

Project Update: Badger Mill Creek Phosphorus Compliance and Next Steps

Commission Meeting
October 13, 2022

Madison Metropolitan Sewerage District



Badger Mill Creek Phosphorus Compliance Simplified: PLUS



Madison Metropolitan Sewerage District

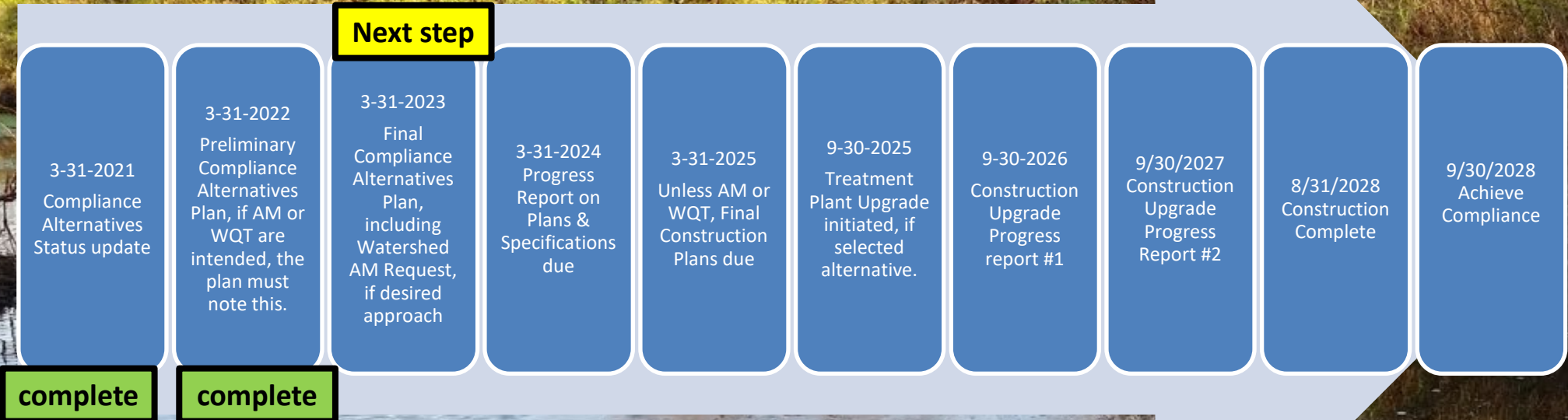


Project PLUS: Phosphorus Limits and Udated Solutions

Goals:

