

May 6, 2025

CLCAX19001

via email and mail

New Jersey Department of Environmental Protection Bureau of Dam Safety 44 S. Clinton Street, 3rd Floor P.O. Box 420 Mail Code 44-03 Trenton, New Jersey 08625-0420 Att: Clint Oman, PE, Supervisor

RE: COLLINGS LAKE CIVIC ASSOCIATION CUSHMAN LAKE DAM (NJDEP FILE NO. 31-98) BLOCK 2518, LOTS 1 & 1.01 FOLSOM TOWNSHIP, ATLANTIC COUNTY, NEW JERSEY

Dear Mr. Oman:

This letter is provide to document activities associated with the response to seepage occurring at the primary spillway of the Cushman Dam. The Dam is currently under construction and the lake has recently been filled. Please find the timeline of events for the Cushman Lake Dam:

- 4/24/2025 Pennoni was contacted by the Collings Lakes Civic Association (CLCA) to be made aware
 of developing circumstances at the Cushman Lake Dam site.
 - Two concerns were raised. The first being that 6-7 boils (one main one and several smaller ones) had formed approximately 2-3 feet from the downstream face of northermost culvert of the existing primary spillway, potentially indicating water passing under the existing primary spillway. A video of the boils was provided by the Client to Pennoni late that afternoon to provide context.
 - 2. The second was that there was water present in the swale on the downstream side of the North auxiliary spillway and a seep forming from the riprap beyond the spillway to the wooded/wetland area.
- 4/25/2025 Pennoni visited the site the following morning, to observe the conditions on site. Approximately 11 boils were observed on 4/25/2025. The boils appear 1/2"-2" in diameter with a sandy turbulent flow and sand depositing on top of the newly installed rip rap in the area. The diameter of the sandy deposit was approximately 4 feet. Pennoni took video and photos of the area of both areas under observation
- 4/28/2025 Pennoni Project Manager (PM) visited the site to observe any changing conditions in the boil or water in the riprap. No change was noted. At that time, the Pennoni (PM) <u>directed the CLCA to</u> <u>open the sluice gate and bring down the lake elevation.</u> Pennoni was informed at that time that CLCA would contact the project contractor for the key to the sluice gate to begin the dewatering.
- 4/30/2025 Pennoni informed by CLCA that the sluice gate would still not open or closed. Gate appears jammed. Contractor informed CLCA that they would be onsite on 5/5/2025 to open gate.
- 5/1/2025 Pennoni Project Manager (PM) Called NJDEP Dam Safety to report the boils and condition of the dam. Sluice gate still not operational.

5/2/2025 Pennoni Project Manager (PM), CLCA and NJDEP met on the site to observe conditions. No change was noted. At that time, the NJDEP directed the CLCA to open the sluice gate and bring down the lake elevation. Contractor scheduled for May 5 to open gate. Conceptual alternatives for mitigation were discussed including placing additional sheeting on the upstream side of the spillway and potential for grouting under the existing spillway.

Pennoni and CLCA will continue to monitor the riprap seep at the northern end of the auxiliary spillway. It is most likely groundwater not piping or seepage.

- 5/3/2025 CLCA continues to monitor daily.
- 5/5/2025 Pennoni visited the Cushman Lake Dam site. During this visit, Pennoni used an underwater camera to identify condition of the sluice gate and trash rack. Video shows a large amount of wood debris was present at the gate and trash rack.

Pennoni is reviewing the geotechnical information for the project as well as as-built documents with original design plans and the original Lippincott and Jacobs report on the dam and spillways to develop additional seepage models to formulate possible solutions.

If you have questions regarding the application, you can contact me at (215) 254-7735 or by email at <u>bgrasso@pennoni.com</u>.

Sincerely,

PENNONI ASSOCIATES INC.

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Beth-Ann M. Grasso, PE, CME, CFM Project Engineer

Cc: Collings Lake Civic Association

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