



Dear Mayors Seren and Weiss, and Members of Cleveland Heights and Shaker Heights City Councils:

Thank you for the opportunity to present to the Shaker Heights City Council on April 25, 2022 and the Cleveland Heights City Council on May 16, 2022 regarding the progress of the Doan Brook Restoration Near Horseshoe Lake Park project. As follow up, I want to reiterate several points and reaffirm the Sewer District's position regarding the suggested approach from the Friends of Horseshoe Lake and TRC to addressing the increasing state of deterioration of Horseshoe Lake dam. Please let me know if you would like to discuss any of these points further or would like additional background information.

Horseshoe Lake dam must be removed because it is unsafe: Horseshoe Lake dam is a 170-year-old earthen dam. It is a Class I dam regulated by the Ohio Department of Natural Resources (ODNR) Dam Safety Program. Horseshoe Lake dam is in a dangerous state of failure and in exceptionally poor condition. Seepage through the dam and masonry joints, cracking in the masonry, and sinkholes indicate Horseshoe Lake dam is unstable and deteriorating. In late 2021, additional deterioration of the spillway prompted ODNR to order the closure of the area to the public and required additional measures to reduce the potential for a dam failure.

Horseshoe Lake was formed by a human made impoundment (i.e., dam) on Doan Brook originally built for commerce: In general dams on streams impact water quality and require on-going maintenance. As a result, there should be a justification for such impoundments to outweigh the environmental impacts and on-going costs and potential risks of dam failure. These justifications typically include flood control, drinking water supply, power supply or commerce.

Horseshoe Lake dam does not supply drinking water, power or play a role in commerce. Based on our analysis and data (addressed below), it also does not provide flood control function. As a result, the Sewer District cannot pay for the rebuilding of Horseshoe Lake dam under the Regional Stormwater Management Program, nor will the Sewer District pay for any new dam at Horseshoe Lake Park regardless of height.

We can, however, fully fund and maintain the restoration of Doan Brook at this location. This restoration is supported by extensive modeling and data analysis as part of the Sewer District's multi-million-dollar Chagrin River and Lake Erie Tributaries (CHALET) Stormwater Master Plan (SWMP) of the watershed. It is also supported by watershed science and positive results have been seen in communities across the country as environmental impacts to rivers and streams are repaired. The benefits of removing dams on natural streams such as Doan Brook are well documented by numerous organizations and agencies such as the US EPA, American Rivers, the U.S. Fish & Wildlife Service, and the Nature Conservancy.

Horseshoe Lake Dam will not be reclassified to a lower ODNR classification: The dam is designated as a Class 1 structure by ODNR. This is the highest classification in Ohio since it is located upstream of another ODNR regulated Class I high hazard dam at Lower Lake and heavily populated areas, including University Circle in the City of Cleveland. The Class 1 designation reflects the downstream hazard threatening life and property. Please see attached communication from Mia Kannik from ODNR.

Ms. Kannik does note that, if the dam were modified to a significantly smaller size, it would fall outside ODNR's jurisdiction making it exempt from Ohio's dam safety laws. This option was also vetted by the Sewer District and rejected. A new smaller dam would still impede Doan Brook and would not provide flood control benefits, nor would it provide water quality and habitat improvements. To reiterate, the Sewer District will not pay for the modification or rebuilding of another dam at Horseshoe Lake Park.

The approach recommended by the Sewer District is supported by modeling, data and analysis: The plan is supported by millions of dollars of investments in multi-year studies and assessments, including a 2,381-page Chagrin River and Lake Erie Tributaries (CHALET) Stormwater Master Plan (SWMP) study report which includes Horseshoe Lake; a 109-page Sediment Sampling and Characterization Report; a 55-page Technical Memo on the Aquatic Life in Doan Brook; and a 26-page technical memo summarizing our analysis and recommendation for Shaker Lakes. Gannett Fleming, the engineering firm hired by the City of Cleveland Heights to assess the Sewer District's data and studies, concluded their independent review had no objections to the Sewer District's methodologies or findings.

Alternatives have been fully vetted: Many initial alternatives were vetted by the Sewer District during the stormwater master planning efforts within the Doan Brook watershed, including options similar to the alternative concept from the Friends of Horseshoe Lake and TRC. Those options were eliminated from further consideration because of the lack

of demonstrated flood control benefits, cost implications, dam safety compliance issues, and a lack of water quality and habitat improvements.

TRC provided an overview of their alternative concept to Sewer District staff. Following Sewer District review, a follow-up letter was provided to TRC by the Sewer District (attached), which concluded their option did not meet the objectives of the Regional Stormwater Management Program for the factors considered above. Further, the TRC concept did not include detailed cost estimates, project details or demonstration of flood control benefits through their own modeling or the CHALET model upon which the Sewer District's conclusions are based.

I acknowledge, understand, and appreciate the emotion behind preserving Horseshoe Lake. When it was obvious that public safety and science pointed to the removal of the dam, the Sewer District did not make the decision lightly to address this serious threat to public safety. We look forward to working with the Cities of Shaker Heights and Cleveland Heights as well as residents across the area as we move through the removal of Horseshoe Lake dam and the restoration of Doan Brook. As always, we remain open to reviewing further information, such as flood control benefits, design details and cost estimates, from TRC if that should be developed and provided to the Sewer District.

Sincerely,



Frank Greenland, Director of Watershed Programs
Northeast Ohio Regional Sewer District

CC: William Hanna, Law Director
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