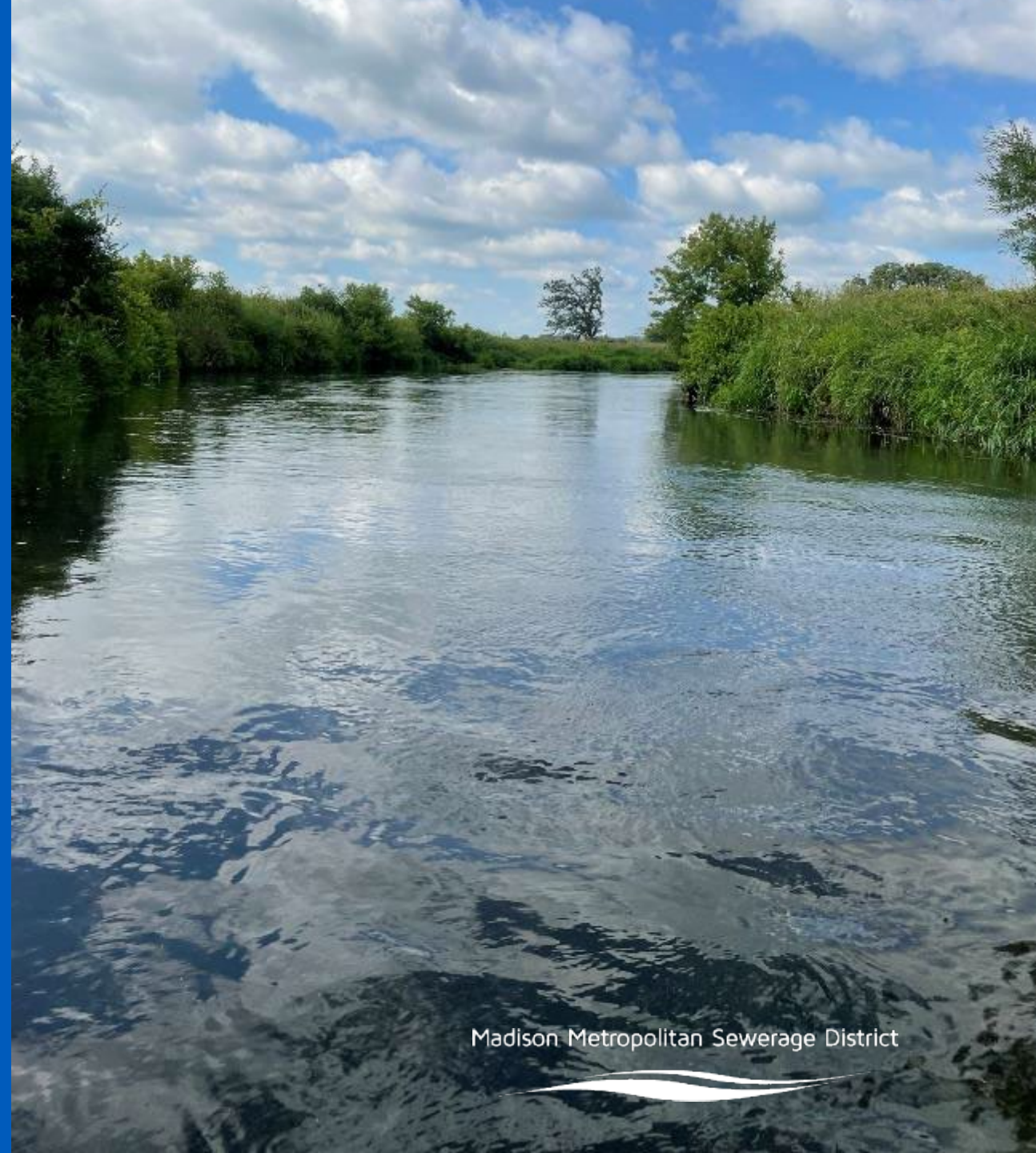
- Achieve phosphorus compliance standards.
- Minimize harm to the biology of the stream.
- Maintain a fiscal responsibility to ratepayers and owner communities.

