



ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch
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Big Canoe Property Owners Association
10586 Big Canoe
Big Canoe, GA 30143

MAY 20 2021

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

Ladies & Gentlemen:

On February 3, 2021, our staff performed the FY21 quality assurance inspection on the subject dam. During the inspection, we noted the following compliance and maintenance items:

Compliance Issues:

1. Seepage and a change in vegetation was seen on the lower half of the downstream slope. Additionally, it appeared that seepage was flowing in the lower concrete ditch and was also present on the lower left abutment. An Engineer of Record (EOR) must investigate the seepage.
2. The low-level outfall, located below the embankment and below the road, was flowing. An EOR must investigate if the low-level valve is slightly open or if leaks exist in the intake or within the dam into the low-level pipe. Be reminded that, in accordance with according with Rule 391-3-8-.10, all spillway and outlet gates and any other mechanical devices must be operated at least once per year, and you must certify that such gates and appurtenances are in good repair and working order.
3. At the principal spillway chute, voidspace was noted behind the left wingwall at the base of the chute. Voidspace was also found in other spots behind the spillway wall on the left side of the chute. An EOR must investigate these voids.
4. Portions of riprap appeared displaced down the upstream slope, into the water. Wave-action erosion was also apparent. An EOR must investigate this deficiency.

Maintenance Issues:

1. Multiple deteriorated black corrugated plastic pipes were observed on the downstream slope. Some were discharging into the lower concrete ditch and some may have been covered in vegetation. Similarly, the toe drains to the right of the low-level outfall could not be measured. These pipes were deteriorated, partially clogged, and partially submerged. Finally, seepage was emanating from behind the left wingwall, the location of another old CMP toe drainpipe. All surface and toe drainpipes must be cleared of vegetation and sediment clogs and allowed to flow. The vicinity of the discharges must also be cleared so that flow measurements can be taken with a small bucket. In terms of the black corrugated pipes, their deterioration may mean some need to be replaced. This office must be notified if replacement of these pipes requires intrusive work.

2. Bare spots were observed on the upstream slope. A low-growing grass species must be established across this area.

As soon as possible, you should address the maintenance issues noted above. Further, multiple compliance items listed above require the involvement of an EOR. This office must receive a written response from an EOR regarding these items **within 90 days of the date of this letter**. You are not permitted to perform intrusive work on the dam without approval from this office.

You are responsible for inspecting your dam on a quarterly basis and having a professional engineer inspect your dam on a biennial basis. The Safe Dams Act & Rules for Dam Safety along with the owner inspection form and instructions can be found on our webpage at <https://epd.georgia.gov/watershed-protection-branch/safe-dams-program>.

Please retain the completed checklists, photographs, instrumentation readings, and any other notes taken during your quarterly inspections. A complete package of quarterly inspection reports must be sent to this office by April 30 of each calendar year. If you notice any significant changes with your dams, such as new cracks, sloughs (shallow slope failures), excessive or new seepage, or muddy flow from the dam or internal drains, please contact this office immediately.

A copy of our inspection report with photos is enclosed for your records. If you have any questions, please contact our office at (404) 651-8485 or bobby.sauer@dnr.ga.gov.


Sincerely,



Robert E. Sauer, Jr., P.E.
Environmental Engineer
Safe Dams Program

Enclosures

Inspection Report

Manager Review: 

Date of Inspection: 2/3/2021

Name of Dam: Lake Petit Dam

County: Pickens

ID#: 112-009-00462

Weather: clear, mid 40s

Inspected by: Rachel Cochran and Bobby Sauer

Type of Inspection: X QA Construction Other

Persons Contacted: none

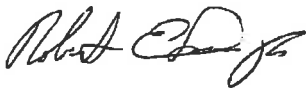
Toe Drains Right: flowing clear, but cannot be measured

Toe Drains Left: flowing clear, but cannot be measured

Additional Drains: green pipe to right of low-level outfall is dry

Remarks:

1. The lake is approximately one inch above normal pool.
2. Seepage and a change in vegetation is seen on the lower half of the downstream slope.
3. Multiple deteriorated black corrugated plastic pipes are observed on the downstream slope. Some are discharging into the lower concrete ditch.
4. Seepage is seen in the lower concrete ditch and on the lower left abutment.
5. The low-level outfall, located below the embankment, is flowing.
6. The toe drains to the right of the low-level outfall cannot be measured. They are deteriorated CMP material, partially clogged, and partially submerged. They are flowing clear. The green pipe in this vicinity is accessible but not flowing. Additionally, seepage is emanating from behind the left wingwall, the location of another old CMP drainpipe. This drainpipe is no longer visible though.
7. At the principal spillway chute, voidspace is noted behind the left wingwall at the base of the chute. Voidspace is also seen in other spots behind the spillway wall on the left side of the chute.
8. Bare spots are observed on the upstream slope.
9. Portions of riprap appear displaced down the upstream slope, into the water. Wave-action erosion is also apparent.



Lead Inspector

Lake Petit Dam
Pickens County
Pictures taken on February 3, 2021



seepage flowing in ditch in lower downstream slope



deteriorated black corrugated pipes draining into lower ditch



apparent seepage and soft ground on lower downstream slope



seepage on lower left abutment



bare spots on lower downstream slope



seepage into lower ditch

Lake Petit Dam
Pickens County
Pictures taken on February 3, 2021



flow from low-level outlet, looking downstream at low-level outfall



voidspace behind left wall along principal spillway



seepage from voidspace behind left wall at low-level outfall



bare area on upstream slope



principal spillway plunge pool; notice voidspace behind left wall



riprap displaced down upstream slope; wave-action erosion apparent