

April 28, 2023

Mr. David M. Griffin, P.E.
Program Manager
Safe Dams Program
Georgia Department of Natural Resources
2 Martin Luther King, Jr. Drive
Atlanta, Georgia 30334

**Subject: Owner Quarterly Inspection Reports 2022/2023 (Quarters 2, 3, and 4 of 2022 and Quarter 1 of 2023)
Lake Petit Dam (ID Number (No.) 112-009-00462), Pickens County**

Dear Mr. Griffin:

On behalf of the Big Canoe Property Owner's Association (POA), Geosyntec is submitting, under cover of this letter, the quarterly owner inspection forms for inspections conducted at Lake Petit Dam for the 2022/2023 reporting year. Quarterly inspections were conducted at Lake Petit Dam [National Inventory of Dams (NID) No. GA00685] by representatives from Geosyntec on behalf of the owner on the following dates:

- 2022 Quarter 2 (Q2) inspection dated 06 June 2022;
- 2022 Quarter 3 (Q3) inspection dated 28 September 2022;
- 2022 Quarter 4 (Q4) inspection dated 20 December 2022; and
- 2023 Quarter 1 (Q1) inspection dated 29 March 2023.

Please contact the undersigned if you have any questions regarding this matter.

Sincerely,



Wesley MacDonald, P.E. (GA, AL, KY, TN, and WA)
Senior Engineer



Jamey Dotson, P.E. (GA, AL, NC, and TN)
Senior Principal Engineer

Attachment A 2022/2023 Reporting Year Quarterly Inspections

Copies to: Mr. Scott Auer, Big Canoe POA

TN9418/Cover Letter

ATTACHMENT A
2022/2023 Reporting Year Quarterly Inspections

Embankment (Earth) Dam Inspection Form

Name of Dam: Lake Petit Dam Date: 06 June 2022
Location of Dam (County): Pickens County Weather: Sunny, 82 degrees F
Inspected by (Print Name): Edisson O. Avila, E.I.

If an inspection item requires further action on your part, place a check mark to the left of the number of the item

A. Crest (refer to Glossary for description)

1. How would you describe the vegetation on the crest? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): The crest of the dam is an asphalt paved road (Wilderness Parkway). Vegetation along the shoulders of the road was observed to be well-maintained.
2. Are there any trees or other inappropriate or excessive vegetation on the crest? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
3. Is there a paved road or driveway on the crest? Yes X No _____
If yes, describe the condition (for example, good condition, numerous cracks, newly paved)/Corrective Action: Good condition. Paved in 2012. Several transverse and longitudinal pavement cracks were observed on the crest. No changes were observed on the paved road or cracks on the crest relative to previous inspections.
4. Are there any depressions, ruts or holes on the crest? Yes _____ No X
If yes, describe (size, location, etc.)/Corrective Action: N/A
5. Are there any cracks on the crest? Yes X No _____
If yes, describe (length and width, location, direction of cracking, etc.)/Corrective Action: Minor transverse and longitudinal pavement cracks associated with normal pavement wear were observed. These cracks are not associated with embankment deformations. No changes were observed on the cracks relative to previous inspections.
6. Other observations on the crest/Corrective Action: Maintenance repairs to the shoreline protection on the upstream shoreline were completed by April 2022.

B. Upstream Slope (refer to Glossary for description)

1. What is the reservoir level today? At Normal Pool 1,335.5 Feet Above Normal Pool _____ Feet Below Normal Pool Feet
2. How would you describe the vegetation on the upstream slope? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): This area is well-seeded and maintained short grass. Vegetation on the upstream slope was mowed concurrently with the Quarterly Inspection. Repairs to the shoreline protection were completed by April 2022. Straw matting was installed in disturbed areas due to construction activities, as well as reseeded using Big Canoe POA approved seed mix. The aforementioned areas are located up-slope of the newly placed rip rap, and along the left and right sides of the upstream slope near the respective rims.
3. Are there any trees or other inappropriate or excessive vegetation on the slope? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
4. Are there any depressions, bulges, ruts or holes (such as animal burrows) on the slope? Yes _____ No X
If yes, describe (size, location, etc.)/Corrective Action: N/A
5. Are there any eroded areas on the slope (such as wave erosion along the shoreline)? Yes X No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: Disturbed areas and mitigation efforts related to construction activities for the shoreline protection are discussed in Section B.2.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 06 June 2022

B. Upstream Slope (continued)

6. Are there any cracks, sloughs or slides (vertical cliffs) on the slope? Yes _____ No X
If yes, describe (length, width, height, location, etc.)/Corrective Action: N/A
7. Is there any type of slope protection along the shoreline (such as rip rap)? Yes X No _____
If yes, describe what type and its condition (for example, rip rap - adequate, inadequate, sparse)/Corrective Action: _____
Shoreline protection completed by April 2022. The shoreline protection consists of a layer of rip rap 5 feet above and 3 feet below the normal reservoir level.
8. Other observations on the upstream slope/Corrective Action: No other observations.

C. Downstream Slope (refer to Glossary for description)

1. How would you describe the vegetation on the downstream slope? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): Grass observed to provide generally good cover. Vegetation on the downstream slope was mowed concurrently with the Quarterly Inspection. Continue to mow at a rate prescribed in the O&M Plan to prevent the establishment of unwanted vegetation and animal burrows. Sparse vegetation observed at: (i) Bench No.5 to crest, left side; top of Bench No. 4, left side); and Bench No. 4 to 5, right side. Topsoil should be added to these areas and reseeded in accordance with the O&M Plan.
2. Are there any trees or other inappropriate or excessive vegetation on the slope? Yes X No _____
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: Overgrown vegetation observed at: (i) Bench No. 3 to 4, near left groin; and (ii) Bench No. 2 to 3, left and right groin. Overgrown vegetation should be removed in accordance with the O&M Plan.
3. Are there any depressions, bulges, ruts or holes (such as animal burrows) on the slope? Yes X No _____
If yes, describe (size, location, etc.)/Corrective Action: Several minor animal burrows/digging locations, and ant hills were observed on the downstream face. Continued normal maintenance and filling of holes/burrows is required.
4. Are there any eroded areas on the slope (such as along abutment contacts)? Yes X No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: Surficial erosion (i.e., granular material at the surface of the downstream face) was observed at Bench No. 4 to 5, right side. Small rills were observed on Bench No.4, right side (approximately 50 ft from the right groin); and Bench No. 4 to 5, near left groin (approximately 15 ft, 1 ft wide, and varying in depth). Areas with surficial erosion need to have erosion control measures installed (i.e., hay matting and reseeded) to establish vegetation. Areas with small rills need to be backfilled with material similar to the shell material of the Dam.
5. Are there any cracks, sloughs or slides (vertical cliffs) on the slope? Yes _____ No X
If yes, describe (length, width, height, location, etc.)/Corrective Action: N/A

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 06 June 2022

C. Downstream Slope (continued)

6. Are there any wet areas or areas of hydrophilic (lush, water-loving) vegetation? Yes X No _____

If yes, describe (size of area, location, etc.)/Corrective Action: No changes observed to the reverse filter installed at the seepage area between Bench No. 1 and 1, left side.

Portions of the top of the Bench No. 1 and 2 were dry during this inspection. The concrete gutters on these benches have areas of deteriorated concrete and open joints that likely contribute to the localized wet areas on these benches during rainy periods. Designs for drainage improvements on these benches are underway. On the other benches the earthen swales that convey surface drainage to either abutment had some areas of ponded water at the time of inspection. While this is not an immediate dam safety issue, the swales are very flat and slow draining and would benefit from periodic regrading to ensure positive drainage is maintained.

On the left abutment near the embankment toe a persistent wet area has been noted. The area collects most of the surface runoff from the left side of the embankment and doesn't drain well to an inlet further left along Wolfscratch Rd. Regrading the area to facilitate drainage to the inlet would improve conditions.

7. Do any wet areas indicate seepage through the dam (such as rust-colored, stained water)? Yes _____ No X N/A _____

If yes, describe (for example, new area of seepage, no change from past observations, size of area, location) /Corrective Action: See discussion of seepage repair in item C.6.

8. Are there any leaks (flowing water) from the slope or beyond the toe of the dam? Yes X No _____

If yes, describe (location, rate of flow, turbidity of flow)/Corrective Action: Small volume flows of clear water continue to issue from the interceptor drains along Bench No. 1, with the exception of right most interceptor drains, and the left most interceptor drains (paired drains) which were covered by the seepage repair. Continue to monitor the drains and weirs for changes in flow amount and turbidity.

9. Other observations on the downstream slope/Corrective Action: The weirs on the left and right abutments were located. Both weirs were flowing slightly and were generally clean. The left weir has a tendency to become clogged with vegetation/debris (sediment) and requires cleaning out regularly. The source of the vegetation/debris is from surficial erosion from the left abutment upslope of the weir.

D. Plunge Pool (refer to Glossary for description)

1. Is there any type of erosion protection around the plunge pool (such as rip rap)? Yes _____ No X

If yes, describe what type and its condition (for example, rip rap - adequate, inadequate, obstructed by vegetation) /Corrective Action: There is no plunge pool. Downstream from the impact-type stilling basin there is not rip rap, however, based on current operations it does not appear to be needed.

2. Is there any erosion and or seeps around or going into the plunge pool? Yes _____ No X

If yes, describe (size of area, location, severity, etc.) /Corrective Action: N/A

3. Other observations around the plunge pool/Corrective Action: The area of the stilling basin is full of organic bacterial growth and should be routinely cleaned to assist in the inspection of the stilling basin.

E. Principal and Emergency Spillways (refer to Glossary for description)

1. What types of spillways does the dam have (such as corrugated metal, concrete or siphon pipe; concrete or earth channel)?

Principal Spillway Gunitite, Stepped Spillway Emergency Spillway None, other than a low-level outlet pipe.

Other/Corrective Action: Auxiliary, siphon system to control draw downs.

↑ Check if corrective action is noted/required.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam Date: 06 June 2022

E. Principal and Emergency Spillways (continued)

- 2. Has the emergency spillway activated (had flow) since the last inspection? Yes _____ No X
If yes describe (date(s) of flow, reason for activation, depth of flow) /Corrective Action: A dive inspection of the sluice gate structure which serves as the intake for the low-level outlet was completed in September 2020. A camera inspection of the low-level outlet conduit was completed in December 2020. Both inspections indicated that the inlet structure and pipe are in generally fair to good condition.
- 3. For pipe spillways, is the intake obstructed in any way (such as with excessive debris)? Yes _____ No X
If yes, describe (type of debris, reason for obstruction, etc.) /Corrective Action: The intake for the low-level outlet is not visible from the surface, but was inspected by a dive team in September 2020. The sluice gate structure was noted to not have been obstructed by sediment or debris following cleaning by divers during that inspection.
- 4. For pipe spillways, what is the condition of any trash racks (for example, adequate, inadequate, damaged)? /Corrective Action: The intake for the low-level outlet is not visible from the surface but was inspected by a dive team in September 2020. The sluice gate structure was noted to have an intact trash rack by the divers.
- 5. For pipe spillways, are there any visible cracks, separations or holes in the pipe(s) (intake or outlet)? Yes _____ No X
If yes, describe (location, width of crack or separation, etc.)/Corrective Action: Recent dive inspections of the pipe's inlet did not identify any cracks, separations, or holes. The recent camera inspection rated the pipe in fair to good condition.
- 6. For pipe spillways, are there any apparent leaks in the pipe(s)? Yes _____ No X
If yes, describe (location, rate of flow from leak, etc.)/Corrective Action: A camera inspection of the low-level outlet pipe was completed in December 2020. The inspection identified a few pipe joints with calcite formations, indicating minor seepage, but otherwise did not identify any apparent leaks or issues with the conduit's overall condition.
- 7. For pipe spillways, how would you describe the overall condition of the pipe(s)? (Check all that apply)
Functioning Normally X Not Functional _____ Deteriorated _____ Damaged _____ Adequate _____ Inadequate _____
- 8. For concrete or earth channel spillways, is the entrance or channel obstructed in any way? Yes _____ No X
If yes, describe (type of obstruction, location, etc.)/Corrective Action: Some accumulation of leaves and pine needles were observed along the spillway crest, but these did not appear to impact the function of the spillway as it was observed to be functioning normally.
- 9. For earth channel spillways, how would you describe the vegetation in the spillway? (Check all that apply)
Recently Mowed _____ Overgrown _____ Good Cover _____ Sparse _____
Other (describe)/Corrective Action: N/A
- 10. For earth channel spillways, are there any trees or other inappropriate vegetation in the spillway? Yes _____ No _____
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
- 11. For earth channel spillways, are there any eroded areas in the spillway? Yes _____ No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: N/A

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 06 June 2022

E. Principal and Emergency Spillways (continued)

12. For concrete channel spillways, are there any cracks or holes in the spillway? Yes X No _____
If yes, describe (width of crack or hole, location, etc.)/Corrective Action: The spillway was fully operational and the spillway repairs conducted in April 2022 were observed to be intact and withstanding the flows within the spillway. Continue to monitor the status of the repairs. The spillway repairs addressed deficiencies that were required for the acceptable performance of the spillway. Throughout the spillway, there are still minor cracks observable, however, these smaller cracks and holes were classified as deficiencies that do not hinder the performance of the spillway. These minor cracks should continuously be monitored for changes.
13. For concrete channel spillways, are there any leaks or evidence of undermining (flow under the concrete)? Yes X No _____
If yes, describe (location, rate of flow from leak, indicators of undermining, etc.)/Corrective Action: See notes for Item E.12. Continue to monitor the status of the spillway repairs conducted in April 2022.
14. For earth or concrete channel spillways, how would you describe the overall condition of the spillway? (Check all that apply)
Functioning Normally X Not Functional _____ Deteriorated _____ Damaged _____ Adequate _____ Inadequate _____
15. Other observations on the spillways/Corrective Action: An 8 in. bypass siphon line was used to control reservoir levels and dewater the spillway for the repairs conducted in April 2022. The bypass siphon line is recharged via a valve in a manhole at the left side of the spillway, near Wilderness Parkway. For the spillway repairs conducted in April 2022, the left side of Bay 45 was repaired by excavating loose soils and debris behind the walls of the spillway. The areas were then backfilled against and under the walls with granular soils, and grouted with polyurethane resin to prevent the areas from eroding. As of this inspection, the repaired areas were stable with no visible signs of erosion, however, water flow was observed to daylight over the recently repaired areas. The source of the water flow is currently being investigated.

