


## Fw: Comments for CARPC commission consideration

Tanya Sime <tanyas@capitalarearpc.org>

Tue 7/9/2024 1:53 PM

To: Nick Bower <nickb@capitalarearpc.org>

 1 attachments (29 KB)

CARPC meeting 11 July fin.docx;

Tanya Sime  
608-474-6017

---

**From:** Brian Christian <bchristi490@gmail.com>

**Sent:** Tuesday, July 9, 2024 1:33 PM

**To:** Tanya Sime <tanyas@capitalarearpc.org>; Brian Christian <bchristi490@gmail.com>

**Subject:** Comments for CARPC commission consideration

Hi Tanya, Please find attached comments and a recommendation I have prepared for the proposed AWQMP amendment submitted by MMSD related to BMC Outfall 005.

As it is several pages, I don't expect it to be read in its entirety, unless that is desired. Perhaps the bullet points I provided and the summary.

I appreciate the commissioners' time in reviewing this.

Thanks  
Brian Christian

Dear CARPC Commissioners,

Please consider my comments below and my request to NOT approve the MMSD's amendment to the Areawide Water Quality Management Plan related to phosphorus mitigation in Badger Mill Creek (BMC).

### **The BMC/IAT urban corridor**

City of Verona and Dane County parklands located on the north and south sides of BMC comprise an urban environmental corridor extending from County Hwy PB and the Military Ridge State Bike Trail on the northeast to Bruce Street on the west. The Ice Age National Scenic Trail (IAT) traverses nearly the entire corridor with the majority of its route adjacent to BMC. The corridor also contains numerous City of Verona hiking trails and a new paved multiuse path also adjacent to BMC. There are 4 pedestrian bridges that cross BMC in this area including a significant, newly constructed bridge for the multiuse path.

This urban corridor is a pivotal environmental link connecting Badger Prairie Park natural area to the north, Goose Lake area wetlands to east with State and Dane county natural areas to the west and south extending to the Sugar River. The corridor provides habitat to various riparian and upland wildlife species.

The corridor is also an important means to connect people with nature for local residents and those drawn from the larger regional trail systems. The trails are heavily used for wildlife viewing, hiking and biking. Access to BMC, a Class II trout stream is a rare asset for anglers in an urban setting. The importance of the corridor has led to the formation of a very active Friends Group registered with the Dane County Parks Volunteer Program which is collaboratively stewarding the property with the City, County and IAT Alliance, and has contributed 1000's of volunteer work hours since its inception 2+ years ago.

- **Badger Mill Creek is the key cornerstone feature of the BMC/IAT corridor, a unique and valuable urban asset in Dane County.**
- **The corridor provides important wildlife habitat and is heavily used and highly valued.**

### **Effluent impact on BMC**

Over the past 20+ years effluent discharged to BMC has had a "net positive" effect on BMC health as assessed by evaluating the biology of trout, a sensitive indicator species. This statement has been acknowledged by MMSD and most recently supported by a WDNR study entitled "*Trout Stream Management and Status Report of the Sugar River Watershed Dane and Green Counties, Wisconsin 2020-2021*" (D. Oele, March 2023), which confirms a Class II trout stream categorization, and recommends further stream investment.

The increase in stream volume provided by the effluent is considered by experts to be the most beneficial to improved stream health. While highly treated, a number of contaminants/attributes of effluent remain at unnatural levels (e.g. chloride, nitrogen, temperature and others). Notwithstanding the quality of the effluent, discharge to BMC has improved its capacity to support trout. The higher temperature of the effluent is actually considered by experts to be a beneficial buffer, stabilizing temperature in cold months. Well-qualified stream biology experts of the WDNR, Trout Unlimited and Upper Sugar River Watershed Association agree that discontinuing effluent discharge to BMC will be detrimental to the creek. The decision to divert effluent to Badfish Creek simply shifts the contaminant load to BFC (8% increase).

Because of its proximity to Outfall 005, effluent discharge represents a very significant fraction of stream flow in the BMC/IAT corridor segment used most by people. Under baseflow conditions, effluent contributes ~93% of

flow at Count Hwy PB and 50% at the Bruce Street USGS monitoring station, as determined in February of 2023 in a stream study conducted by EOR for MMSD. When discharge was stopped during the study, in-stream trout habitat improvements made by Dane County in 2021 where above the water surface, rendering this investment useless. The quantity of water provided by the effluent is important not only for aquatic habitat but also for maintaining a healthy riparian ecosystem. Anglers and wildlife viewers alike will have a diminished experience with stream flow reduced to very low levels once the effluent discharge is discontinued.

