

Westwood Lake Improvement Project WST-2



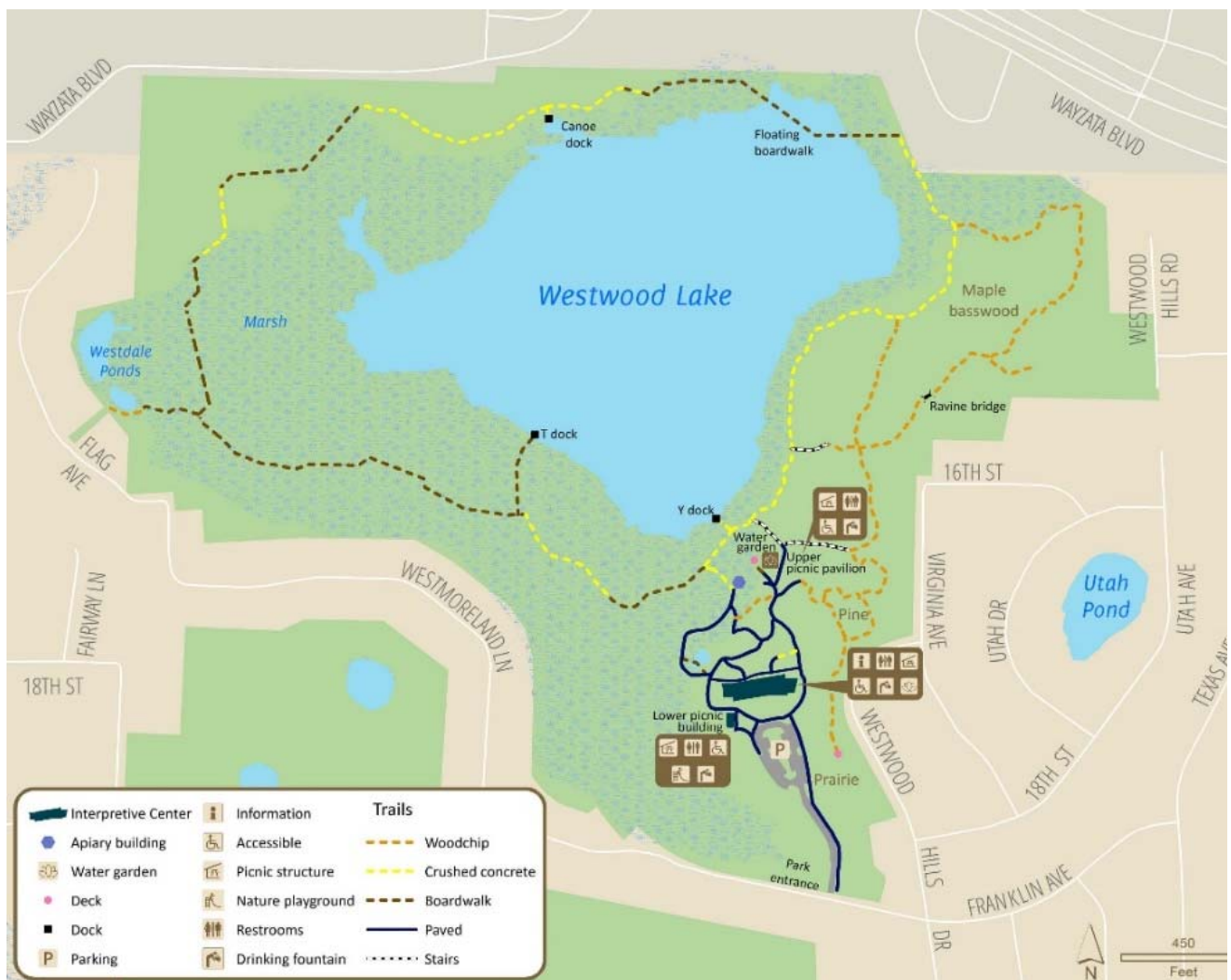
FINAL REPORT
June 1, 2021

I. Project Overview

The Westwood Lake Water Quality Improvement Project is part of a much larger project at the Westwood Hills Nature Center, 8300 West Franklin Avenue, St. Louis Park, Minnesota. The North Water Feature project assists water quality improvement by providing additional storm water runoff storage, and reducing runoff volume, and sediments and nutrients in the water, through infiltration, evaporation, or evapotranspiration. The water used in this feature is captured from the rainwater that comes off of the roof of the interpretive center building. This project also includes educational benefits through signage, pedestrian bridges and interactive hand pumps. Staff will develop an educational curriculum based on the bog and the hydrologic cycle represented through the linear storm water feature.