PLUS Timeline



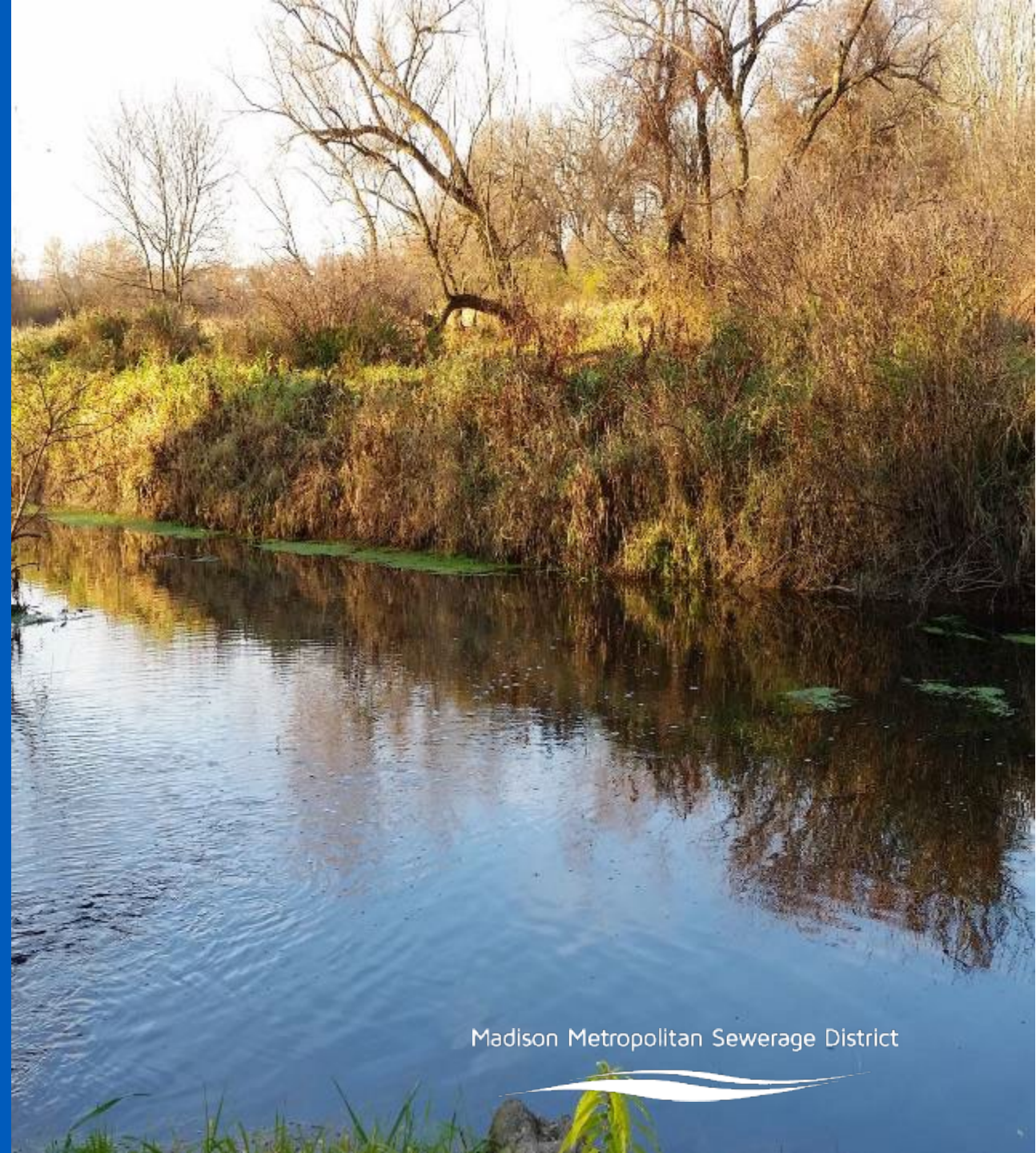
Update

- Working to answer Commission's questions
- Many meetings and discussions with stakeholders and regulators
- Continuing to assess the viability of possible compliance alternatives:
 - Adaptive management has been eliminated
 - Water quality trading appears less viable
 - Tertiary treatment is being reassessed



Why adaptive management has been eliminated

- Adaptive management in BMC HUC 12 requires more pounds than trading but success is only achieved if in-stream water quality meets 0.075 at the end of the project. This increases the District's risk.
- Adaptive management would need to account for >24,000 pounds if expanded to Upper Sugar River and BMC HUC 12's where non-point phosphorus reduction projects are more prevalent.
 - For perspective, the District discharges ~2,200 pounds of excess phosphorus each year.
- Without a TMDL or other permitted partners, we are eliminating this option.



