

## **Saving the "Largest Pond in the World"**

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In late 2014, Langley Pond, which according to "some" is the largest pond in the world, was at the brink of disappearing. A local resident noticed a color change in the creek downstream of the earthen dam that impounds Langley Pond. Shortly after, an engineering team identified two boils along the downstream toe of the dam. The process of lowering the 285-acre "pond" was immediately implemented. All the while, the local emergency management agency was preparing downstream residents for a potential evacuation if conditions worsened.

The pond is a vital part of the local community and has national fame as being the practice facility for the U.S. Rowing Team prior to the 1996 Olympics in Atlanta. Repairing the century's old structure was of utmost importance to Aiken County, S.C., the Owner. However, given the unexpected timeline in which repairs were needed, funding became a major concern for the County.

In order to meet current guidelines for high hazard dams in South Carolina, which included stabilizing the embankment and providing for additional spillway capacity, the estimated repair cost for the project quickly exceeded \$10 MM. With the help of a grant through the Federal Emergency Management Agency (FEMA), the County was successful in securing the needed funding. Construction of the remedial measures is currently underway, with an estimated completion in early 2020.

This presentation will focus on the history of the project, the series of events that lead to the substantial rehabilitation design, the project constraints, and the construction, which encountered the 'usual' surprises of concentrated groundwater flow, debris pits and soft soils and the 'unusual' surprises of century's old wooden sheeting, piling, and abandoned structures. Rehabilitation measures for the dam and spillway, which included a 70-foot deep cement-bentonite cutoff wall and a ~200-foot wide labyrinth spillway will be highlighted. The Owner's perspective will be highlighted, and include information regarding the requirements needed to obtain the grant funding through FEMA. Additional information for various state and federal emergency funding mechanisms for emergency mitigation and rehabilitation measures will be presented.