F. Instrumentation (refer to Glossary for description)

1. Are there any toe drains at the downstream toe or any other seepage drains on the dam? Yes X No _____
If yes, describe the condition (for example, clogged, free flowing, deteriorated, good condition) /Corrective Action: The drain at the toe of the dam had flow into it and the interceptor drains along Bench No. 1 were identified (with the exception of the interceptor drains noted in Item E.8). All observable interceptor drains had minimal clear flow. The final drain at the left abutment contact is now buried in the two-stage filter installed between Bench 1 and 2. A piece of rebar was inserted into this drain prior to construction of the filter to facilitate locating the drain in the future. The underdrain system of the dam outlets is the impact stilling basin, which the basin was full of oxidized bacteria growth and should be routinely cleaned up assist in the inspection of the impact stilling basin. There are two drainpipes right of the impact stilling basin that appeared to be flowing, while the pipe to the left was dry.
2. For drains, is an animal guard installed at the outlet of each drain? Yes _____ No X _____
If no, which drains lack animal guards? /Corrective Action: Animal guards are not installed on interceptor drainpipes; however, they do not appear necessary on the interceptor surface drains or underdrain outlet pipes due to continuous flow and relatively small diameter.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 06 June 2022

F. Instrumentation (Continued)

3. For drains, measure the rate of flow from each drain and record below (use additional pages if necessary):

Designation/Location of Drain	Flow Rate	Flow Rate in GPM*	Turbidity of Flow <small>(describe – clear, muddy, etc.)</small>
Interceptor Drains on Bench No. 1	Very low	<1 GPM	clear
Underdrain Outlets	½" height of flow over the weir of the impact-style outlet structure	--	--

4. Are there any piezometers on the dam? Yes X No _____
 If yes, describe the condition (for example, good condition, damaged, etc.)/Corrective Action: The piezometers are generally in good condition.
5. For piezometers, does each piezometer have a cap with a lock? Yes _____ No X _____
 If no, which piezometers need caps (to prevent rain water intrusion) and/or locks (to prevent tampering)? /Corrective Action: Individual piezometers have caps to prevent water from intruding but no locks. Monument covers have bolted lids to prevent tampering.
6. For piezometers, are you able to take a measurement (depth to water) in each piezometer? Yes X No _____
 If yes, record depth to water (in feet) in each piezometer, record on a separate page, and attach to this form.
7. Are there any other monitoring devices on the dam? Yes _____ No X _____
 If yes, describe what type and the condition (for example, monitoring wells - good condition, damaged) /Corrective Action:
N/A
8. Other observations on instrumentation/Corrective Action: No other observations.

G. Photographs

At a minimum, photographs should be taken of the crest, upstream slope, downstream slope and any other notable features.

List of photographs (be sure to date stamp the photos): Photographs have been attached to this inspection report.

**GPM (gallons per minute): to convert from oz/sec multiply by 0.4688; to convert from ml/sec multiply by 0.01585*

PROJECT NAME: June 2021 (Q2) Lake Petit Dam Quarterly Owners Inspection

PROJECT NO.: TN8667

CLIENT: Big Canoe Property Owners Association

FILE NAME: June 2022 Dam Insp



Photograph 1: Upstream Face, June 2022 – GDOT No. 4 aggregate was placed along the left and right groin (not in Photograph 1) to assist with historical surficial erosion observed on the groins.



Photograph 2: Upstream Face, June 2022 – Shoreline protection repair conducted in March 2022. No changes were observed on the recently placed rip rap.

PROJECT NAME: June 2021 (Q2) Lake Petit Dam Quarterly Owners Inspection

PROJECT NO.: TN8667

CLIENT: Big Canoe Property Owners Association

FILE NAME: June 2022 Dam Insp



Photograph 3: Overflow Spillway, June 2022 – Flow restored to the spillway after the completion of spillway repairs completed in April 2022. Small leaves were observed in the spillway.



Photograph 4: Impact Stilling Basin, June 2022 – Bacterial growth observed in the instilling basin.

PROJECT NAME: June 2021 (Q2) Lake Petit Dam Quarterly Owners Inspection

PROJECT NO.: TN8667

CLIENT: Big Canoe Property Owners Association

FILE NAME: June 2022 Dam Insp

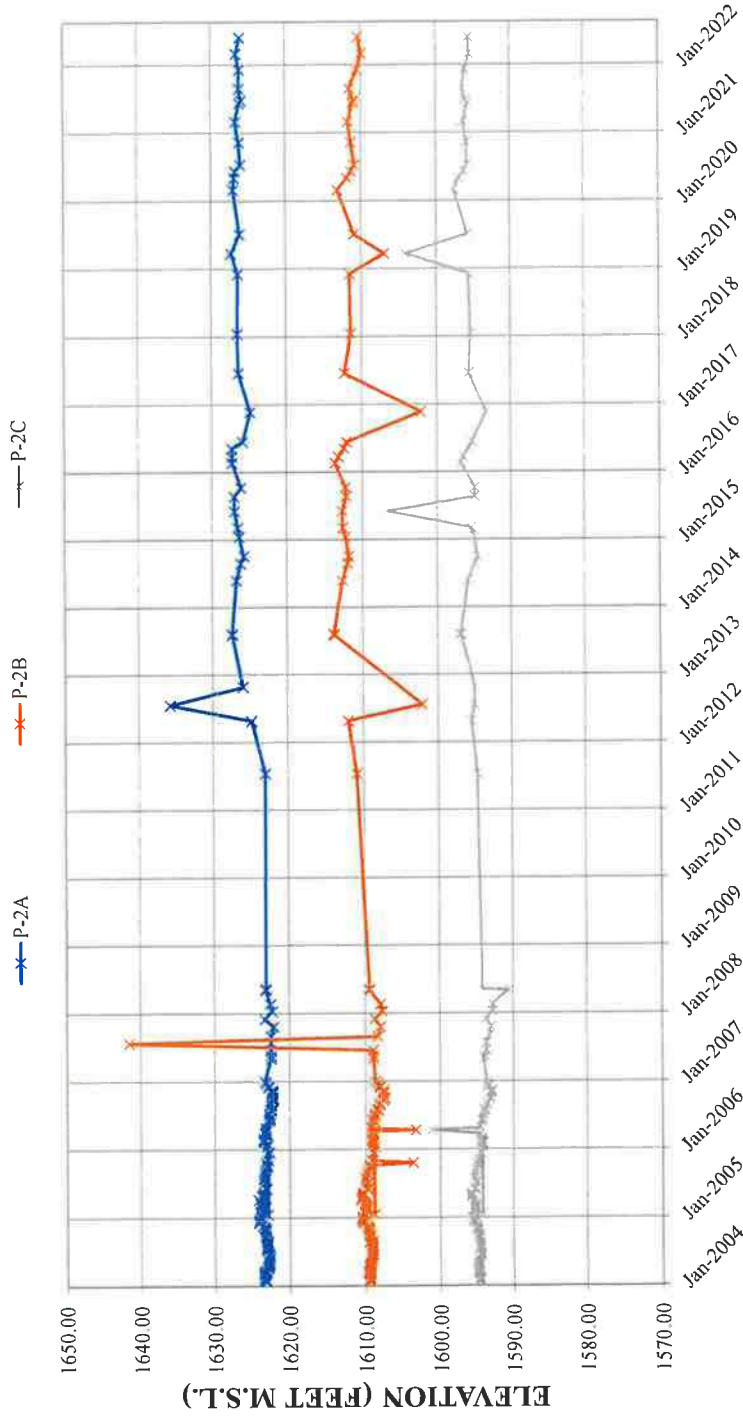


Photograph 5: Spillway, June 2022 – Flow observed on top of the recent repairs conducted in April 2022. The source of the flow is currently being investigated.



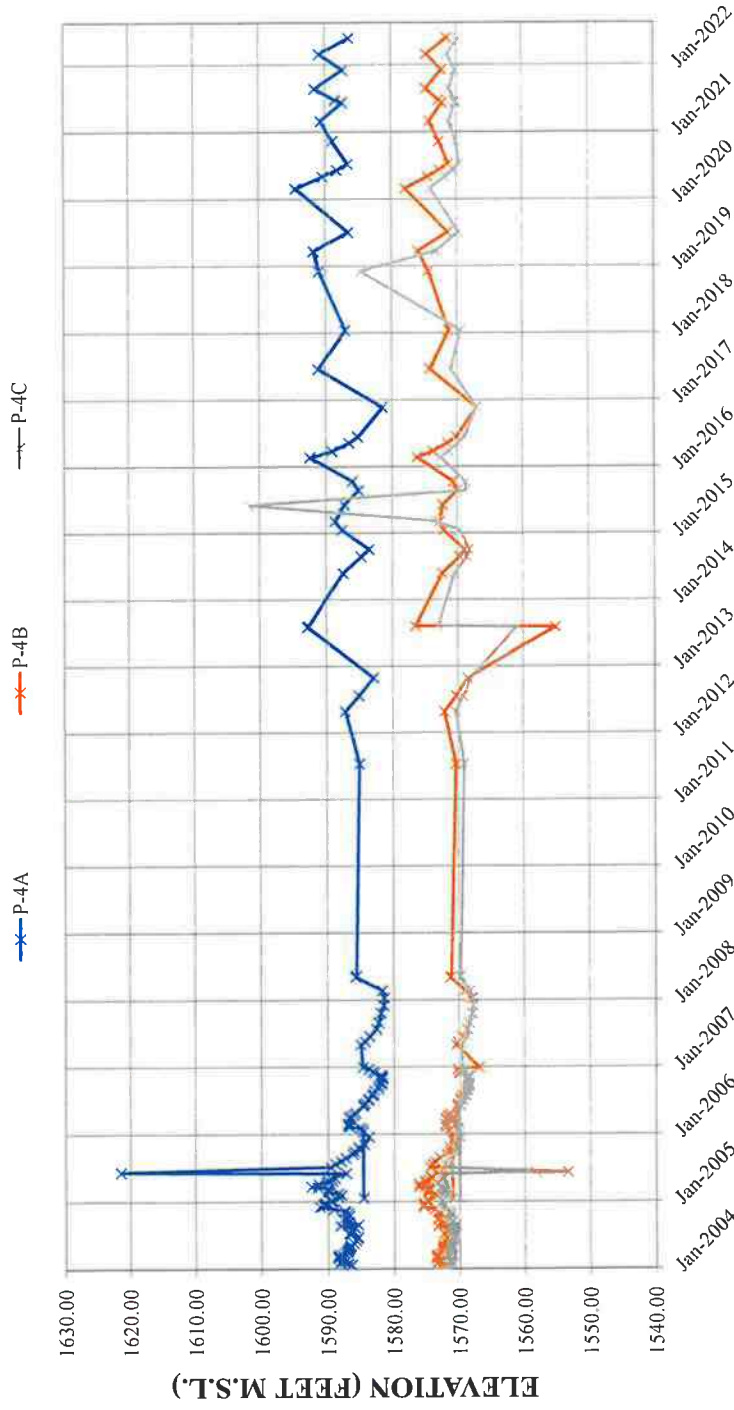
Photograph 6: Spillway, June 2022 – A wide shot photo documenting the same flow as in Photograph 5.

Vibrating Wire Piezometer Water Elevations



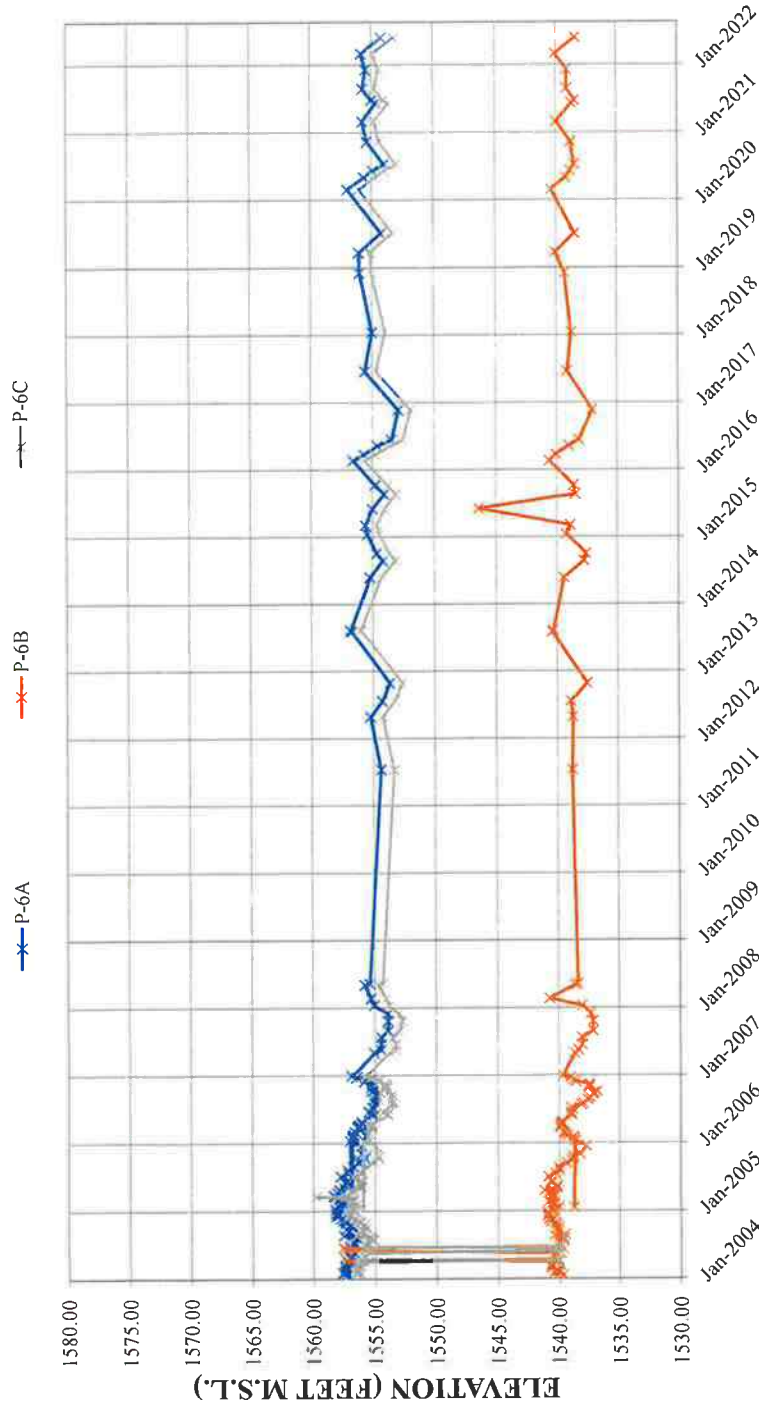
Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-2. Summary of Vibrating Wire Piezometer Data, P-2A, B, C (Feb 2004 through June 2022) - Lake Petit Dam, Big Canoe, GA

