

Barr Lake/Milton Reservoir Watershed Association
 BMW Board Retreat
 April 28th, 2020 9:00 am – 12:00 p.m.
 GoToMeeting

Minutes

Board Attendance:

Steve Lundt – Metro
 Dan DeLaughter– SPWRP
 Sarah Reeves -SPCURE
 Michelle Seubert – CPW
 Erin Jenkins – SPWRP
 Chris Douglass – ECCV
 Curt Bauers – FRICO
 Kelly DiNatale - United

Katie Koplitz – Metro Wastewater
 Jennie Fleurant – BMW Intern
 Michelle Seubert - CPW
 Brad Cox – Denver
 James Boswell - Thornton

Public Attendance:

Amy Conklin – BMW Coordinator

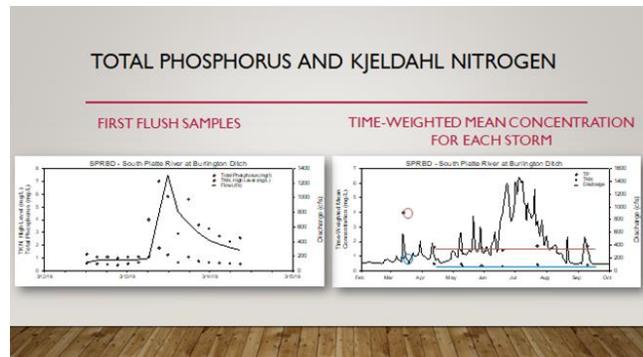
Steve worked his magic and got the virtual meeting started. Sarah Reeves shared that over the weekend, she got married!!!! Congratulations!!!!

Storm Water Quality Monitoring – Steve presented the power point that Craig Wolf sent him about the stormwater monitoring results. GEI installed the cabinet and refrigerated sampler and conduit to river. It started taking samples about a year ago. There were problems with the sampling line freezing that Steve worked through. It’s running well now. Steve goes there twice per week. There were a few other problems GEI worked through. It’s located at the Delgany siphon which will be under construction as the National Western area re-develops.

GEI monitors real time storm conditions to inform when to activate the automatic sampler. The bottles collect 24-hour composite samples. They also activate the other stations in the network. They use the weather station at Metro as well as the Denver gage upstream. They captured seven (7) storm events and the first flush Bomb Cyclone storm event last year. There was a lot of runoff last year as well. The long runoff period dilutes pollutants in the water.

Steve was able to get 2 sets of samples around the first flush event last year for a total of 16 total data points. There was both rain and snow as part of that storm event that translated into 2 peaks with the second peak being smaller from the melting snow. The pipe that goes out into the river collects debris and Steve has to knock off the debris sporadically. Hopefully the relocation of the station can fix that problem.

He showed the samples in the bottles that reflected the quality visually very well. He showed Total Kjeldahl Nitrogen (TKN) graphs and Total Phosphorus (TP) which all peak with the stormflow. Some consistency in the TKN and TP levels is emerging. It was a good, exciting first year of collecting data. Both TKN and TP were high during the first flush. Late winter early spring events flush the organic



matter that has been collecting and decomposing on the streets into the river. Leaf litter and grass clipping are probably the source of the TKN. Impervious surfaces are another contributing factor. N usually stays put more than P and doesn't make up as much of the load. It could be that the bomb cyclone was an unusual event creating more TKN than is typically seen. In the future, it might be worth comparing the data from our stormwater monitoring station with the National Urban Runoff Program (NURP), conducted in the 1970s.

Brad reminded the group that he has shared the 20 year wet weather data compilation Denver has completed. That data shows a downward trend in TP concentrations at the Denver location (SPRD).

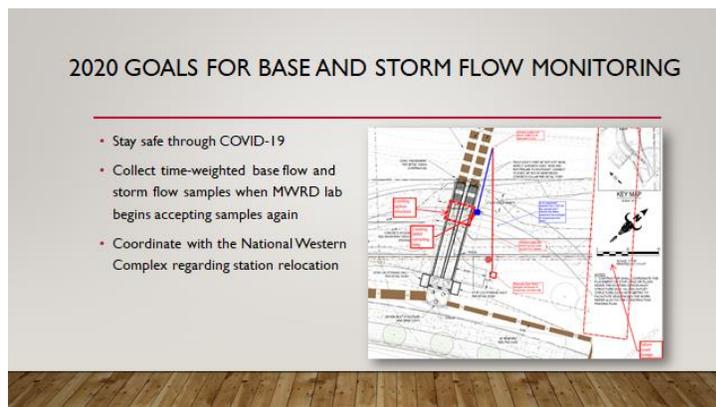
Table 5-1: Summary of water quality, discharge, and load trends for select parameters at all sites from 1998 to 2018. ▼ = Significant decreasing trend, ▲ = Significant increasing trend, X = No significant trend, NA = Not analyzed.