While annual precipitation has increased since discharge to BMC began, climate change also predicts more episodic rain events with extended dry periods and higher temperatures. Extended periods of low rainfall and high temperature were experienced in 2021 and 2023. During much of the late summer and fall of 2023 baseflow was estimated to be 30-40% lower than that determined in the EOR/MMSD study mentioned above and reversed baseflow gains made in the prior 15-year period. The BMC/IAT corridor will be particularly sensitive to drought without effluent discharge.

- **Discharge of effluent has a “net positive” effect on BMC health.**
- **Discontinuing effluent will be detrimental to BMC aquatic and riparian habitats, erasing 20+ years of progress.**
- **The portion of the BMC/IAT corridor most used by people will be the most impacted by stopping effluent discharge.**
- **Concern about non-phosphorus contaminants will simply shift to BFC**

### **Maintaining BMC health is consistent with County and City investments**

Dane County and the City of Verona as well as a number of volunteer organizations have recognized the importance of environmental protection and urban recreational opportunities. Dane County, WDNR, Trout Unlimited, and the City of Verona implemented stream improvements in 2021 during sewer construction along BMC. These include installation of various structures to improve the stream channel morphology and increase habitat for trout. Dane County has invested heavily in property from the confluence of BMC and the Sugar River to Paoli and beyond (Rhiner, Duerst, Davidson, Falk-Wells) an area experiencing a marked increase in water recreation. The WDNR has invested in prairie restoration along the Sugar River and Sugar River State Natural Area. In addition, volunteer organizations including Trout Unlimited, Upper Sugar Watershed Association, Ice Age Trail Alliance and the Friends of Badger Mill Creek Environmental Corridor have contributed money and many thousands of hours on restoration activities in the area. Maintaining the current health status of BMC is consistent with and supports these initiatives.

- **Maintaining the current health status of BMC is consistent with and supports government and volunteer investments to conserve natural areas in the BMC/Sugar River watersheds which are under constant development pressure.**

### **Regulatory considerations for a unique situation**

The BMC situation is unique in that the effluent’s impact on the receiving stream is not negative, but rather “net-positive” for the health of BMC. This statement is justified by recent and relevant data, mentioned above, generated by well-qualified scientists from the same regulatory authority (WDNR) charged with making the decision on amendment approval.

According to water quality standards regulations (Wis. Stat. S. 283.83 and Code NR 102) their overarching purpose includes protecting public health and welfare as well as propagation of fish and aquatic life and wildlife. It is important that this purpose be met when applying the individual standards to the situation. Well-qualified stream biologists uniformly agree that the loss of effluent will damage stream health and reverse the progress which has been made. The benefits of flow volume and possible temperature effects of the effluent out-weigh possible impacts associated with contaminants as it pertains to BMC health.

Our unique situation also impacts thinking on how watershed approaches to phosphorus mitigation are applied. Regulatory requirements that limit mitigation to the receiving stream watershed appear to be based on the assumption that the effluent is harmful to the receiving stream. This however is not the case in our situation. So, expanding the area that can be used for watershed approaches beyond HUC 12, or moving a sampling point of compliance beyond the confluence of BMC and the Sugar River, seems rational and appropriate in our situation. This consideration helps address cost and risk challenges related to loss of land available for mitigation processes due to urbanization. Application of watershed approaches to the BMC/SR watersheds have the added value of supporting the tremendous investments described above by expanding phosphorus mitigation to these areas, can leverage experiences from Yahara WINS, and avoid impact to BFC.

Lastly, available information and correspondence between regulators and MMSD (e.g. contained in FCAP report) don't appear to include discussion or consideration of the benefits of the effluent return to BMC. Benefits to the environment and people should also be considered.

- **The unique positive impact of effluent should be considered in the application of regulations to both the amendment decision and to the applicability of watershed approaches to mitigate phosphorus**

### Summary

The BMC/IAT corridor is a rare and valuable asset for an urban area, worthy of protection. It is highly valued, recently improved and currently being stewarded by groups dedicated to its restoration and preservation. It makes sense to take advantage of the excellent treatment capabilities of MMSD and consider the effluent as a proven resource that benefits BMC rather than disposing of it as a waste product.

With collaboration and consideration of our specific situation, application of watershed approaches to phosphorus mitigation in the BMC/SR can address regulatory requirements, maintain the current health of BMC and improve investments in the larger area. I support revisiting MMSD's decision to divert effluent to BFC in favor of considering the demonstrated benefits of the effluent to BMC health.

I request the commission vote NO to the amendment.

Thank you for considering my views.

Respectfully,

Brian Christian