Vibrating Wire Piezometer Water Elevations



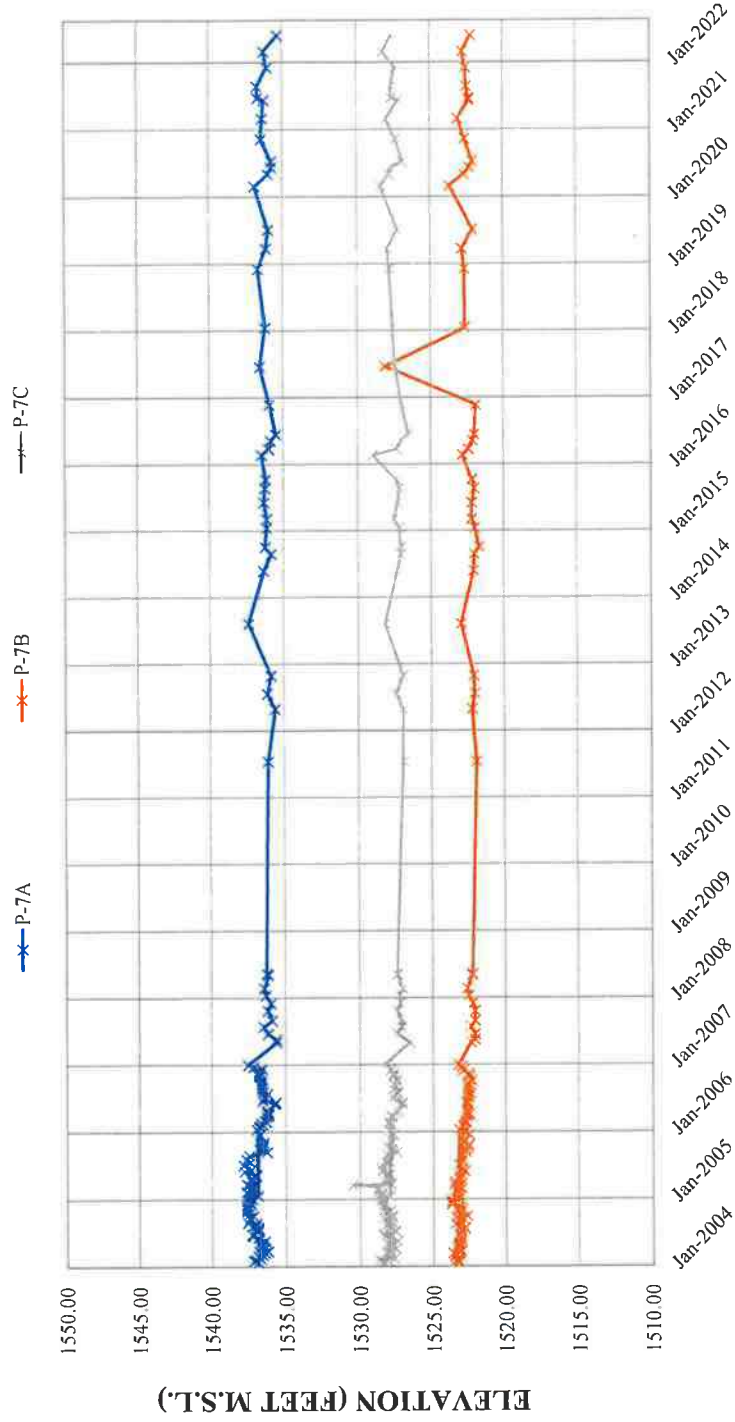
Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-3. Summary of Vibrating Wire Piezometer Data, P-4A, B, C (Feb 2004 through June 2022) - Lake Petit Dam, Big Canoe, GA

Vibrating Wire Piezometer Water Elevations



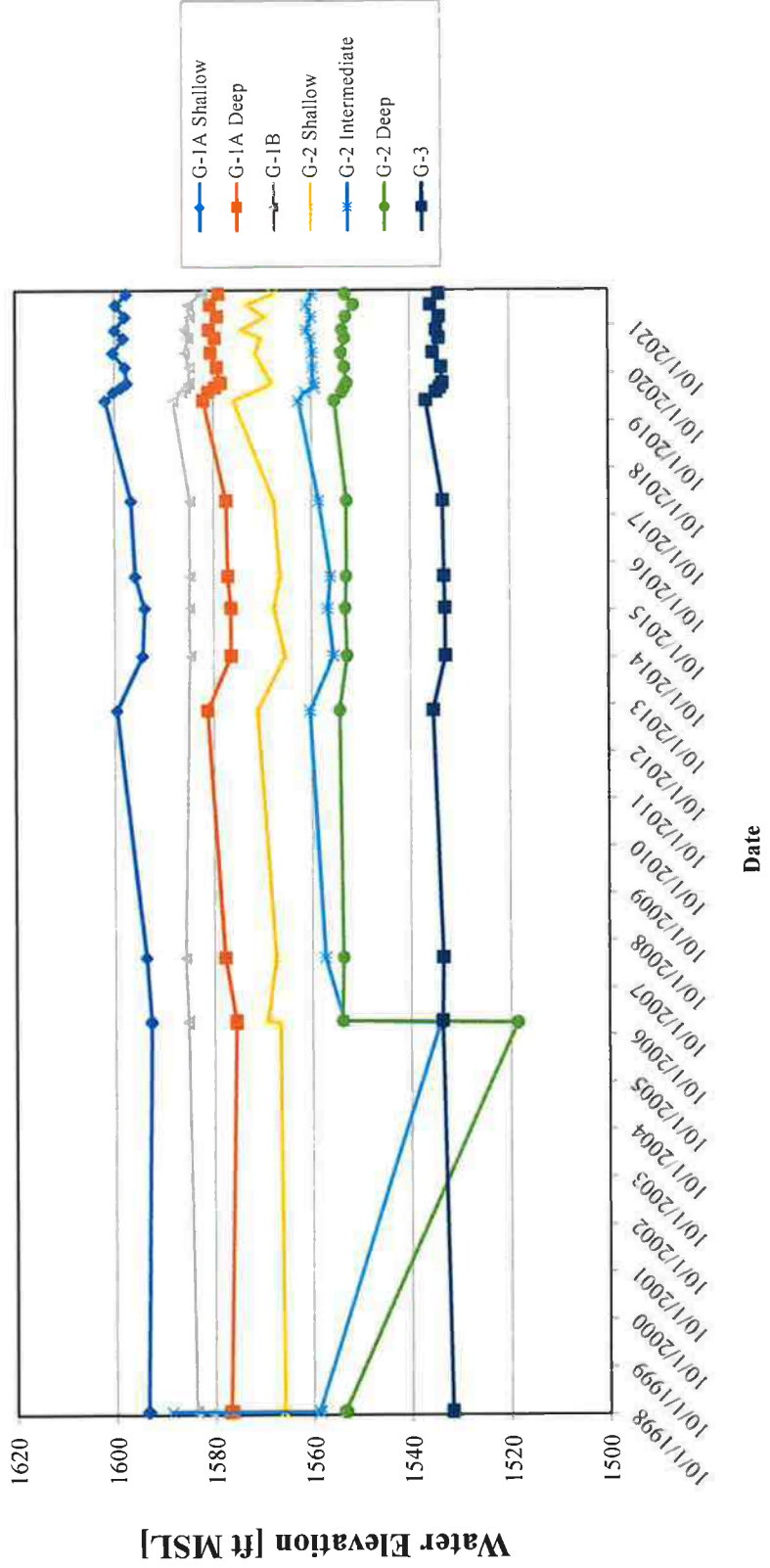
Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-4. Summary of Vibrating Wire Piezometer Data, P-6A, B, C (Feb 2004 through June 2022) - Lake Petit Dam, Big Canoe, GA

Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-5. Summary of Vibrating Wire Piezometer Data, P-7A, B, C (Feb 2004 through June 2022) - Lake Petit Dam, Big Canoe, GA

Standpipe Piezometer Water Elevations



Note: G-2 Shallow water levels noted as anomalous on 3 Jan 2007. Re-measured 19 Jan 2007, and levels more consistent with previous readings.

Figure 2-6. Summary of Standpipe Piezometer Data (Oct 1998 through March 2022) - Lake Petit Dam, Big Canoe, GA.

Embankment (Earth) Dam Inspection Form

Name of Dam: Lake Petit Dam Date: 28 September 2022
Location of Dam (County): Pickens County Weather: Sunny, 65 degrees F
Inspected by (Print Name): Zachary Mickel

If an inspection item requires further action on your part, place a check mark to the left of the number of the item

A. Crest (refer to Glossary for description)

1. How would you describe the vegetation on the crest? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): The crest of the dam is an asphalt paved road (Wilderness Parkway). Vegetation along the shoulders of the road was observed to be well-maintained.
2. Are there any trees or other inappropriate or excessive vegetation on the crest? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
3. Is there a paved road or driveway on the crest? Yes X No _____
If yes, describe the condition (for example, good condition, numerous cracks, newly paved)/Corrective Action: Good condition. Paved in 2012. Minor transverse and longitudinal pavement cracks were observed on the crest. No changes were observed on the paved road or cracks on the crest relative to previous inspections.
4. Are there any depressions, ruts or holes on the crest? Yes _____ No X
If yes, describe (size, location, etc)/Corrective Action: N/A
5. Are there any cracks on the crest? Yes X No _____
If yes, describe (length and width, location, direction of cracking, etc.)/Corrective Action: Minor transverse and longitudinal pavement cracks associated with normal pavement wear were observed. These cracks do not appear to be associated with embankment deformations. No changes were observed on the cracks relative to previous inspections.
6. Other observations on the crest/Corrective Action: Maintenance repairs to the shoreline protection on the upstream shoreline were completed by April 2022.

B. Upstream Slope (refer to Glossary for description)

1. What is the reservoir level today? At Normal Pool 1,635.5 Feet Above Normal Pool _____ Feet Below Normal Pool Feet _____
2. How would you describe the vegetation on the upstream slope? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): This area is well-seeded and maintained short grass. Grass cover has been re-established in areas disturbed by the shoreline protection activities. Areas not grass covered are protected by riprap erosion protection above and slightly below the normal pool waterline.
3. Are there any trees or other inappropriate or excessive vegetation on the slope? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
4. Are there any depressions, bulges, ruts or holes (such as animal burrows) on the slope? Yes _____ No X
If yes, describe (size, location, etc.)/Corrective Action: N/A
5. Are there any eroded areas on the slope (such as wave erosion along the shoreline)? Yes _____ No X
If yes, describe (size of area, location, severity, etc.)/Corrective Action: Shoreline riprap protection in place and appears to be performing as designed.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 28 September 2022

B. Upstream Slope (continued)

- 6. Are there any cracks, sloughs or slides (vertical cliffs) on the slope? Yes _____ No X
If yes, describe (length, width, height, location, etc.)/Corrective Action: N/A

- 7. Is there any type of slope protection along the shoreline (such as riprap)? Yes X No _____
If yes, describe what type and its condition (for example, riprap - adequate, inadequate, sparse)/Corrective Action:
Shoreline protection completed in April 2022. The shoreline protection consists of a layer of riprap 5 feet above and 3 feet below the normal pool reservoir level.

- 8. Other observations on the upstream slope/Corrective Action: Recommend overseeding newly established grass cover on the upstream slope to reduce to potential for bare areas to form during winter months.

C. Downstream Slope (refer to Glossary for description)

- 1. How would you describe the vegetation on the downstream slope? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): Grass cover is well established and maintained throughout the downstream slope. Continue to mow to prevent the establishment of unwanted vegetation.

- 2. Are there any trees or other inappropriate or excessive vegetation on the slope? Yes X No _____
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: Overgrown vegetation and large-diameter trees (greater than 4 inches in diameter) observed along the downstream groin areas. Woody vegetation and trees should be removed in accordance with Georgia Safe Dams Program or FEMA guidelines.

- 3. Are there any depressions, bulges, ruts or holes (such as animal burrows) on the slope? Yes _____ No X
If yes, describe (size, location, etc.)/Corrective Action: N/A

- 4. Are there any eroded areas on the slope (such as along abutment contacts)? Yes X No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: Minor erosion (less than 12 inches deep) observed near the downstream left groin area due to surface water runoff. Surficial erosion areas should be repaired and grass cover should be established to reduce the potential for further erosion.

- 5. Are there any cracks, sloughs or slides (vertical cliffs) on the slope? Yes _____ No X
If yes, describe (length, width, height, location, etc.)/Corrective Action: N/A

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 28 September 2022

C. Downstream Slope (continued)

6. Are there any wet areas or areas of hydrophilic (lush, water-loving) vegetation? Yes X No _____
If yes, describe (size of area, location, etc.)/Corrective Action: No changes observed to the reverse filter installed at the seepage area at the left side of Bench No. 1 and 2. Reverse filter appears to be performing as designed. No wet areas were observed during the visual inspection. Standing water and minor flow (less than 0.5 gallons per minute, cumulative) were observed within the concrete gutters at Bench No. 1.
7. Do any wet areas indicate seepage through the dam (such as rust-colored, stained water)? Yes _____ No X N/A _____
If yes, describe (for example, new area of seepage, no change from past observations, size of area, location) /Corrective Action: See discussion of seepage repair in item C.6.
8. Are there any leaks (flowing water) from the slope or beyond the toe of the dam? Yes X No _____
If yes, describe (location, rate of flow, turbidity of flow)/Corrective Action: Small volume flows of clear water continue from the interceptor drains along Bench No. 1, with the exception of right most interceptor drains, and the left most interceptor drains (paired drains) which were covered by the seepage repair. Continue to monitor the drains and weirs for changes in flow amount and turbidity.
9. Other observations on the downstream slope/Corrective Action: The weirs on the left and right abutments were located. Both weirs were flowing slightly and were generally clean. The left weir has a tendency to become clogged with vegetation/debris (sediment) and requires cleaning out regularly. The source of the vegetation/debris is from surficial erosion from the left abutment upslope of the weir.

D. Plunge Pool (refer to Glossary for description)

1. Is there any type of erosion protection around the plunge pool (such as riprap)? Yes _____ No X
If yes, describe what type and its condition (for example, riprap - adequate, inadequate, obstructed by vegetation) /Corrective Action: There is no plunge pool. Downstream from the reinforced concrete impact-type stilling basin there is no riprap, however, based on current operations it does not appear to be needed.
2. Is there any erosion and or seeps around or going into the plunge pool? Yes _____ No X
If yes, describe (size of area, location, severity, etc.) /Corrective Action: N/A
3. Other observations around the plunge pool/Corrective Action: The area of the stilling basin is full of organic bacterial growth and should be routinely cleaned to assist in the inspection of the stilling basin.