Parameter Type	Parameter	SPRU	SPRD	TGC6	SCRM	SPRH
Water Quality	Specific Conductance (µS/cm)	▲	X	▲	▲	X
	Suspended Solids, Total (mg/L)	X	X	X	▼	▼
	Nitrogen, Total (mg/L)	X	X	X	X	▼
	Phosphorus, Total (mg/L)	X	▼	X	X	▼
Discharge	Discharge (cfs)	NA	X	NA	▼	NA
Loads	Suspended Solids, Total (#/day)	NA	X	NA	▼	NA
	Nitrogen, Total (#/day)	NA	X	NA	X	NA
	Phosphorus, Total (#/day)	NA	X	NA	▼	NA

Steve thinks these are good results from the first year. We can use it to compare to other datasets. Steve goes out weekly to get baseflow data from the station. He's only missed one week because the Metro lab is working with him, as they prioritize sampling in response to the Coronavirus. There hasn't been any stormwater monitoring yet this year. We haven't had a big storm yet. He hopes the lab will be up and running before we want to collect samples.

Dan would like to see the baseline data on the same graph with the stormwater data graphs. Sometimes Steve and GEI are able to collect samples in relative close timing to each other so we have both baseflow and stormflow close together.

Moving Storm Water Monitoring Station – Steve talked about the Delgany siphon that has to be moved. The proposed construction will relocate the sewer lines underground and further east, away from the river. Our stormwater station will need to be moved as part of the Delgany siphon move. Steve kept reminding the construction team at Metro about the station to make sure the station is not forgotten and is incorporated into the work plans for the National Western Complex project. We might have to pay a little to have GEI recalibrate but it should mostly be included in the work for the National Western. He showed some of the potential locations for the relocated station. The pipe will need to be longer but it shouldn't be a problem. The Mayor wants to make sure that the cabinet is aesthetically pleasing. The cabinet might be hidden or made pretty.



The new pipe will be more resistant to freezing issues. Steve was encouraged to request that the pipe to from the river to the relocated station have heat tracing. The station is essential to Metro and up to National Western, not BMW, to relocate the station the way we want it.

The station might be offline for a few months as the construction proceeds. Steve will keep the Board informed. Construction is planned to start soon. It should be completed in about a year. Since the Delgany siphon won't require electricity the national western will need to be sure electricity goes to the new, relocated station.

There will be some in stream restoration as part of the park renovation which could change the sand bar and the stream channel. Any changes in the river regime might require some changes to the design of how the station works. It's an active area with a lot of construction and changes. It would be really nice if Steve can drive up to the site and collect samples. He will report back as the project proceeds.

Update on Modeling Efforts – Steve and Kelly has been working with Integral in trying to fix calibration issues with the watershed and in lake models. It hasn't been well calibrated since 2013. They've looked at flows and tweaking the models to determine next steps. The watershed SWAT model will be run separately and compared to FRICOs load estimates into Barr. Then the WASP, in lake model will be run separately and compared to data BMW collects in the lake. The issue may be with linking the two models. All the flows and files have been checked, with a few changes caught but not enough to account for the disconnect between the model results and data.

The modelers will be presenting their results soon that hopefully will result with some resolutions and/or more questions. Steve is working on the modeling and studies parts of the IP. With the next round of modeling, in 2 to 3 years, we'll have to spend more money on a bona fide calibration of the models.

Prairie Corner Lift Station – Dan led a meeting with the applicant for the lift station and sent a follow up letter summarizing BMW's remaining concerns. The letter summarizes the conversation with the engineer. We made some good progress on monitoring the pressure sensor to be sure we know if the pressure main has issues, per Cherry Creek's experience. Dan reached out to Brighton and Adams County Water Quality Association to be sure long term wastewater treatment plans are incorporating the existence of the new lift station. Holding tank storage was another issue that was worked through. The storage is adequate for only about 4 hours of storage during peak conditions. We were asking for some reassurance that they could ramp up and handle that type of emergency. Dan noted that there is enough of a land buffer to protect the lake a little. The applicant may want to consider a berm or something to eliminate any impervious surface pathway to the lake. The only outstanding issue is CPW's concerns.

Michelle reported that the CPW letter commenting on the proposed lift station may be ready by the end of the week. The railroad tracks and land provide a little buffer between the lift station and the lake.

