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To: [Janet Popielski](#)
Subject: EXTERNAL: Horseshoe Lake Dam
Date: Monday, May 23, 2022 4:40:40 PM
Attachments: [image001.png](#)
[image002.png](#)
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[image004.png](#)

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Janet,

Thank you for your inquiry about the classification of Upper Shaker Lake Dam (a.k.a. Horseshoe Lake Dam). If the dam is repaired to its original size, it will continue to be a Class I dam.

The classification of a dam is based on three factors: the dam's height, storage capacity, and potential downstream hazard. The height of the dam is the vertical distance from the top of dam (crest) elevation to the lowest point along the downstream toe. The storage capacity is the total volume of water that the dam can impound at the top of dam (crest) elevation. The potential downstream hazard consists of roads, buildings, homes, and other structures that would be damaged in the event of a dam failure. Potential for loss of life is also evaluated. Various dam failure scenarios must be considered, and they include failures when the dam is at normal pool level and failures during significant flood events. Each of the three factors is evaluated, and the final classification of the dam is based on the highest individual factor. Class I is the highest and Class IV is the lowest. The classification of a dam can change based on future development or other changes along the downstream channel or from changes made to the dam.

Failure of Upper Shaker Lake Dam would cause a cascading failure of Lower Shaker Lake Dam, the stored water behind both dams would flow down Doan Brook into the University Circle neighborhood where there is a potential for loss of life.

The dam can be modified to a smaller size to fall outside of the Division's jurisdiction making the dam exempt from Ohio's dam safety laws. A dam is exempt if it is 6 feet or less in height regardless of total storage; less than 10 feet in height with not more than 50 acre-feet of total storage, or not more than 15 acre-feet of total storage regardless of height.

If you have any additional questions, please let me know.

Mia Kannik, P.E.

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