E. Principal and Emergency Spillways (refer to Glossary for description)

1. What types of spillways does the dam have (such as corrugated metal, concrete or siphon pipe; concrete or earth channel)?
Principal Spillway Gunitite, Stepped Spillway Emergency Spillway None, other than a low-level outlet pipe.
Other/Corrective Action: Auxiliary, siphon system to control drawdown of reservoir when needed.

E. Principal and Emergency Spillways (continued)

2. Has the emergency spillway activated (had flow) since the last inspection? Yes _____ No X
If yes describe (date(s) of flow, reason for activation, depth of flow) /Corrective Action: A dive inspection of the sluice gate structure which serves as the intake for the low-level outlet was completed in September 2020. A camera inspection of the low-level outlet conduit was completed in December 2020. Both inspections indicated that the inlet structure and pipe are in generally fair to good condition. An RFP has been issued to Contractors to perform a testing program of the low-level outlet sluice gate and is planned to be completed by the end Quarter 1 of 2023.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 28 September 2022

3. For pipe spillways, is the intake obstructed in any way (such as with excessive debris)? Yes _____ No X _____
If yes, describe (type of debris, reason for obstruction, etc.)/Corrective Action: The intake for the low-level outlet is not visible from the surface, but was inspected by a dive team in September 2020. The sluice gate structure was noted to not have been obstructed by sediment or debris following cleaning by divers during that inspection.
4. For pipe spillways, what is the condition of any trash racks (for example, adequate, inadequate, damaged)? /Corrective Action: The intake for the low-level outlet is not visible from the surface but was inspected by a dive team in September 2020. The sluice gate structure was noted to have an intact trash rack by the divers.
5. For pipe spillways, are there any visible cracks, separations or holes in the pipe(s) (intake or outlet)? Yes _____ No X _____
If yes, describe (location, width of crack or separation, etc.)/Corrective Action: Recent dive inspections of the pipe inlet did not identify any cracks, separations, or holes. The recent camera inspection rated the pipe in fair to good condition.
6. For pipe spillways, are there any apparent leaks in the pipe(s)? Yes _____ No X _____
If yes, describe (location, rate of flow from leak, etc.)/Corrective Action: A camera inspection of the low-level outlet pipe was completed in December 2020. The inspection identified a few pipe joints with calcite formations, indicating minor inflow, but otherwise did not identify any apparent leaks or issues with the conduit's overall condition.
7. For pipe spillways, how would you describe the overall condition of the pipe(s)? (Check all that apply)
Functioning Normally X Not Functional _____ Deteriorated _____ Damaged _____ Adequate _____ Inadequate _____
8. For concrete or earth channel spillways, is the entrance or channel obstructed in any way? Yes _____ No X _____
If yes, describe (type of obstruction, location, etc.)/Corrective Action: No observed debris or blockage.
9. For earth channel spillways, how would you describe the vegetation in the spillway? (Check all that apply)
Recently Mowed _____ Overgrown _____ Good Cover _____ Sparse _____
Other (describe)/Corrective Action: N/A
10. For earth channel spillways, are there any trees or other inappropriate vegetation in the spillway? Yes _____ No _____
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
11. For earth channel spillways, are there any eroded areas in the spillway? Yes _____ No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: N/A

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 28 September 2022

E. Principal and Emergency Spillways (continued)

12. For concrete channel spillways, are there any cracks or holes in the spillway? Yes X No _____
If yes, describe (width of crack or hole, location, etc.)/Corrective Action: The spillway was fully operational and the spillway repairs conducted in April 2022 were observed to be intact and withstanding the flows within the spillway. Continue to monitor the status of the repairs. The spillway repairs addressed deficiencies that were required for the acceptable performance of the spillway. Throughout the spillway, there are still minor cracks observable, however, these smaller cracks and holes were classified as deficiencies that do not hinder the performance of the spillway. These minor cracks should continue to be monitored for changes.
13. For concrete channel spillways, are there any leaks or evidence of undermining (flow under the concrete)? Yes X No _____
If yes, describe (location, rate of flow from leak, indicators of undermining, etc.)/Corrective Action: Water flow was observed along the left spillway wall near the downstream end, beneath the cracked concrete. The flow appears to remain clear and is daylighting near the bridge abutment along the left, downstream end of the spillway channel. Flow was estimated to be approximately 0.5 gpm. The source of the flow is currently being investigated; however it does not appear to hinder the performance of the spillway or present an immediate dam safety deficiency.
14. For earth or concrete channel spillways, how would you describe the overall condition of the spillway? (Check all that apply)
Functioning Normally X Not Functional _____ Deteriorated _____ Damaged _____ Adequate _____ Inadequate _____
15. Other observations on the spillways/Corrective Action: An 8 in. bypass siphon line was used to control reservoir levels and dewater the spillway for the repairs conducted in April 2022. The bypass siphon line is recharged via a valve in a manhole at the left side of the spillway, near Wilderness Parkway.
For the spillway repairs conducted in April 2022, the left side of Step 45 was repaired by excavating loose soils and debris behind the walls of the spillway. The areas were then backfilled against and under the walls with granular soils, and grouted with polyurethane resin to prevent the areas from eroding. As of this inspection, the repaired areas were stable with no visible signs of erosion, however, water flow was observed to daylight over the recently repaired area. The source of the water flow is currently being investigated and the area should be backfilled with aggregate material for temporary repairs.

F. Instrumentation (refer to Glossary for description)

1. Are there any toe drains at the downstream toe or any other seepage drains on the dam? Yes X No _____
If yes, describe the condition (for example, clogged, free flowing, deteriorated, good condition) /Corrective Action: The drains at the toe of the dam had flow exiting and the interceptor drains along Bench No. 1 were identified (with the exception of the interceptor drains noted in Item E.8). All observable interceptor drains had minimal clear flow (less than 0.5 gpm. cumulative across all drains). The final drain at the left abutment contact is now buried in the reverse filter installed between Bench 1 and 2. A piece of rebar was inserted into this drain prior to construction of the filter to facilitate locating the drain in the future.
The underdrain system of the dam outlets is the impact stilling basin. The basin was full of oxidized bacteria growth and should be routinely cleaned up assist in the inspection of the impact stilling basin. Two pipe outlets were observed to the right of the impact stilling basin, one of which (CMP pipe) had flow estimated at 2 gpm. One pipe outlet was observed to the left of the impact stilling basin and minimal flow was observed (less than 0.5 gpm).

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 28 September 2022

2. For drains, is an animal guard installed at the outlet of each drain? Yes _____ No X

If no, which drains lack animal guards? /Corrective Action: Animal guards are not installed on interceptor drainpipes; however, they do not appear necessary on the interceptor surface drains or underdrain outlet pipes due to continuous flow and relatively small diameter.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam Date: 28 September 2022

F. Instrumentation (Continued)

3. For drains, measure the rate of flow from each drain and record below (use additional pages if necessary):

Designation/Location of Drain	Flow Rate	Flow Rate in GPM*	Turbidity of Flow (describe – clear, muddy, etc.)
Interceptor Drains on Bench No. 1	Very low	Approximately 0.5 GPM, Cumulative	Clear
Underdrain Outlets	½" height of flow over the weir of the impact-style outlet structure	Less than 0.5 GPM	Clear
Pipe Outlets Left of Impact Stilling Basin (2 pipes)	Low	Approximately 2 GPM in Small Diameter CMP Pipe.	Clear
Pipe Outlet to the Right of the Impact Stilling Basin	Low	Approximately 0.5 GPM	Clear

4. Are there any piezometers on the dam? Yes X No _____
 If yes, describe the condition (for example, good condition, damaged, etc.)/Corrective Action: The piezometers are generally in good condition.
5. For piezometers, does each piezometer have a cap with a lock? Yes _____ No X _____
 If no, which piezometers need caps (to prevent rain water intrusion) and/or locks (to prevent tampering)? /Corrective Action: Individual piezometers have caps to prevent water from intruding but no locks. Monument covers have bolted lids to prevent tampering.
6. For piezometers, are you able to take a measurement (depth to water) in each piezometer? Yes X No _____
 If yes, record depth to water (in feet) in each piezometer, record on a separate page, and attach to this form.
7. Are there any other monitoring devices on the dam? Yes _____ No X _____
 If yes, describe what type and the condition (for example, monitoring wells - good condition, damaged) /Corrective Action: N/A
8. Other observations on instrumentation/Corrective Action: No other observations.

G. Photographs

At a minimum, photographs should be taken of the crest, upstream slope, downstream slope and any other notable features.

List of photographs (be sure to date stamp the photos): Photographs have been attached to this inspection report.

*GPM (gallons per minute): to convert from oz/sec multiply by 0.4688; to convert from ml/sec multiply by 0.01585

GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN8667

Project Name: September 2022 (Q3) Lake Petit Dam Quarterly Owners Inspection

Site Location: Pickens County, Georgia

Photograph 1

Date: 9/28/2022 12:21 PM

Direction: W

Comments: Crest - General view of the asphalt roadway on the crest of the dam. Photograph taken from the left abutment.



Photograph 2

Date: 9/28/2022 12:11 PM

Direction: W

Comments: Upstream Slope - View of the grass covered upstream slope and riprap wave protection. Photograph taken from the approximate center of the dam.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN8667

Project Name: September 2022 (Q3) Lake Petit Dam Quarterly Owners Inspection

Site Location: Pickens County, Georgia

Photograph 3

Date: 9/28/2022 10:33 AM

Direction: NE

Comments: Overflow Spillway - General view of the overflow spillway towards the upstream end. No debris observed blocking flow during the inspection.



Photograph 4

Date: 9/28/2022 10:56 AM

Direction: W

Comments: Overflow Spillway - Flow observed along the left wall of the overflow spillway. Flow appears to daylight near the downstream end of the overflow spillway.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN8667

Project Name: September 2022 (Q3) Lake Petit Dam Quarterly Owners Inspection

Site Location: Pickens County, Georgia

Photograph 5

Date: 9/28/2022 11:07 AM

Direction: NE

Comments: Impact Stilling Basin - General view of the impact stilling basin and associated drain outlets at the downstream toe of the dam.



Photograph 6

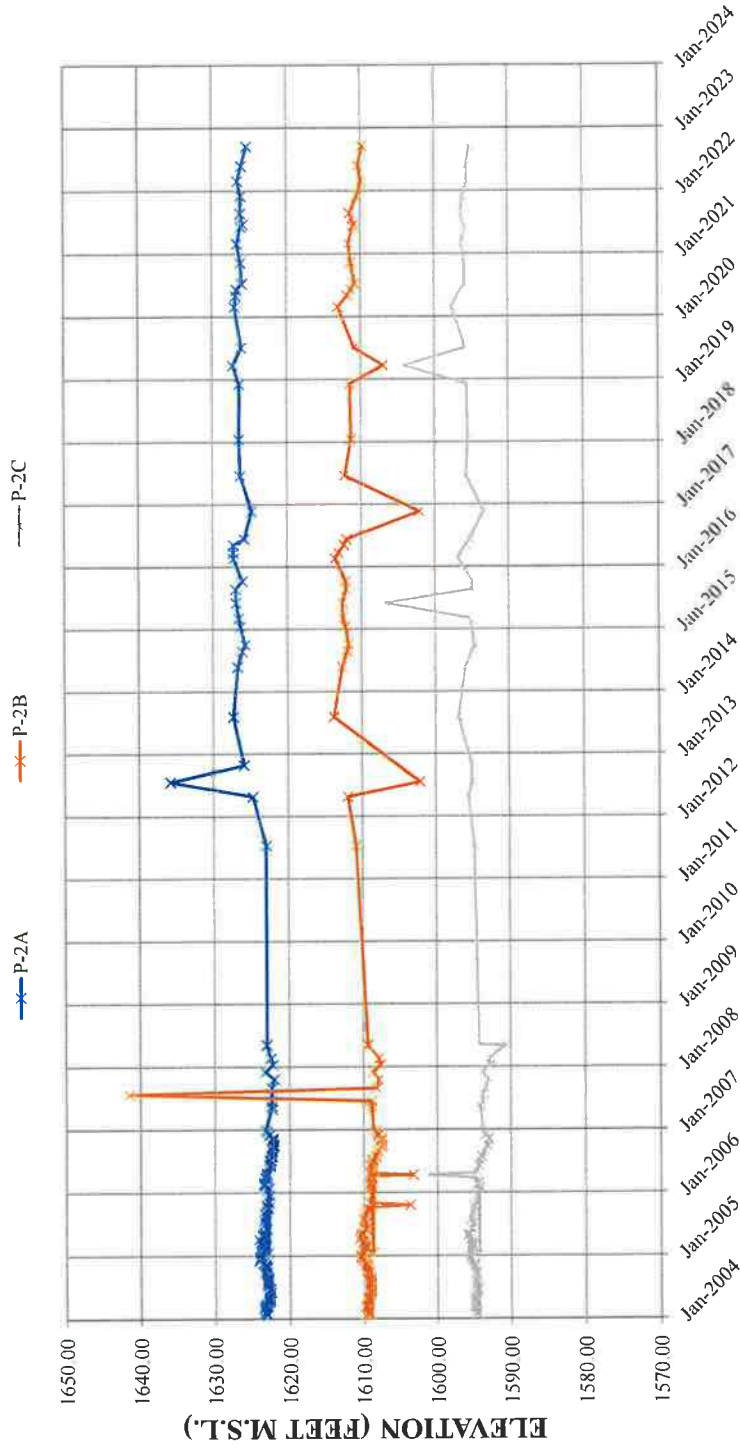
Date: 9/28/2022 1:47 PM

Direction: E

Comments: Downstream Slope - View of minor, surficial erosion observed along the left, downstream groin area. It is assumed that erosion is caused by stormwater flow during rain events.