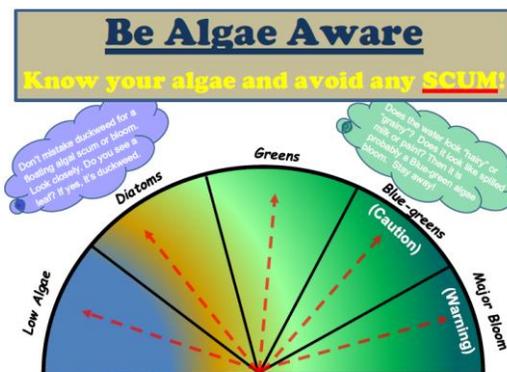
Steve added that he was surprised by the build out plans for the development the lift station will serve. The proposed development will generate significant construction. We need to follow up with Brighton to be sure they stay engaged with BMW moving forward.

Implementation Plan Update – Dan reported that the IP Committee is planning to meet on May 21st and everyone continues working on their pieces of the plan in the meantime. Steve may

want to revive the Technical Committee to brainstorm what additional new studies and plans may be needed in the future. The item will be revisited in May when the timeline for completion of the plan can be reviewed also.

I&E Committee Update (Steve) – Steve reported that Jennie assembled the spring newsletter. It’s been sent out and is a good way to communicate with our stakeholders. Jennie reported that she has been working on the fertilizer survey. She’s been collecting information and needs to enter it in the spreadsheet. She is tracking P concentrations in lawn and garden fertilizer being sold in local stores. She’s been doing research for Michelle on fertilizer for the display at the Nature Center.

Steve is working on the algae sign, shown to the right. It should be ready tomorrow and he’ll install at Barr. It will have a needle that points to the current algae amounts, like the fire sign. He’s also made postcards to hand out as part of this effort to get people to be algae aware.



Amy went over shadowing effort we offer to interns as part of their experience. Jennie will let us know who she might be interested in shadowing and we’ll wait for there to be an opportunity for shadowing. Hate you, coronavirus!

Bike tours – Amy reported that the organizing committee for the bike tours met and is pursuing making the bike tour a virtual tour. She will get back to board with more information about virtual tour and a proposal to use some of her coordinator hours in creating the tour.

Steve is working with CU-Denver student on modeling P in Burlington Ditch. Amy will send out information on their presentations on May 8th, when it becomes available.

Amy was approached by EPA to submit a proposal for a non-competitive grant for messaging using materials developed under the Urban Waters Grant. She submitted the proposal and will keep the Board updated.

Updates/Action Items

- Chair’s Report –
 - Dan is working with Erin on comments to the non-standard MS4 permit update.
- Treasurer’s Report
 - As of the March 31st, the balance is \$188,788.78
 - All expenses since the last meeting are within budget and will be recorded as part of the minutes.
 - Amy and Chris are working on membership dues invoices. Payment will be due June 1st. They added language regarding Coronavirus impacts. There may be some members whose membership will be impacted by their organizations’ budgets adjusting to the disruptions caused

March Checks that Cleared		
2115 - Friends of Barr Lake	\$ 250.00	Membership
2116 - DiNatale Water Consultants	\$ 1,608.75	Modeling - Technical
2117 - Integral Consulting	\$ 964.80	Modeling - Technical
2119 - Crazy Dave's LLC	\$ 440.00	lunch for Stakeholders
2120 - Amy Conklin, Feb. Coord.	\$ 3,796.00	Coordinator
April Checks for Signature		
2122 - Amy Conklin, March Coord	\$ 2,857.00	Coordinator
2123 - The Greenway Foundation	\$ 500.00	Event Sponsorship/membership
2124 - Applewood Bookkeeping	\$ 60.00	bookkeeping

by the Coronavirus. BMW's immediate cash flow is good because we have reserves in the bank we can draw down in the short term. There may be a need for the Budget Committee to be resurrected to earmark some of the reserves for regulatory and other future projects. The consensus was to send out the invoices and wait for comments from the members. Anyone wanting to talk about changes to their membership dues payments is encouraged to contact **Amy or Chris**. Sarah commented that the impacts to budgets from Coronavirus are widespread but temporary and require flexibility.

The Board discussed the GEI contract to continue stormwater monitoring. The contract is for the calendar year which makes it difficult to track the budget through our different fiscal year. **Steve** will reach out to GEI and request the next contract be for the first seven (7) months of 2021 and for our fiscal year (August 1 to July 31) after that. The current proposed contract was approved with a unanimous Thumbs Up.

- Coordinator Updates (Amy C.)
 - Approval of the March 24th, 2020 Meeting Minutes - unanimous Thumbs Up vote to approve
 - Amy will begin posting the South Metro Land Conservancy (SMLC) newsletter on BMW website
 - Amy will send this month's checks to Steve for signature and will take the CMF membership check to Dan when he is allowed to return to his office.

