

## **Executive Summary**

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The Portage Lake Dam was inspected on October 23, 2008 in accordance with Michigan P.A. 451, Part 315 criteria. The inspection was the 3 year inspection under this statute. The Portage Lake Dam is owned and maintained by the Washtenaw County Drain Commissioner. Its purpose is to maintain the legal lake level of Portage and Base Line Lakes.

The overall condition of the facility is good, however, several deficiencies exist which should be addressed. Listed below are the deficiencies:

Right Downstream Retaining Wall: A crack in the right downstream retaining wall was noted in past inspection reports. The crack size and offset (movement) dimensions are similar to past reports. This crack should continue to be monitored.

Right embankment: The fence should be repaired where it is disconnected from the fence posts.

Spillway Piers: The upstream side of the left pier of Gate 2 and the right pier of Gate 4, between the walk and the stop log structure, has spalled concrete that should be repaired.

The Gate 2, upstream left pier at the pier bottom and spillway interface has some deterioration that was noted to be of similar condition in past inspections and should be monitored for any additional deterioration during future inspections.

I-Beam L-Brackets: The L-brackets on all I-beams for the stop log structures should be reviewed for weld integrity. It is recommended that all brackets be welded on four sides. Some brackets appear to be bent away from the I-beams at the top weld as if the pin connection is carrying the vertical weight of the I-Beam load. Those brackets that appear to be carrying a vertical load should be detached and adjusted to let the I-beam sit in the foundation pocket, removing the vertical load.

The spalling concrete protrusions on the walkway for connecting the I-beams should be monitored over the next 3 years. If the deterioration continues, repairs should be made.

Left embankment: The downstream retaining wall, left of the stairs, is undermined and is leaning towards the river. The wall should continue to be monitored and protection from further undermining erosion should be considered.

Left embankment: The upstream and downstream access stairs of the left embankment appear to have an annular space underneath them due to past animal habitat and erosion. In order to maintain the integrity of the stairs and the embankment, the annular space should be filled.

**Stantec**  
**PORTAGE LAKE DAM**  
**WASHTENAW COUNTY DRAIN COMMISSIONER**  
**WASHTENAW COUNTY, MICHIGAN**  
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Left embankment: No trespassing and warning signage should be provided on the fencing and gate.

Electrical: The electrical and control system is old and portions of the system are out of date and hazardous to operating personnel. The system should be updated per Section 6 of this report.

Operations Plan: Develop an operations plan for summer, winter and emergency operations.