Lake Louise Dam - Preventing Kelly Barnes 2.0

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Originally constructed in the 1930’s, the 75-foot high Lake Louise embankment dam impounds a 165-acre reservoir in Stephens County, Georgia. The dam is located only five miles from the former location of the failed Kelly Barnes Dam and was constructed by the same company that assisted with construction of the Kelly Barnes Dam embankment a few years later. The failure of Kelly Barnes Dam in 1977 precipitated Georgia dam safety legislation and creation of the Georgia Safe Dams Program. The Lake Louise Dam was recently observed to have several deficiencies to include inappropriate vegetation, uncontrolled seepage, and spillway degradation. In addition, the dam and spillway system have inadequate capacity and remediation measures were planned. During the design phase of the remediation project, additional deficiencies were identified with a decommissioned low-level conduit. A partial failure of the pipe was observed by camera inspection, resulting in exposed soil and a boil within the conduit. Immediate temporary measures, including activation of the Emergency Action Plan, draining the 60-foot deep lake, and closure of the public road that traverses the dam crest, were implemented to reduce the potential for impacts from a catastrophic failure until the permanent remediation measures could be completed. This presentation will focus on the details and timeline of the project, to include the temporary and permanent measures to improve the condition of the dam, in an effort to prevent another “Kelly-Barnes-Dam-type” failure in Stephens County, Georgia.