Next Meetings

- Board Meeting – **May 26th, 9 am Metro, maybe in person?!**
- I/E Committee Meeting – **May 5th, 2020 10 am to 11:30, Barr Lake Nature Center**
- Bike Tour – **June 18th, Barnum Park**
- Stakeholder Meeting/Watershed Tour – **June 23rd, 2020 9:30 am, Montclair basin**
- Technical Committee meeting – **TBD, 9 am Metro**

BMW Board 2020 'Schedule'

- ~~January 28, 2020 Meeting at South Adams Water and Sanitation District Thank you **JM!**~~
 - ~~**Amy** will present an outline for a presentation paper on the BMW OCCT experience. Too many acronyms (TMA). Amy will reach out to DW to get their feedback on the outline.~~
 - ~~**Erin** will present what she's done with a Data Visualization Tool~~
- ~~February 25, 2020 Stakeholder meeting Barr Lake Nature Center Thank you **Michelle**~~
 - ~~**Steve** Water Quality update~~
 - ~~**Chris** ECCV update~~
 - ~~**Julie** – Centennial update~~
- March 24, 2020 – Metro, Thank you **Steve**
 - **IP Committee** – progress report and brainstorming opportunities and funding
 - **Dan/Erin** – Industrial Permit update

- April 28, 2020 – Metro, Thank you **Steve**
 - ~~GEI or Steve~~ Stormwater quality update
 - **IP Committee** - Update
- May 26, 2020 – Metro, Thank you **Steve**
 - Presentation from Lobbyist – **Amy** will work with **Michelle** to get CPW lobbyist to talk to the Board about the legislative process and what would be required for passing P-free fertilizer legislation
 - Gutter Bin Presentation
- June 23, 2020 – North Denver Cornerstone Collaborative tour – **Amy** will work with **Brad** to set it up
 - Include information on improvements at City Park
- July 28, 2020 – Meet at Metro, Thank you **Steve**
 - **Steve** – will try to set up a tour of Metro’s P recovery facility
 - **IP Committee** – Update, maybe draft
- August 25, 2020 – Meet at Metro, Thank you **Steve**
 - **Amy** will invite other watershed groups to attend this meeting and give them lunch. We can ask for an update on activities in Chatfield (including Chatfield Reallocation), Bear Creek (including progress on their TMDL) and Cherry Creek
 - **Curt** (?) – Present on how FRICO plans to operate in regards to the conservation pool at Chatfield
 - **IP Committee** – present final draft?
 - Preparation for Annual meeting and BBQ
- September 22, 2020 – meet at Barr Lake, try to engage more stakeholders, thank you **Michelle**
 - **Michelle** – will help arrange golf cart tour to area where in-canal treatment would be built
 - **Steve** – will present in-canal treatment concept, maybe Harvey Harper can call in
 - **Amy** – will reach out to WQCD (Meg Parish, Joni Nuttle, Nicole Rowan, Patrick P.)
- October 27, 2020 – Meet at Metro, thank you **Steve**
 - General catch up from whatever we didn’t get to or need to get to.
 - Other topics – PFAs, invite Paul Winkle to talk about Arsenic and fishing
- November 24, 2020 – Board Retreat

BMW I/E Events for 2020

Date	Event	Activity	Name and contact
3/26/20	Stormdrain Marking App presentation	2000 W Third Ave, Denver	Donny Roush, Juliana Archuleta
3/27/20	Stormdrain Marking	McAulliffe Middle School	Steve Lundt, Amy Conklin, Donny Roush, Phillip Curtis, Jennie

4/13/20	Raptor Run	Barr Lake	Michelle Seubert
June, TBD	Furry Scurry	Wash. Park	Donny, Jennie
5/2/20	CU Capstone Project	Presentations on Auraria Campus	Steve, Amy
5/16/20	Northglenn-Thornton-Westminster Water Festival	Front Range Community College	Michelle, James
5/18/20	Boat Safety Day	Barr Lake State Park	Michelle
6/18/20	Urban Water Cycle Bike Tour	Bike Tour along Platte River	Steve, Amy, Donnie, Jennie
6/22/20	Greenway Foundation River Fest	South Platte River	Jennie and volunteers, Donny
6/23/20	BMW Watershed Tour	Barr Lake State Park	Amy
7/11/20	Lake Appreciation Day	Barr Lake State Park	Michelle, Steve, Amy
7/25-28	Arapahoe County Fair	The Homestead	Amy, SPLASH