



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1152, East Tower
Atlanta, Georgia 30334
404-463-1511

January 7, 2022

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

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

Dear Mr. MacDonald:

This office has reviewed the updated Emergency Action Plans (EAP) regarding the subject dam that was received on November 24, 2021. 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. Please either include low-lying areas around Petit Creek in the areas to be prepared for evacuation in the warning messages for Level 2 or just reference mapping in the EAP as is done in the Level 3 warning message. The warning message for use by emergency services mentions not to travel on Hwy. 53. Are there other roadways that the public should avoid?
3. Section 5.1 states the initial boundary condition of the breach routing used in the EAP was the top of dam elevation of 1648 feet. Please verify that the routing begins with the reservoir at top of dam elevation, and that the top of dam elevation is 1648.
4. Section 6, Step 4, Termination and Follow Up, states that when a level 3 emergency is terminated without actual failure of the dam, "the Georgia Safe Dams technical representative will inspect the dam and/or require a state certified engineer to inspect the dam...." While the Safe Dams Program may inspect the dam, the owner, not the Safe Dams Program, is responsible to make sure the dam is inspected. The Safe Dams Program should be involved in the decision to terminate the emergency.
5. Section 7.3.1 appears to give the incorrect emergency/condition level for imminent or completed failure in the opening paragraph

6. The volume of Lake Petit Dam used in the breach analysis is substantially different from the volume in the Safe Dams Database. The volume used should either be corrected or supporting data in favor of use of the lower volume should be presented.
7. The EAP references the Lake Petit Dam Operations & Maintenance (O&M) Plan (Geosyntec, 2021). Please provide this office with a copy of this document.
8. The main body of the EAP mentions that Lake Disharoon will be inundated by the flood wave from a failure of Petit Lake Dam. Modeling and flooding of Lake Disharoon Dam should be discussed in the Dam Breach Analysis in Appendix C.

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 comments below:

1. Should the Safe Dams Program be listed with a (1) call priority on the notification flowchart for Level 2 and 3 emergencies?
2. Please clarify the difference between inundated structures in Table 4 and Table 5.
3. In Table 6, you should consider adding to some of the action items to perform the action if it is safe to do so.
4. Is it reasonable to group embankment movement, embankment seepage, spillway flows, and sinkholes all together for the purpose of defining remedial actions? Some of these issues will have different failure modes and may warrant other remedial actions. Under Security Threat or Sabotage, you should consider mentioning to notify appropriate authorities and secure access to the dam.

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