II. Project Area

The Westwood Lake Water Quality Improvement Project is part of a much larger project at the Westwood Hills Nature Center. The new Interpretive Center building is the most environmentally sustainable building within the state, making it a thought-provoking project to design and build. Recently the building design achieved Net-Zero energy for the past 12 months and is undergoing certification to acknowledge that accomplishment. Once certified, this will be one of the first, if not the first, certified Net-Zero energy commercial buildings in Minnesota.



III. Project Description and Outcomes

The Westwood Lake Water Quality Improvement Project was completed in the spring of 2021. This improvement project was constructed in conjunction with the new Westwood Hills Nature Center's Interpretive Center Building Project. The City of St. Louis Park hired Barr Engineering for the design and bidding assistance as well as overseeing the construction of this project.

The project is a meandering water feature that captures and recirculates collected runoff from the roof of the nature center and provides water quality improvements that are above and beyond what the Commission requires for the redevelopment of the overall nature center. There is an emphasis on public education about stormwater management within and out of the nature center, including interactive features and kiosks discussing the water cycle, the Tamarac Bog, and the good work that the Bassett Creek Watershed Management Commission does. Westwood Hills Nature Center serves, on average, over 27,000 people in programs, events, and visitor services.

Stormwater management and nutrient-reduction capacity created by the project is estimated at 59.9 pounds annually of Total Suspended Solids and 0.33 pounds annually of Total Phosphorus. A final analysis of the actual pollutant reduction has not been completed to date. The water feature project functions as designed.

IV. Timeline and Key Documents

The following are links to The Westwood Lake Water Quality Improvement Project, which is part of a much larger project at the Westwood Hills Nature Center.

The following links include documents, reports, timelines, and dedicated webpages.

- [Westwood Lake Water Quality Improvement Project website](#)
- [Feasibility Study Proposal](#) (approved September 2017)
- [Final Feasibility Study](#) (approved May 2018; concept #3 chosen by BCWMC)
- [50% Designs](#) (approved July 21, 2018) ~ [Presentation of 50% Designs](#)
- [Resolution Ordering Project](#) (August 16, 2018)
- [City of St. Louis Park new Interpretive Center](#)
- Initial letter requesting reimbursement (March 30, 2020)
- Final Report June 1, 2021

V. Project Budget and Funding

The entire Westwood Hills Nature Center construction project was budgeted at \$12,345,493 of which \$1,000,000 was designated for the design of the project. The estimated cost of the Westwood Lake Water Quality Improvement Project is \$404,500. Design and engineering cost was \$116,000 and \$288,500 was expended to construct the water quality improvement project. \$404,500 will be paid from funds received from a county tax levy pursuant to Minnesota Statutes, section 103B.251 levied in 2018 for collection in 2019.

The initial reimbursement request in the amount of \$174,486.76 (\$96,891.76 for design and \$77,595 for construction) was submitted and reimbursed by BCWMC in March of 2020.

VI. Lessons Learned

Lessons learned with the water quality project are few and largely minor and include issues with landscape edging, hand pumps losing prime, and movement of stones within the channel. The larger lessons learned pertain to managing the invasive vegetation, in the bog specifically, and around the ponds.

The bog is a sensitive area and gaining access to adequately maintain is challenging. Staff is thinking of how to cover over the winter months to aid in the spring cleanup. Managing the native vegetation areas surrounding the pond is routine maintenance. However, the nature area struggles to manage invasive vegetation and keeping the pond and channel areas well maintained takes extra staff time. There is little we would change with the design, but on a project of this nature, requires a lot of attention to the smallest of details, long term maintenance, and flexibility in the budgets to make field changes as they are identified.

VII. Maintenance

The Westwood Lake Water Quality Improvement Project is part of a much larger project at the Westwood Hills Nature Center, where facility staff is onsite on a daily basis and will be observed as such. The benefit of this project enhances the overall center and will be inspected and maintained by trained naturalists knowledgeable in native habitats. Maintenance of this new water feature includes the following items:

- Inspections and maintenance activities routinely and recorded in Cartograph asset management software
- Maintain adequate water levels within bog on a weekly basis
- Removal of debris from the lower catch basin daily
- Removal of debris and undesirable vegetation from the water channel monthly
- Stabilize stones within water channel as needed
- Winter shutdown procedures – drain and remove sediment from piping and pond, drain and open valves, and drain the water from the holding tank
- Completion of these tasks will be completed by Westwood Hills Nature Center Naturalists staff

VIII. Photos



North water feature under construction



Bog liner and maintenance channel installation



Tamarack bog at the start of planting

Transplanted bog fully planted





Watershed educational sign located inside the interpretive center of Westwood Hills Nature Center



Bog educational sign facing bog at Westwood Hills Nature Center

Pump patio educational sign at Westwood Hills Nature Center