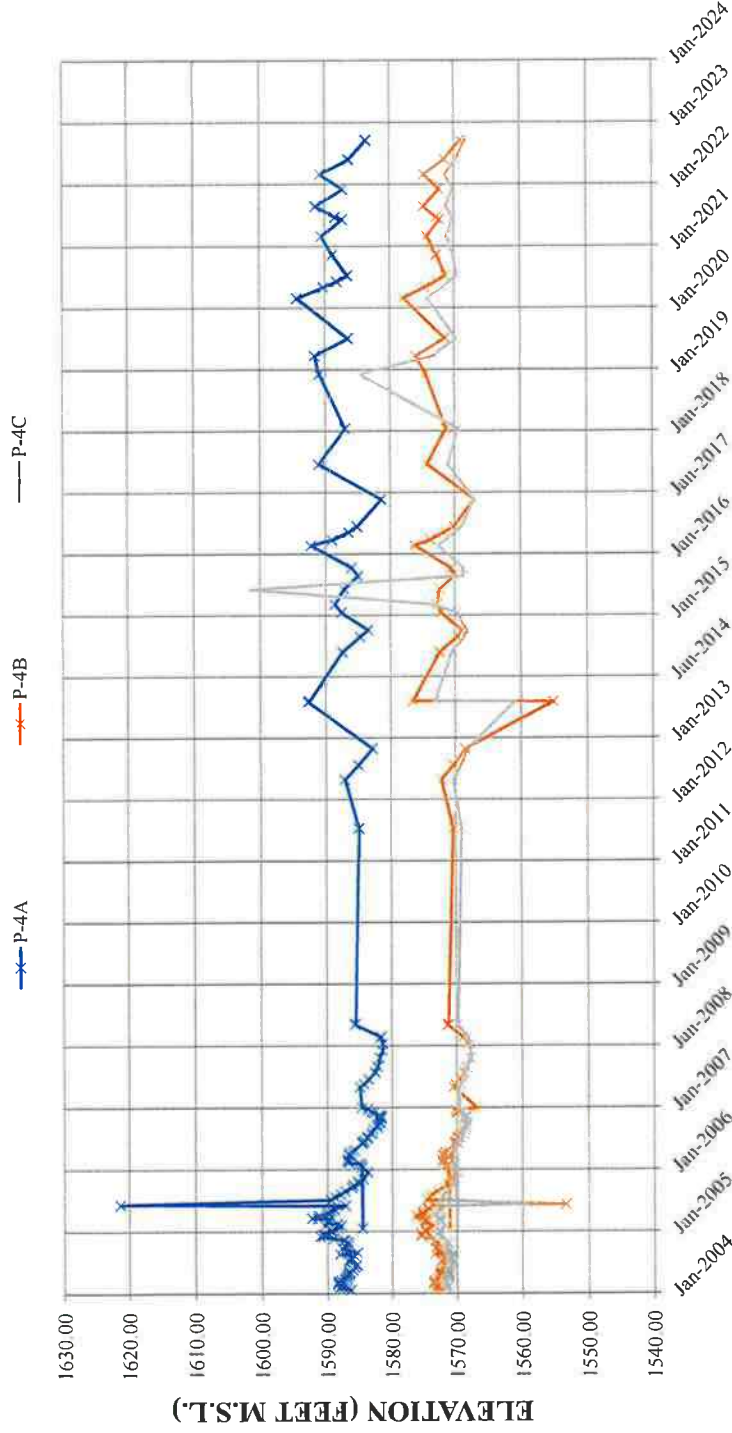
Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.

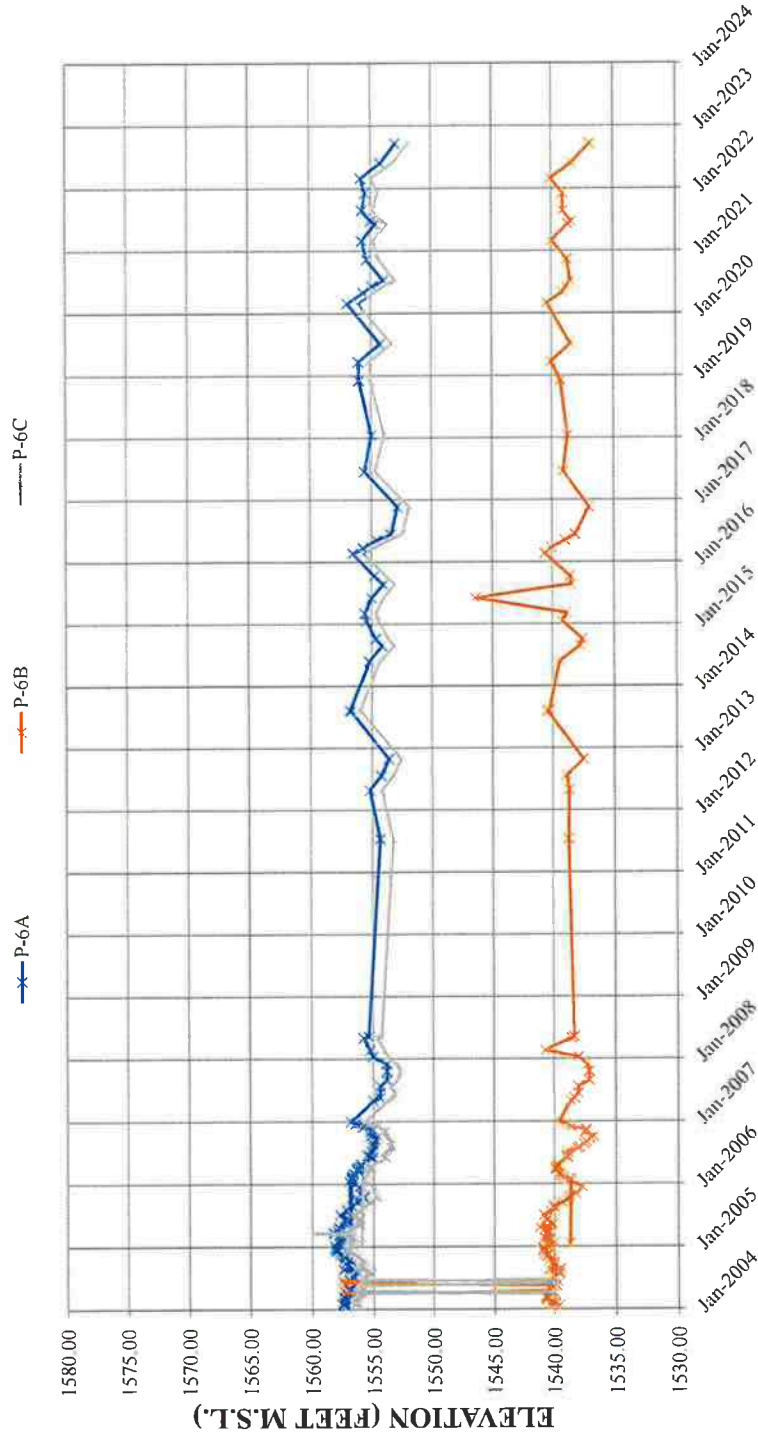
Figure 2-2. Summary of Vibrating Wire Piezometer Data, P-2A, B, C (Feb 2004 through September 2022) - Lake Petit Dam, Big Canoe, GA

Vibrating Wire Piezometer Water Elevations



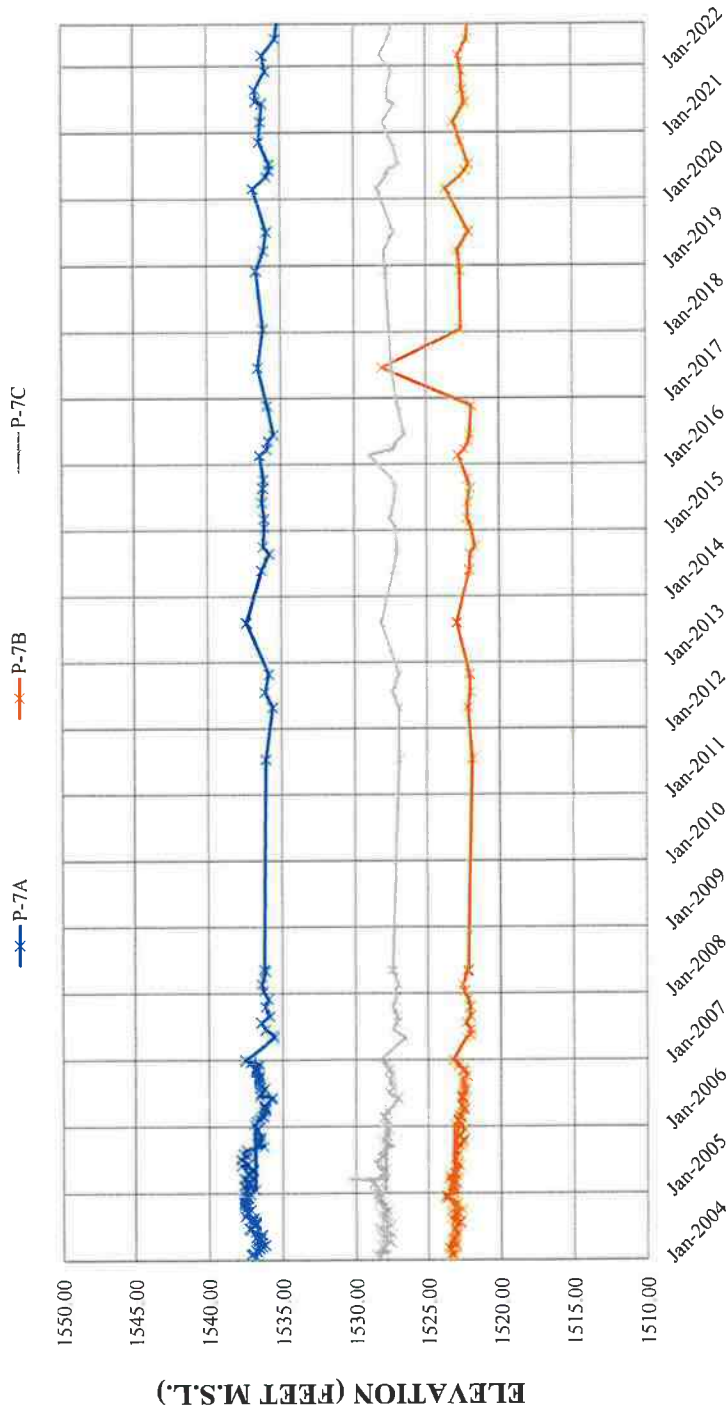
Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-3. Summary of Vibrating Wire Piezometer Data, P-4A, B, C (Feb 2004 through September 2022) - Lake Petit Dam, Big Canoe, GA

Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-4. Summary of Vibrating Wire Piezometer Data, P-6A, B, C (Feb 2004 through September 2022) - Lake Petit Dam, Big Canoe, GA

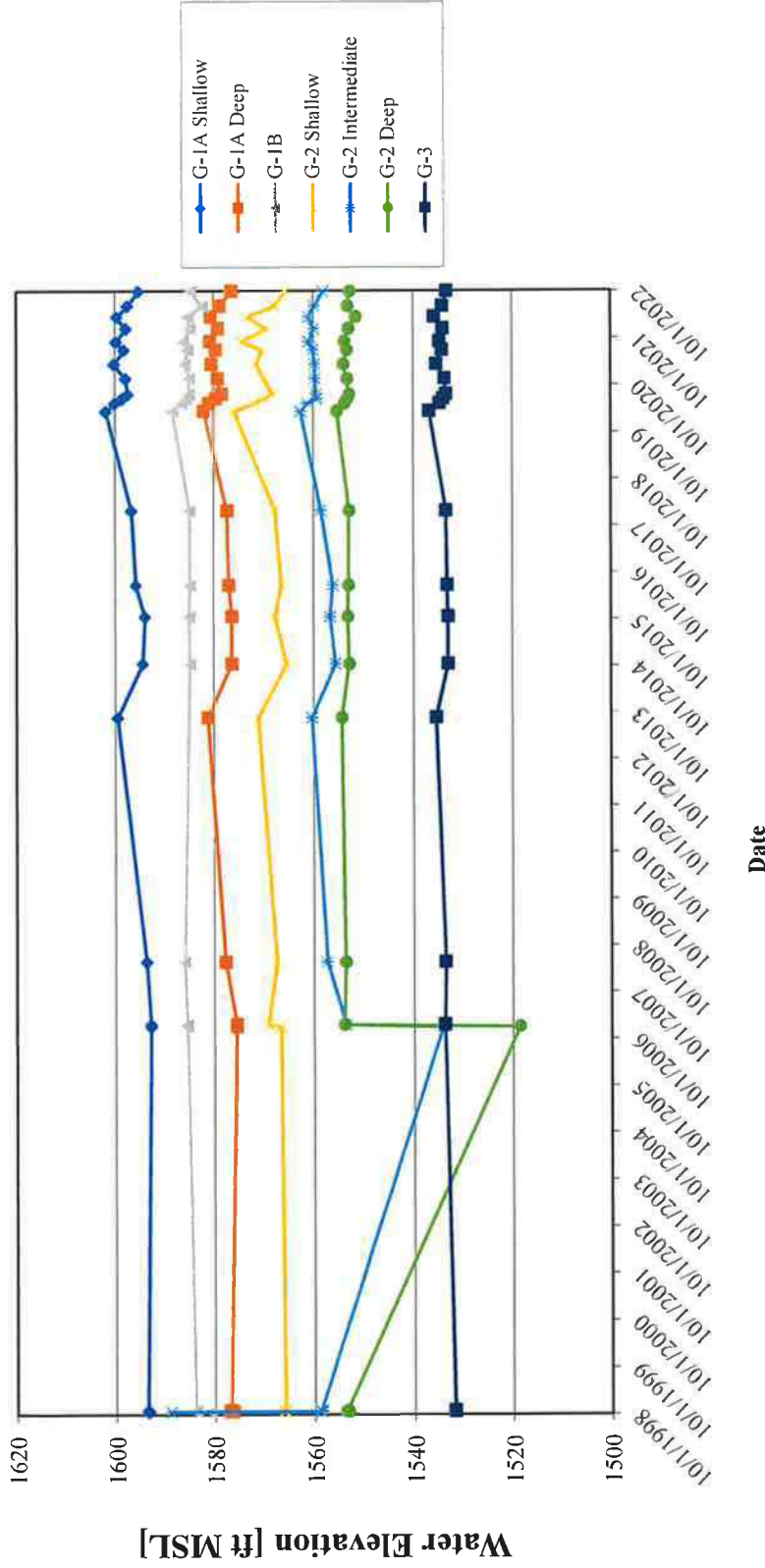
Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.

Figure 2-5. Summary of Vibrating Wire Piezometer Data, P-7A, B, C (Feb 2004 through September 2022) - Lake Petit Dam, Big Canoe, GA

Standpipe Piezometer Water Elevations



Note: G-2 Shallow water levels noted as anomalous on 3 Jan 2007. Re-measured 19 Jan 2007, and levels more consistent with previous readings.

Figure 2-6. Summary of Standpipe Piezometer Data (October 1998 through September 2022) - Lake Petit Dam, Big Canoe, GA.

