In 2017, the CLFLWD was awarded a Clean Water Fund grant from BWSR to implement the Moody Lake Alum Treatment Project (5-221-C). Of the total grant amount, there was $20,000 budgeted for engineering technical services. The proposed project is the final step in an adaptive management, multi-phase approach to improving water quality in Moody Lake.

Paleolimnological sediment core data, collected by the St. Croix Watershed Research Station on behalf of CLFLWD, will be reviewed and analyzed by EOR to develop an appropriate dosing plan for Moody Lake in 2018. Additional sediment cores may be collected at various locations from the top 20 cm of sediment to determine a more depth specific dosing plan, as needed. The alum treatment will likely be split into two treatments, with the first half applied in 2018, and the second half applied in 2019. The alum will likely be applied in the fall, following aquatic plant senescence, but the exact timing of the treatment will be determined by the contractor.

Plans and specifications will be completed for all components of the alum dosing to be bid, including but finalizing alum dosing rates and specifying sediment incorporation methods. MPCA permitting has already been requested and approved. EOR will prepare project bidding documents, advertise for bids, conduct a pre-bid meeting, answer bidding questions, and provide bid packages for alum application to Moody Lake. Additionally, EOR will develop an alum treatment operation, monitoring and maintenance plan that the District will follow to ensure that the alum treatment meets its goals throughout its design life. Finally, EOR will observe and document the alum application and management of the alum application contract. Frequent site visits will be made by EOR engineer and scientists during application to ensure alum is being incorporated into lake sediments as prescribed. Construction contract management will include the processing of pay requests and project close out documentation. Actual application dose and treatment map provided by the Contractor will be reviewed by EOR engineer prior to project close out.

Budget

104 hours - $14,800

Mileage and lab expenses - $4,868 (includes $4,500 of potential additional sediment P fraction analysis, as needed)

Total - $19,668

Timeline

April 2018 – November 2019
Deliverables

- Alum dosing plans and specifications
- Project bidding documents, Attendance at prebid meeting, Attendance at bid opening, Bid award recommendation memo to Board
- Site observation and project status reports, Pay requests, Map depicting depth of alum incorporation and dosing plan.

Recommendation

We recommend the Board authorize a not-to-exceed fee of $19,668 for EOR to implement the Moody Lake Alum Treatment project.