum and 2 with a buffered alum mixture. There won't be a control. The buffered alum mixture application will not cause the initial drop in pH that is typical with alum alone application. It will also not affect alkalinity resulting in a more accurate relationship between pH and chlorophyll. The application will be on May 30<sup>th</sup> with initial sampling on May 29<sup>th</sup> and people are welcome to come out and assist. For some reason the TP in the lake is now between 200-250 ug/L which is lower than it's ever been, possibly because the Burlington Pump Works haven't been turned on since February and only river water has flowed down the canal. TP in Milton is higher and closer to normal. Metro has purchased new equipment that will yield TP results within 24 hours and should allow us to keep the TP below 100 ug/L.

Barr Lake is currently full but it is also releasing as much water as it is taking in. The water in the reservoir is completely different than the water in the lake last year. The lake is stratified now and going anoxic on the bottom. If the lake stays more than 7 m deep the stratification will continue. Steve will continue with weekly monitoring. The study plan has been updated and Steve will send it out to the group.

### **3. In-Canal Treatment Scope of Work**

- a. Final Draft
- b. Next Steps

Steve has been developing a list of firms to send the RFP to. The group discussed how to evaluate the proposals and identify conflicts of interest. The list of companies will be presented to the Board and the RFP will be sent out on or around June 3<sup>rd</sup>. Amy will present the list of firms along with the management scenarios. He refined the RFP to include a range of TP removal of 2,500 to 14,000 kg/yr. The 14,000 kg high part of the range represents assumptions about L/E and Centennial using in-canal treatment to further reduce their loads from 1 mg/L to 0.1 mg/L. Laurie suggested that we include a 500 kg/yr reduction to represent MS4 reductions. Al Polonsky discussed the pros and cons of allowing developers the option of using in-canal treatment rather than better, on-site treatment requirements (BMPs), much like the wetland banks or nutrient trading.

### **4. In-Reservoir Options**

- a. How to approach this implementation item
- b. Carp Study in Milton for example

Steve has observed the impact of Carp bioturbation in Barr Lake and considers it worth studying. A carp management plan may be worth developing. Fish screens are another potential as is dredging. Aeration and mixing are options but they are expensive. If there is a park fee, it might be revenue source for a management technique such as a fish screen or dredging. Steve will invite Paul Winkle to attend one of our TC meetings.

### **5. TMDL Implementation Topics (On Going Updates as Needed)**

- a. Canal Treatment
- b. Stormwater Options
- c. NPS/Ag.
- d. WWTP upgrades
- e. In-reservoir Options

### **6. Next Meeting**

- a. Tech. Committee: June 27, 9:00am to 11:00am at Metro