Embankment (Earth) Dam Inspection Form

Name of Dam: Lake Petit Dam Date: 20 December 2022
Location of Dam (County): Pickens County Weather: Cloudy, 38 degrees F
Inspected by (Print Name): Max Cange and Daisy McMillion

If an inspection item requires further action on your part, place a check mark to the left of the number of the item

A. Crest (refer to Glossary for description)

1. How would you describe the vegetation on the crest? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): The crest of the dam is an asphalt paved road (Wilderness Parkway). Vegetation along the shoulders of the road was observed to be well-maintained.
2. Are there any trees or other inappropriate or excessive vegetation on the crest? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
3. Is there a paved road or driveway on the crest? Yes X No _____
If yes, describe the condition (for example, good condition, numerous cracks, newly paved)/Corrective Action: Good condition. Paved in 2012. Minor transverse and longitudinal pavement cracks were observed on the crest. No changes were observed on the paved road or cracks on the crest relative to previous inspections.
4. Are there any depressions, ruts or holes on the crest? Yes _____ No X
If yes, describe (size, location, etc.)/Corrective Action: N/A
5. Are there any cracks on the crest? Yes X No _____
If yes, describe (length and width, location, direction of cracking, etc.)/Corrective Action: Minor transverse and longitudinal pavement cracks associated with normal pavement wear were observed. These cracks do not appear to be associated with embankment deformations. No changes were observed on the cracks relative to previous inspections.
6. Other observations on the crest/Corrective Action: N/A

B. Upstream Slope (refer to Glossary for description)

1. What is the reservoir level today? At Normal Pool X Above Normal Pool _____ Feet Below Normal Pool _____ Feet
2. How would you describe the vegetation on the upstream slope? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): This area is well-seeded and maintained short grass. Grass cover has been re-established in areas disturbed by the shoreline protection activities. Areas which are not grass covered are protected by riprap erosion protection.
3. Are there any trees or other inappropriate or excessive vegetation on the slope? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
4. Are there any depressions, bulges, ruts or holes (such as animal burrows) on the slope? Yes _____ No X
If yes, describe (size, location, etc.)/Corrective Action: N/A
5. Are there any eroded areas on the slope (such as wave erosion along the shoreline)? Yes _____ No X
If yes, describe (size of area, location, severity, etc.)/Corrective Action: Shoreline riprap protection in place and appears to be performing as designed.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 20 December 2022

B. Upstream Slope (continued)

6. Are there any cracks, sloughs or slides (vertical cliffs) on the slope? Yes _____ No X
If yes, describe (length, width, height, location, etc.)/Corrective Action: N/A

7. Is there any type of slope protection along the shoreline (such as riprap)? Yes X No _____
If yes, describe what type and its condition (for example, riprap - adequate, inadequate, sparse)/Corrective Action:
Shoreline protection completed in April 2022. The shoreline protection consists of a layer of riprap 5 feet above and 3 feet below the normal pool reservoir level.

8. Other observations on the upstream slope/Corrective Action: N/A

C. Downstream Slope (refer to Glossary for description)

1. How would you describe the vegetation on the downstream slope? (Check all that apply)
Recently Mowed _____ Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): Grass observed to provide generally good cover. Small areas of sparse vegetation (up to ~25 ft²) observed at: (i) Bench No.5 to crest, left side: (ii) top of Bench No. 4. left side: (iii) Bench No. 4 to 5, right side: and (iv) top of Bench No. 2 (above the filter), left side.

2. Are there any trees or other inappropriate or excessive vegetation on the slope? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: Previously observed overgrown vegetation and small-diameter trees (<4 in. diameter) along the left and right groins have been removed.

3. Are there any depressions, bulges, ruts or holes (such as animal burrows) on the slope? Yes X No _____
If yes, describe (size, location, etc.)/Corrective Action: Several minor animal burrows/digging locations, and ant hills were observed on the downstream face. A minor depression was observed on Bench No. 4 near right abutment with minor erosion downslope. Continued normal maintenance and filling of minor depressions/holes/burrows is required.

4. Are there any eroded areas on the slope (such as along abutment contacts)? Yes X No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: Previously observed surficial erosion due to surface water runoff located near the downstream left groin area on Bench No. 5 has been repaired with topsoil and erosion control measures (i.e., hay matting and reseeded). Soil swales have been added near the road and Bench No. 5 has had soil placed and revegetated as part of maintenance repairs near the left groin area to convey water into the wooded abutment. Minor surficial erosion along the left groin area below Bench No. 5 was observed to be similar to previous observations.

5. Are there any cracks, sloughs or slides (vertical cliffs) on the slope? Yes _____ No X
If yes, describe (length, width, height, location, etc.)/Corrective Action: N/A

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 20 December 2022

C. Downstream Slope (continued)

6. Are there any wet areas or areas of hydrophilic (lush, water-loving) vegetation? Yes X No _____
If yes, describe (size of area, location, etc.)/Corrective Action: Reverse filter appears to be performing as designed. Water and minor flow (consistent with previous inspections) were observed within the concrete gutters at Bench No. 1. Approximately mid-way between Bench No.1 and No.2 on the right side, a wet area was observed. However, recent and ongoing precipitation made it difficult to measure the extents of this area. This wet area should be inspected in dry conditions to evaluate this area further. A rut was observed along the side of the road near the left toe of the embankment where water from rain events sometimes pools in a previously noted area.
7. Do any wet areas indicate seepage through the dam (such as rust-colored, stained water)? Yes _____ No X N/A _____
If yes, describe (for example, new area of seepage, no change from past observations, size of area, location) /Corrective Action: See discussion of seepage repair in item C.6.
8. Are there any leaks (flowing water) from the slope or beyond the toe of the dam? Yes X No _____
If yes, describe (location, rate of flow, turbidity of flow)/Corrective Action: Small volume flows of clear water continue from the interceptor drains along Bench No. 1 as intended, with the exception of the right-most interceptor drain (not flowing, dry), and the left most interceptor drains (paired drains) which were covered by the seepage repair (a piece of rebar was inserted into this drain prior to construction of the filter to facilitate locating the drain in the future). Continue to monitor the drains and weirs for changes in flow amount and turbidity.
9. Other observations on the downstream slope/Corrective Action: The weirs on the left and right abutments were located. Both weirs were flowing slightly and were generally clean. The left weir has a tendency to become clogged with vegetation/debris (sediment) and requires cleaning out regularly. The source of the vegetation/debris is from surficial erosion from the left abutment upslope of the weir.

D. Plunge Pool (refer to Glossary for description)

1. Is there any type of erosion protection around the plunge pool (such as riprap)? Yes _____ No X
If yes, describe what type and its condition (for example, riprap - adequate, inadequate, obstructed by vegetation) /Corrective Action: There is no plunge pool. Downstream from the impact-type stilling basin there is not riprap, however, based on current operations it does not appear to be needed.
2. Is there any erosion and or seeps around or going into the plunge pool? Yes _____ No X
If yes, describe (size of area, location, severity, etc.) /Corrective Action: N/A
3. Other observations around the plunge pool/Corrective Action: The area of the stilling basin previously observed to be full of organic bacterial growth has been cleaned to assist in the inspection and planned test of the low-level outlet pipe.

E. Principal and Emergency Spillways (refer to Glossary for description)

1. What types of spillways does the dam have (such as corrugated metal, concrete or siphon pipe; concrete or earth channel)?
Principal Spillway Gunite, Stepped Spillway Emergency Spillway None, other than a low-level outlet pipe.
Other/Corrective Action: Auxiliary, siphon system to control partial drawdown of reservoir when needed.

E. Principal and Emergency Spillways (continued)

↑ Check if corrective action is noted/required.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam Date: 20 December 2022

2. Has the emergency spillway activated (had flow) since the last inspection? Yes _____ No X
If yes describe (date(s) of flow, reason for activation, depth of flow) /Corrective Action: A specialty underwater contractor inspected the low-level pipe and backside of the sluice gate structure in December 2022 and indicated that the pipe is in satisfactory condition. An RFP has been issued to Contractors to perform a testing program of the low-level outlet sluice gate and is planned to be completed by the end Quarter 1 of 2023.
3. For pipe spillways, is the intake obstructed in any way (such as with excessive debris)? Yes _____ No X
If yes, describe (type of debris, reason for obstruction, etc.) /Corrective Action: The intake for the low-level outlet is not visible from the surface. but was inspected by a dive team in September 2020. The sluice gate structure was noted to not have been obstructed by sediment or debris following cleaning by divers during that inspection.
4. For pipe spillways, what is the condition of any trash racks (for example, adequate, inadequate, damaged)? /Corrective Action: The intake for the low-level outlet is not visible from the surface but was inspected by a dive team in September 2020. The sluice gate structure was noted to have an intact trash rack by the divers.
5. For pipe spillways, are there any visible cracks, separations or holes in the pipe(s) (intake or outlet)? Yes _____ No X
If yes, describe (location, width of crack or separation, etc.)/Corrective Action: The December 2022 inspection of the pipe rated the pipe in satisfactory condition.
6. For pipe spillways, are there any apparent leaks in the pipe(s)? Yes _____ No X
If yes, describe (location, rate of flow from leak, etc.)/Corrective Action: A camera inspection of the low-level outlet pipe was completed in December 2020. The inspection identified a few pipe joints with calcite formations, indicating minor inflow. but otherwise did not identify any apparent leaks or issues with the conduit's overall condition.
7. For pipe spillways, how would you describe the overall condition of the pipe(s)? (Check all that apply)
Functioning Normally X Not Functional _____ Deteriorated _____ Damaged _____ Adequate _____ Inadequate _____
8. For concrete or earth channel spillways, is the entrance or channel obstructed in any way? Yes _____ No X
If yes, describe (type of obstruction, location, etc.)/Corrective Action: No observed debris or blockage.
9. For earth channel spillways, how would you describe the vegetation in the spillway? (Check all that apply)
Recently Mowed _____ Overgrown _____ Good Cover _____ Sparse _____
Other (describe)/Corrective Action: N/A
10. For earth channel spillways, are there any trees or other inappropriate vegetation in the spillway? Yes _____ No _____
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
11. For earth channel spillways, are there any eroded areas in the spillway? Yes _____ No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: N/A

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam Date: 20 December 2022

E. Principal and Emergency Spillways (continued)

12. For concrete channel spillways, are there any cracks or holes in the spillway? Yes X No _____
If yes, describe (width of crack or hole, location, etc.)/Corrective Action: The spillway was fully operational, and the spillway repairs conducted in April 2022 were observed to be intact and withstanding the flows within the spillway. Continue to monitor the status of the repairs. The spillway repairs addressed deficiencies that were required for the acceptable performance of the spillway. Throughout the spillway, there are still minor cracks observable, however, these smaller cracks and holes were classified as deficiencies that do not hinder the performance of the spillway. These minor cracks should continuously be monitored for changes.
13. For concrete channel spillways, are there any leaks or evidence of undermining (flow under the concrete)? Yes X No _____
If yes, describe (location, rate of flow from leak, indicators of undermining, etc.)/Corrective Action: Additional repairs along the left side of Step 45 were observed to have been completed since the previous inspection. Repairs consisted of additional backfilling against and under the walls to prevent further erosion. As of this inspection, the repaired areas were stable with no visible signs of erosion, however, water flow was observed to daylight over the recently repaired areas. The flow appears to remain clear and is daylighting near the bridge abutment along the left, downstream end of the spillway channel. Flow was estimated to be approximately 10 gpm. The flow does not appear to hinder the performance of the spillway or present an immediate dam safety deficiency.
14. For earth or concrete channel spillways, how would you describe the overall condition of the spillway? (Check all that apply)
Functioning Normally X Not Functional _____ Deteriorated _____ Damaged _____ Adequate _____ Inadequate _____
15. Other observations on the spillways/Corrective Action: No other observations.

F. Instrumentation (refer to Glossary for description)

1. Are there any toe drains at the downstream toe or any other seepage drains on the dam? Yes X No _____
If yes, describe the condition (for example, clogged, free flowing, deteriorated, good condition) /Corrective Action: The drains at the toe of the dam had flow exiting and the interceptor drains along Bench No. 1 were identified (as noted in Item E.8). The underdrain system of the dam outlets is the impact stilling basin, which has been cleaned to assist in the inspection and test of the low-level outlet pipe. Three pipe outlets were observed to the right of the impact stilling basin. One pipe outlet was observed to the left of the impact stilling basin. Pipes were observed to be free flowing with clear flow, except for one of the pipes to the right of the impact stilling basin which was observed to be dry.
2. For drains, is an animal guard installed at the outlet of each drain? Yes _____ No X _____
If no, which drains lack animal guards? /Corrective Action: Animal guards are not installed on interceptor drainpipes; however, they do not appear necessary on the interceptor surface drains or underdrain outlet pipes due to continuous flow and relatively small diameter.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 20 December 2022

F. Instrumentation (Continued)

3. For drains, measure the rate of flow from each drain and record below (use additional pages if necessary):

Designation/Location of Drain	Flow Rate	Flow Rate in GPM*	Turbidity of Flow (describe – clear, muddy, etc.)
Interceptor Drains on Bench No. 1	Very low	Approximately 0.5 GPM, Cumulative	Clear
Underdrain Outlets	½" height of flow over the weir of the impact- style outlet structure	--	Clear
Flowing Pipe Outlets West of Impact Stilling Basin (2 pipes)	Low	Consistent with previous inspection (Approximately 2 GPM)#.	Clear
Flowing Pipe Outlet East of Impact Stilling Basin	Low	Consistent with previous inspection (Approximately 0.5 GPM)#.	Clear

#: Unable to get accurate measurement due to wet and rainy conditions during inspection.

4. Are there any piezometers on the dam? Yes X No

If yes, describe the condition (for example, good condition, damaged, etc.)/Corrective Action: The piezometers are generally in good condition. The annular spaces between the monument covers and corresponding standpipe piezometer casings were observed to be full of water due to recent precipitation. Recommend to replace the seals of the monument covers.

5. For piezometers, does each piezometer have a cap with a lock? Yes No X

If no, which piezometers need caps (to prevent rain water intrusion) and/or locks (to prevent tampering)? /Corrective Action: Individual piezometers have caps to prevent water from intruding but no locks. Monument covers have bolted lids to prevent tampering.

6. For piezometers, are you able to take a measurement (depth to water) in each piezometer? Yes X No

If yes, record depth to water (in feet) in each piezometer, record on a separate page, and attach to this form.

7. Are there any other monitoring devices on the dam? Yes No X

If yes, describe what type and the condition (for example, monitoring wells - good condition, damaged) /Corrective Action: N/A

8. Other observations on instrumentation/Corrective Action: No other observations.

G. Photographs

At a minimum, photographs should be taken of the crest, upstream slope, downstream slope and any other notable features.

