

March 10, 2022

Sent via email

Shawn McGee, PE
Office Practice Leader, Geotechnical Engineering & Inspection
TRC
1382 West Ninth Street, Suite 400
Cleveland, OH 44113

Dear Mr. McGee,

Thank you for meeting with Northeast Ohio Regional Sewer District (District) staff on February 16, 2022, to discuss TRC's alternative conceptual design for the reconstruction of Horseshoe Lake Dam. As the District understands, TRC was hired by a group of residents who would like the dam to be reconstructed to maintain some semblance of a lake. It is our understanding that the concept presented by TRC at the meeting would reconstruct the dam with the goal of addressing the ODNR safety compliance issues, increasing the active storage by lowering the primary spillway elevation, and maintaining the historic water surface footprint of Horseshoe Lake. The District has reviewed your information and as discussed in more detail below, your proposed concept does not achieve the goals of the Regional Stormwater Management Program (RSMP).

Beginning in 2018, the District conducted a thorough evaluation of the problems and potential holistic solutions in the Doan Brook watershed under the Chagrin River/Lake Erie Direct Tributaries Stormwater Master Plan (CHALET SWMP). The Horseshoe and Lower Lakes were studied to determine if they provided downstream flood control which could justify the use of RSMP funds for their reconstruction. The CHALET SWMP evaluated numerous alternatives for both Horseshoe and Lower Lakes in the early stages, as is common in planning level studies. Eventually those were refined to the four most feasible listed in the September 2021 Technical Memorandum.

One of the early analyses by the CHALET SWMP maximized the active storage at both lakes to determine the reduction of inundation of buildings and transportation assets in University Circle up to the 100-year storm event. For this analysis, the hydraulic/ hydrologic modeling assumed that both lakes were converted to dry detention basins with rebuilt Class I dams at their approximate existing heights and dredged to their original depth. This analysis concluded that Lower Lake's active storage was primarily responsible for reducing the number of inundated buildings and transportation assets downstream of the Horseshoe and Lower Lakes. As a result, the alternative to utilize active storage at Horseshoe Lake was not evaluated further and therefore not included in the September 2021 Technical Memorandum, which has been provided.

TRC's alternative conceptual design for Horseshoe Lake Dam results in less active storage than the conditions modeled by the CHALET SWMP described above, and therefore it does not provide improved flood control in University Circle which could justify the use of RSMP funds for its construction.

The final recommendation to remove the Horseshoe Lake Dam and restore the stream reach of Doan Brook was selected because it provided the best combination of water quality and habitat improvements, flood relief, ODNR dam safety compliance, and long-term benefits of not maintaining the Horseshoe Lake Class 1 Dam. Lastly, since storage at Lower Lake was determined to reduce the number of inundated buildings and transportation assets at University Circle, the District has committed to reconstructing Lower Lake Dam under the RSMP.

Please feel free to reach out to me to if you would like to discuss our decision on TRC's alternative conceptual design.

Sincerely,



Janet Popielski, P.E.

Stormwater Program Manager

cc: Kyle Dreyfuss-Wells, CEO, Northeast Ohio Regional Sewer District
Frank Greenland, Director of Watershed Programs, Northeast Ohio Regional Sewer District
Eric Luckage, Chief Legal Officer, Northeast Ohio Regional Sewer District
Katarina Waag, Assistant General Counsel, Northeast Ohio Regional Sewer District
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