



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch

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404-463-1511

Wesley MacDonald, P.E.
Geosyntec Consultants
835 Georgia Ave.
Suite 500
Chattanooga, TN 37402

OCT 14 2022

SUBJECT: Petit Lake Dam
Pickens County
Permit # 112-009-00462

Dear Mr. MacDonald:

This office has reviewed the updated Emergency Action Plan (EAP) regarding the subject dam that was received on October 7, 2022. There are several comments below that must be addressed before the EAP can be approved. Please note that the document was reviewed for conformance to an approved format, but not for accuracy. As the dam operator's representative, it is your responsibility to ensure the accuracy of the document and to address the below comments.

1. The "Draft" watermark must be removed from the document.
2. Section 1.3 refers to the former Safe Dams Program storage for the dam, which has been updated. It also gives a storage for the dam of 5000 acre-feet instead of 5635 acre-feet.
3. The EAP references the Lake Petit Dam Operations & Maintenance (O&M) Plan (Geosyntec, 2022). Please provide this office with a copy of this document.
4. Appendix C is not consistent with itself, the rest of the EAP, or the August 4, 2022, volume memo as to the normal pool area and elevation, and top of dam elevation and volume. Additional parameters for the dam are not consistent. The number of downstream roadways is also not consistent in Appendix C, with various places listing 10, 11, or 12 roadway crossings.
5. The Lake Petit Dam height used for the breach and breach parameter computation is substantially less than the height listed in the Safe Dams database and elsewhere in the EAP. Use of a lower height must be justified.
6. Appendix C states that 1 acre-foot of storage was used at each roadway crossing. Was this volume used to compute breach time and breach width? If so, is this reasonable?
7. The conclusions state that, "This report summarizes the results of the dam breach analysis for the purpose of supporting a Hazard Potential Classification Assessment (HPCA) for

the Lake Petit Dam.... Based on the assumptions and inputs as described herein, it is Geosyntec's opinion that the Lake Petit Dam is Category I, Very Large Dam per the Georgia SDP Engineering Guidelines." The dam is currently Category I, and no re-classification is being considered. These statements should be removed.

8. Is the upstream road crossing at Old White Road actually a crossing of Justice Way? Is the correct stream opening modeled?
9. The Froehlich worksheet gives an embankment height at Cove Road of 96.5 feet. Section 5.2 indicates Cove Road breaches. The height on the Froehlich computation does not seem reasonable and contradicts other parts of Appendix C. Table 6 indicates a 6.7 foot depth of flooding over Cove Road, and Table 7 indicates 6.7 feet of overtopping at Cove Road. Why was the Froehlich computation given for Cove Road but not the other roadways?

You must address the above issues and provide to this office either the revised EAP or a schedule for completing the EAP **within 30 days of the date of this letter**. Failure to respond may lead to enforcement.

Additionally, you may wish to consider addressing the non-regulatory comment below:

1. What is the intent of the full-page single signature concurrence page?

If you have any questions, you may contact me at Kate.Betsill@dnr.ga.gov or at 470-524-4667.

Sincerely,



Kate Betsill
Environmental Engineer
Safe Dams Program

cc: Mr. Scott Auer, Big Canoe Property Owners Association