List of photographs (be sure to date stamp the photos): Photographs have been attached to this inspection report.

*GPM (gallons per minute): to convert from oz/sec multiply by 0.4688; to convert from ml/sec multiply by 0.01585

GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN8667

Project Name: December 2022 (Q4) Lake Petit Dam Quarterly Owners Inspection

Site Location: Pickens County, Georgia

Photograph 1

Date: 12/20/2022 12:19 PM

Direction: NW

Comments: Crest - General View of the asphalt roadway on the crest of the dam. Photograph taken from the left abutment.



Photograph 2

Date: 12/20/2022 12:20 PM

Direction: W

Comments: Upstream Slope - View of the grass covered upstream slope and riprap wave action protection. Photograph taken from the left side of the dam.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN8667

Project Name: December 2022 (Q4) Lake Petit Dam Quarterly Owners Inspection

Site Location: Pickens County, Georgia

Photograph 3

Date: 12/20/2022 12:40 PM

Direction: N

Comments: Overflow Spillway - General view of the overflow spillway towards the upstream end. No debris observed blocking flow during the inspection.



Photograph 4

Date: 12/20/2022 12:49 PM

Direction: W

Comments: Overflow Spillway – Previously repaired (backfilled and grouted) area behind the left spillway wall at the bridge abutment. Repaired area was stable with no signs of erosion. Flow observed to daylight over previously repaired areas.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN8667

Project Name: December 2022 (Q4) Lake Petit Dam Quarterly Owners Inspection

Site Location: Pickens County, Georgia

Photograph 5

Date: 12/20/2022 10:30 AM

Direction: NW

Comments: Impact Stilling Basin - General view of the impact stilling basin and associated drain outlets at the downstream toe of the dam.



Photograph 6

Date: 12/20/2022 12:18 PM

Direction: SW

Comments: Downstream Slope - View of soil swales installed near the road to convey water into the wooded left abutment, downstream groin area.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN8667

Project Name: December 2022 (Q4) Lake Petit Dam Quarterly Owners Inspection

Site Location: Pickens County, Georgia

Photograph 7

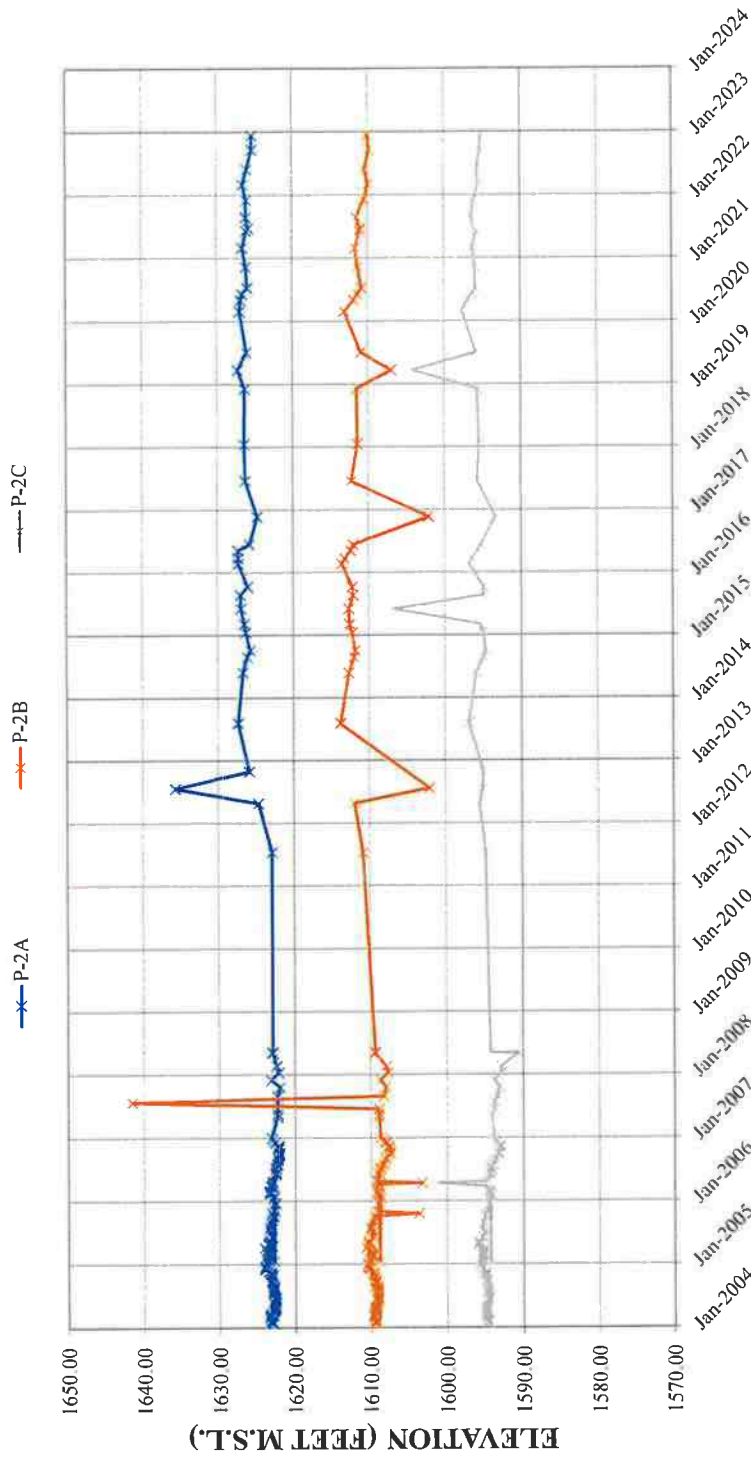
Date: 12/20/2022 11:53 AM

Direction: E

Comments: Downstream Slope - View of maintenance repairs to Bench No. 5 to mitigate surficial erosion along the left, downstream groin area.



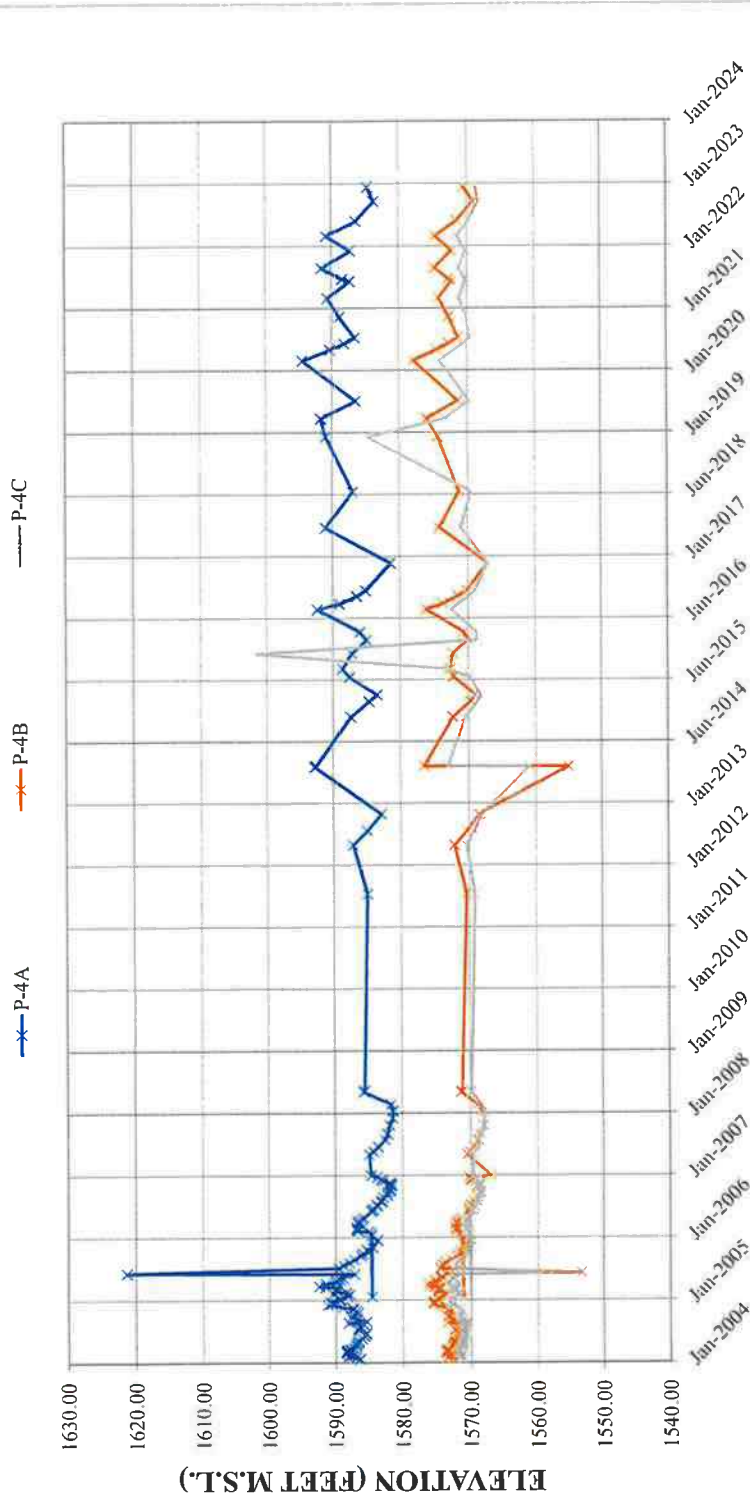
Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.

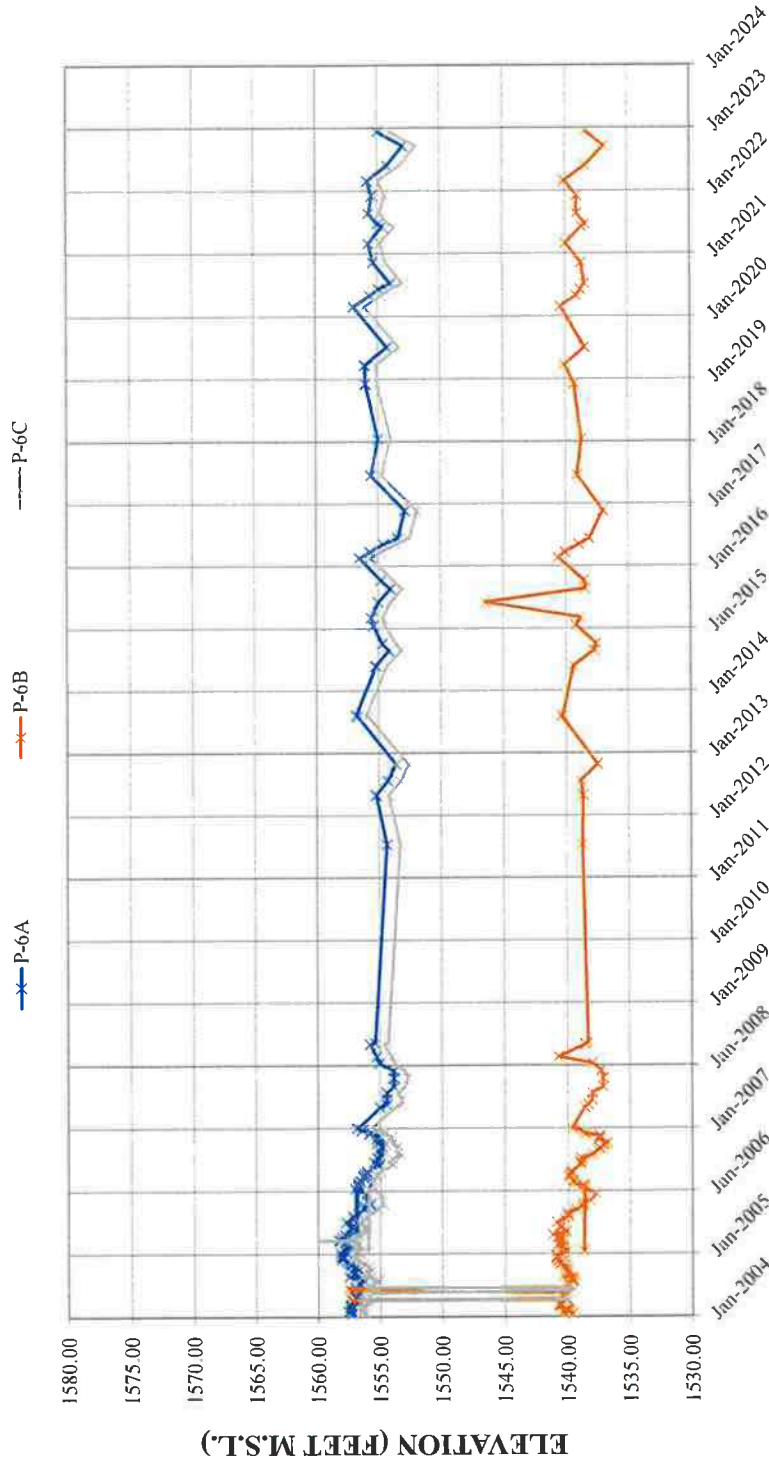
Figure 2-2. Summary of Vibrating Wire Piezometer Data, P-2A, B, C (Feb 2004 through December 2022) - Lake Petit Dam, Big Canoe, GA

