

To: The Members of Hide-A-Hills Club

From: Jim Krygier, On behalf of the Management Committee

Subject: Lake of the Four Seasons Dam Issues

I would like to take this opportunity to brief you on recent developments that have occurred at the main dam at the Lake of Four Seasons (LOFS).

In early October, the HAH maintenance staff noticed small horizontal cracks at the top of the LOFS dam. The cracks began at Dock B, the second dock from the east side of the Lake, and extended to Dock D, a distance of approximately 270 feet. We took pictures of the cracks and notified our local civil engineering firm, 2LMN. Curt Shonk, Professional Engineer, of 2LMN and representatives from PSI, Inc. (a Columbus geotechnical engineering firm), came to Hide-A-Way Hills to inspect the dam. As required by law, we also notified the Ohio Department of Natural Resources (ODNR). We were advised by both groups to monitor the situation to determine if the cracks grew; this would indicate if the dam was potentially "slipping". In fact, we did notice additional slipping over the next two weeks.

On October 24, 2013, a meeting was held with HAH staff and three members of the Management Committee, the 2LMN engineers, and a civil engineering firm recommended by 2LMN, PSI engineers. In addition, two ODNR engineers inspected and evaluated the status of the dam. ODNR advised us to develop a monitoring program with assistance from our contract engineers. PSI provided us with a monitoring proposal that we discussed with 2LMN, but for a variety of reasons, we did not find the proposal acceptable.

On the advice of 2LMN, HAH staff also injected bentonite, an absorbent clay material, into the cracks to reduce the amount of rain water entering the cracks which would increase their size. We also used tarps to cover the cracks during particularly rainy periods.

In early December, HAH staff working under supervision from 2LMN dug a trench on the lakeside face of the dam to determine the location and size of the slip. Conditions were recorded and photographed. Our findings were communicated to ODNR which subsequently directed us to dig additional trenches to obtain more information.

We have also been advised by ODNR to lower the lake further (from the current 5 feet down to 10 feet). In compliance with this directive, we asked 2LMN

to provide us with a program to coordinate this project. We received a contract proposal on January 6, 2014 from 2LMN and DLZ, a geotechnical engineering firm that previously has done work on the dams on Lakes Arrowhead, Deerfoot and Tomahawk. After review and discussion, the Management Committee approved this contract on January 14, 2014.

The contract specifies that we dig additional trenches to determine the size and extent of the dam slip. Soil borings and samples will also be obtained. This work will be done by a certified contractor under the direction of 2LMN and DLZ. Once the evaluation is complete, the engineers will provide ODNR and us with a plan to repair the dam. The plan will specify activities, materials and cost projections. The evaluation will begin as soon as is possible depending on weather and soil conditions.

One very important point that should be noted is that ODNR has directed us to not refill LOFS until we have an approved and completed remediation project. Since LOFS dam is categorized as a Class 1 dam, this is a reasonable and expected step.

As a result, it is imperative that we begin this process as soon as we can to determine the proper steps to take to correct the problems on the dam. Once we have the program certified by the engineers and approved by ODNR, we will need to move with due diligence and haste to accomplish the goals of the project. The schedule will depend on the availability of funds, and very importantly, on weather and ground conditions. It is quite possible to envision that this year's boating season will be impacted although it's difficult to say at this time to what extent.

This project is the top priority for the Management Committee and Club staff. Although there is no reason to believe we cannot solve this problem, we must move expeditiously to employ highly qualified technical experts to provide solutions. We will communicate Club plans to the membership as the project unfolds.

Please feel free to contact any of the Management Committee members with questions or comments.

Management Committee:

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Richard Rudawsky
Todd Kaho
Kevin McLain
Paul Heimberger

January 23, 2014