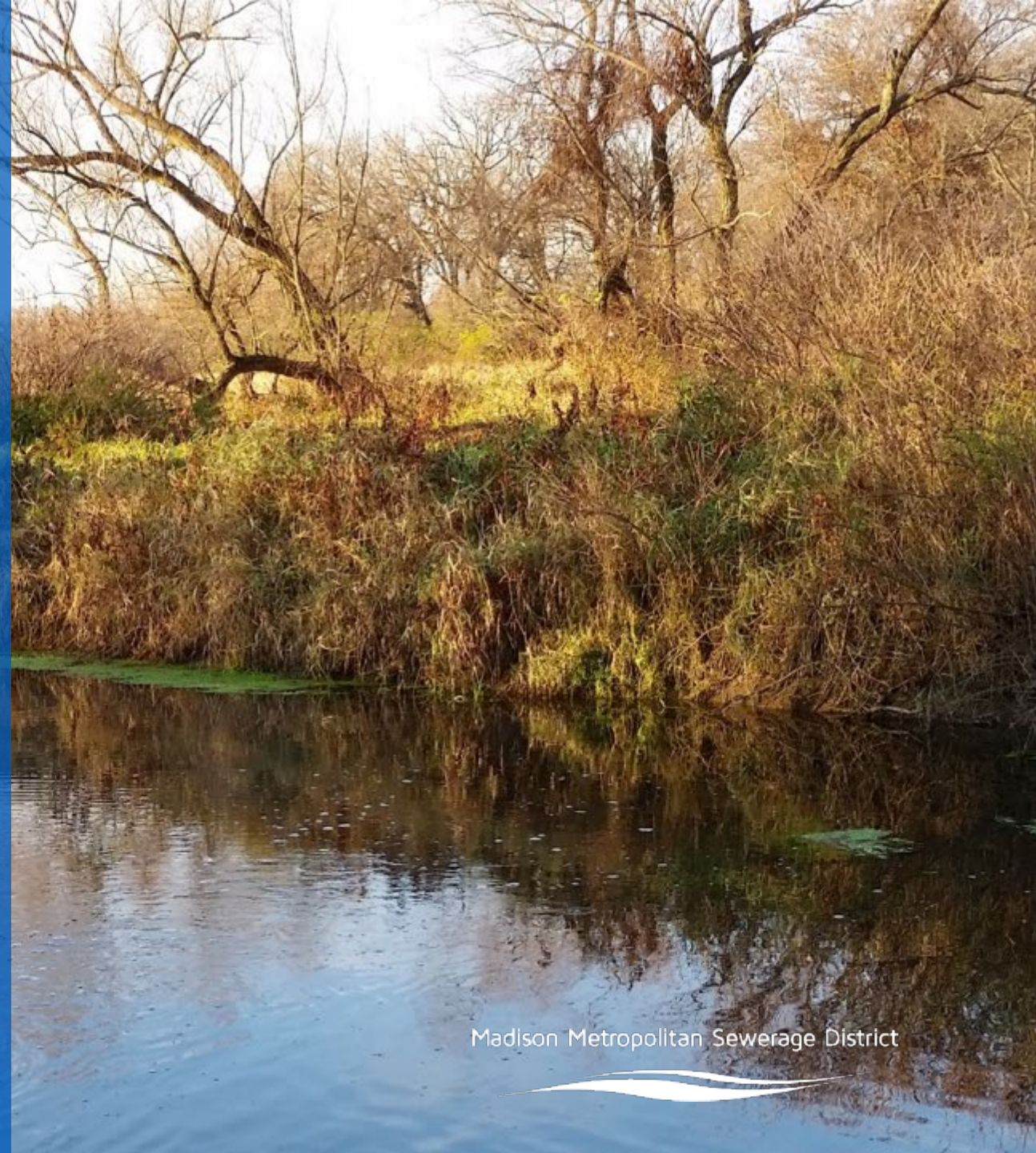
Why water quality trading is less probable

- District would need to offset the ~2,200 pounds of excess phosphorus each year.
- DNR stated that Badger Mill Creek HUC 12 will be the only trading area.
- Badger Mill Creek HUC 12 has very limited acreage available for non-point trades.
- Point-to-point trades and non-point trades in BMC HUC 12 are being evaluated but to date these appear limited, non-permanent and expensive
- Less likely as a final option due to lack of regulatory flexibility



Remaining Option: Modify BMC flow

- Phosphorus transfers to Badfish Creek with flow
- Recommendation from the energy study and appears fiscally responsible.
- Badfish Creek appears to have capacity to take the remaining 8% of flow, and Yahara WINS IGA would allow it. Other permit implications are being assessed.
- Stakeholders want to understand biological impacts. We are currently working with DNR, USGS, hydrogeologists to assess.





Treatment Opportunities and Challenges

- Tertiary treatment would add additional treatment at Nine Springs to remove required phosphorus.
- Working to assess logistical and process information, costs, energy estimates and timelines.
- **Challenges:**
 - Current cost opinions show this to have significant ratepayer impact
 - BMC receives 8% of District effluent and concerns have been raised over equitability and fiscal responsibility of the impact on rates.
 - This treatment only addresses phosphorus compliance and not other parameters or the impact of future regulation/water quality standards.



Community Engagement and Outreach

- Continuing to have conversations to understand all interests around this topic.
- Specific engagement for groups/individuals
- Started engagement late August with goal to be complete over the winter 2022/2023
- Tentatively planning public information meeting in November.

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Next Steps

- Continue stakeholder engagement
- Continue to assess, incorporate learnings and refine potential compliance options
- Return to Commission with a preferred alternative
- Submit Final Compliance Option Report to DNR by March 31, 2023





Questions?