Vibrating Wire Piezometer Water Elevations



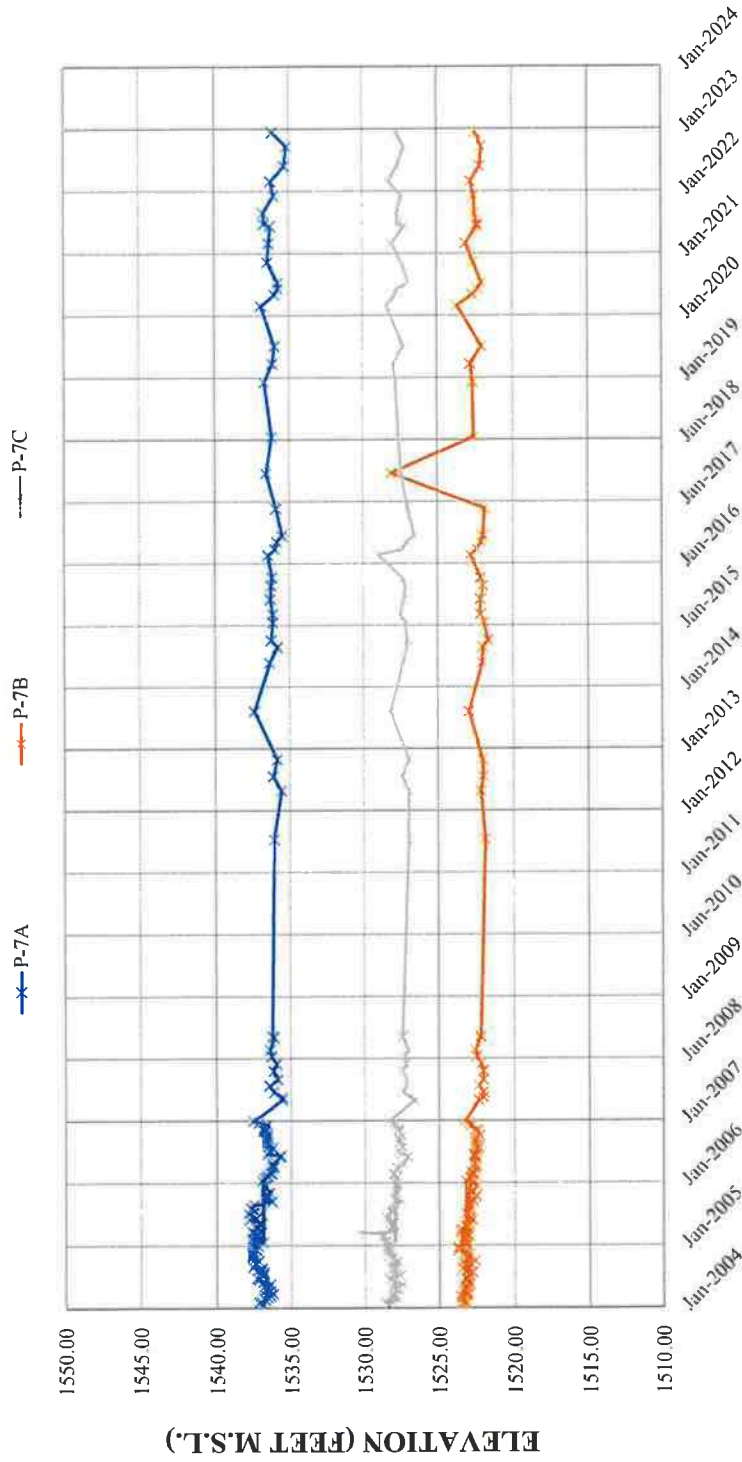
Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-3. Summary of Vibrating Wire Piezometer Data, P-4A, B, C (Feb 2004 through December 2022) - Lake Petit Dam, Big Canoe, GA

Vibrating Wire Piezometer Water Elevations



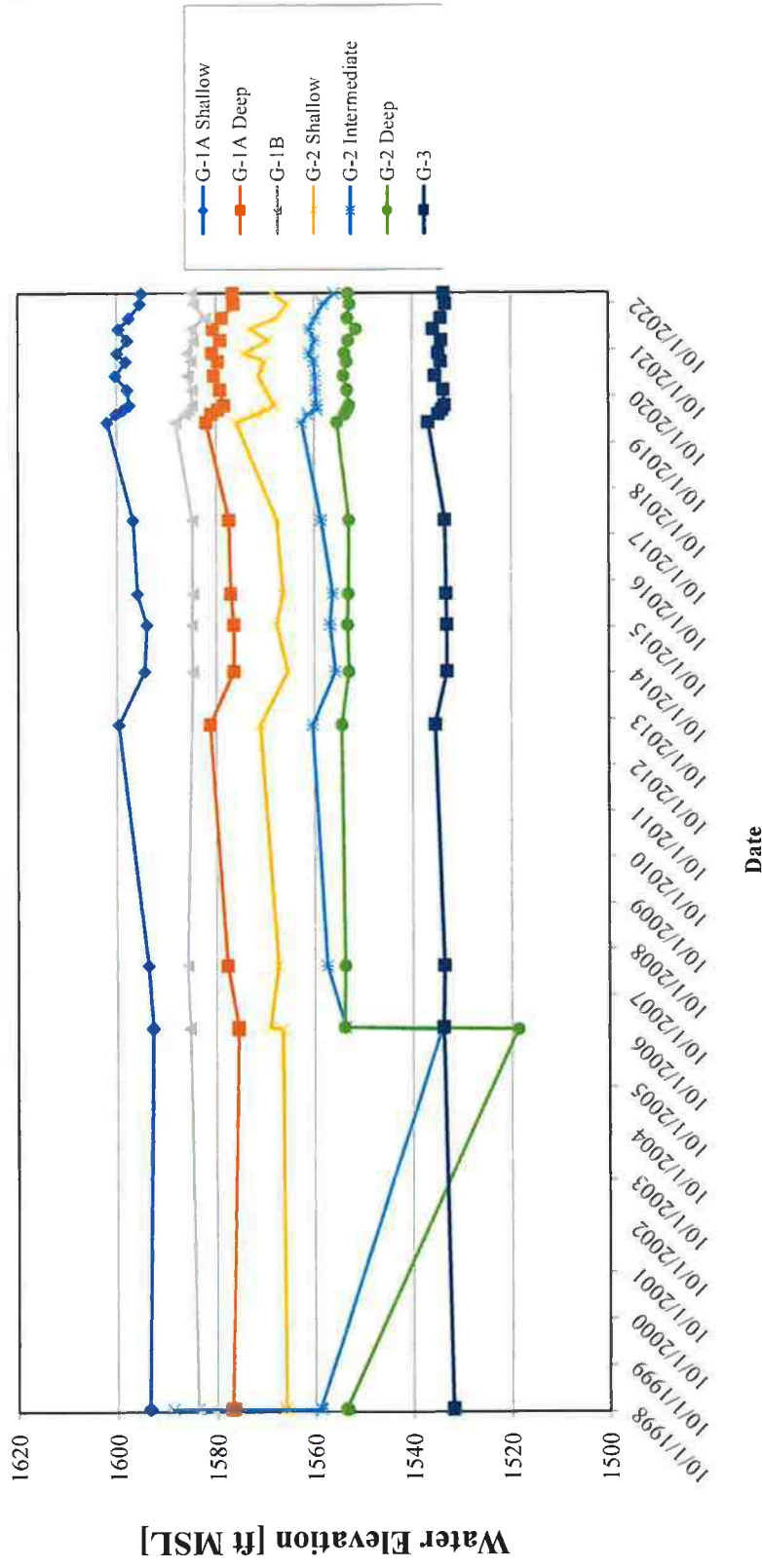
Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-4. Summary of Vibrating Wire Piezometer Data, P-6A, B, C (Feb 2004 through December 2022) - Lake Petit Dam, Big Canoe, GA

Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.
Figure 2-5. Summary of Vibrating Wire Piezometer Data, P-7A, B, C (Feb 2004 through December 2022) - Lake Petit Dam, Big Canoe, GA

Standpipe Piezometer Water Elevations



Note: G-2 Shallow water levels noted as anomalous on 3 Jan 2007. Re-measured 19 Jan 2007, and levels more consistent with previous readings.

Figure 2-6. Summary of Standpipe Piezometer Data (October 1998 through December 2022) - Lake Petit Dam, Big Canoe, GA.

Embankment (Earth) Dam Inspection Form

Name of Dam: Lake Petit Dam Date: 29 March 2023
Location of Dam (County): Pickens County Weather: Sunny, 64 degrees F
Inspected by (Print Name): Edisson Ortega Avila

If an inspection item requires further action on your part, place a check mark to the left of the number of the item

A. Crest (refer to Glossary for description)

1. How would you describe the vegetation on the crest? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): The crest of the dam is an asphalt paved road (Wilderness Parkway). Vegetation along the shoulders of the road was observed to be well-maintained.
2. Are there any trees or other inappropriate or excessive vegetation on the crest? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
3. Is there a paved road or driveway on the crest? Yes X No _____
If yes, describe the condition (for example, good condition, numerous cracks, newly paved)/Corrective Action: Good condition. Paved in 2012. Minor transverse and longitudinal pavement cracks were observed on the crest. No changes were observed on the paved road or cracks on the crest relative to previous inspections.
4. Are there any depressions, ruts or holes on the crest? Yes _____ No X
If yes, describe (size, location, etc.)/Corrective Action: N/A
5. Are there any cracks on the crest? Yes X No _____
If yes, describe (length and width, location, direction of cracking, etc.)/Corrective Action: Minor transverse and longitudinal pavement cracks associated with normal pavement wear were observed. These cracks do not appear to be associated with embankment deformations. No changes were observed on the cracks relative to previous inspections.
6. Other observations on the crest/Corrective Action: None

B. Upstream Slope (refer to Glossary for description)

1. What is the reservoir level today? At Normal Pool X Above Normal Pool ___ Feet Below Normal Pool ___ Feet
2. How would you describe the vegetation on the upstream slope? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): This area is well-seeded and maintained short grass. Vegetation has been re-established in areas disturbed by shoreline protection activities conducted in April 2022. The shoreline of the upstream face is protected via riprap erosion protection. Along the left and right groins of the upstream face, pedestrian paths were established with granular material.
3. Are there any trees or other inappropriate or excessive vegetation on the slope? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: N/A
4. Are there any depressions, bulges, ruts or holes (such as animal burrows) on the slope? Yes _____ No X
If yes, describe (size, location, etc.)/Corrective Action: N/A
5. Are there any eroded areas on the slope (such as wave erosion along the shoreline)? Yes _____ No X
If yes, describe (size of area, location, severity, etc.)/Corrective Action: N/A

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 29 March 2023

B. Upstream Slope (continued)

6. Are there any cracks, sloughs or slides (vertical cliffs) on the slope? Yes _____ No X
If yes, describe (length, width, height, location, etc.)/Corrective Action: N/A
7. Is there any type of slope protection along the shoreline (such as riprap)? Yes X No _____
If yes, describe what type and its condition (for example, riprap - adequate, inadequate, sparse)/Corrective Action:
Shoreline protection completed in April 2022. The shoreline protection consists of a rip rap, approximately 4 feet above and 3 feet below the normal pool reservoir level.
8. Other observations on the upstream slope/Corrective Action: N/A

C. Downstream Slope (refer to Glossary for description)

1. How would you describe the vegetation on the downstream slope? (Check all that apply)
Recently Mowed X Overgrown _____ Good Cover X Sparse _____
Other/Corrective Action (describe): Grass observed to provide generally good cover. Areas of sparse vegetation observed at: (i) slope between Bench No. 3 and 4, middle of slope; (ii) slope between Bench No. 4 to 5, right side; and (iii) top of Bench No. 2 (above the filter), left side. Attempt to reestablish.
2. Are there any trees or other inappropriate or excessive vegetation on the slope? Yes _____ No X
If yes, describe (type of vegetation, size, location, etc.)/Corrective Action: Previously observed overgrown vegetation along the left groin. A dead tree was observed on the right groin, between Bench No. 2 to 3.
3. Are there any depressions, bulges, ruts or holes (such as animal burrows) on the slope? Yes X No _____
If yes, describe (size, location, etc.)/Corrective Action: Several minor animal burrows, and ant hills were observed on the downstream face. A minor depression was observed on Bench No. 4 near right abutment with minor erosion downslope. Continue maintenance filling of minor depression and burrows, and restore vegetation.
4. Are there any eroded areas on the slope (such as along abutment contacts)? Yes X No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: Surficial erosion observed at: (i) the middle of the slope between Bench No. 3 and 4; and (ii) the right side of the slope between Bench No. 4 and 5. Continued normal maintenance, revegetation, and erosion control measures to restore.
5. Are there any cracks, sloughs or slides (vertical cliffs) on the slope? Yes _____ No X
If yes, describe (length, width, height, location, etc.)/Corrective Action: N/A

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam Date: 29 March 2023

C. Downstream Slope (continued)

6. Are there any wet areas or areas of hydrophilic (lush, water-loving) vegetation? Yes X No
If yes, describe (size of area, location, etc.)/Corrective Action: Reverse filter at right side of the slope between Bench No. 1 to 2 appears to be performing as designed. Sediment and vegetation cutting from mowing activities were observed within the concrete channel at Bench No. 1. The source of the sediment is believed to be from the backfill material surrounding the interceptor drains. Wet areas were observed at: (i) left side of slope between the road and Bench No.1, approximately 10 ft up the slope and 20 ft along the slope; and (ii) right side of interceptor drain No. 5 at Bench No. 1, approximately 2 ft up the slope and 5 ft along the slope. No flow or stained water observed. Surficial soft soils were observed at the first wet area. Recommend continued monitoring of these areas for changes to conditions and implementation of interceptor drain replacement, which is ongoing design presently.
7. Do any wet areas indicate seepage through the dam (such as rust-colored, stained water)? Yes No X N/A
If yes, describe (for example, new area of seepage, no change from past observations, size of area, location) /Corrective Action: No active seepage, rust-colored, or turbidity observed at the wet areas discussed in item C.6. Recommend continued monitoring of these areas for changes to conditions.
8. Are there any leaks (flowing water) from the slope or beyond the toe of the dam? Yes X No
If yes, describe (location, rate of flow, turbidity of flow)/Corrective Action: Small volume flows of clear water continue from the interceptor drains along Bench No. 1 as intended, with the exception of the right-most interceptor drain (No. 1) (not flowing, dry). The two leftmost interceptor drains (paired drains, No. 13 and 14) were covered by the installation of the reverse filter for the seepage repair. Clear flows were observed out of the interceptor drains where water flows were observed. Continue to monitor the drains and weirs for changes in flow amount and turbidity.
9. Other observations on the downstream slope/Corrective Action: Two weirs are located on the left and right weirs of the concrete channel located at Bench No. 1. The right weir was flowing easily and required no clearing. The left weir and the concrete channel connecting to the left weir were full of tree cuttings. The left weir has a tendency to become clogged with vegetation/debris and requires cleaning out regularly. The source of the vegetation/debris is believed to be surficial erosion and leaves/twigs/vegetation from the left abutment upslope of the weir.

D. Plunge Pool (refer to Glossary for description)

1. Is there any type of erosion protection around the plunge pool (such as riprap)? Yes No X
If yes, describe what type and its condition (for example, riprap - adequate, inadequate, obstructed by vegetation) /Corrective Action: There is no plunge pool. Downstream from the impact-type stilling basin there is no riprap, however, based on current operations it does not appear to be needed.
2. Is there any erosion and or seeps around or going into the plunge pool? Yes No X
If yes, describe (size of area, location, severity, etc.) /Corrective Action: N/A
3. Other observations around the plunge pool/Corrective Action: As part of the inspection for the low-level out testing program in December 2022, sediment and bacteria growth were dug out of the impact-style stilling basin. As of this quarterly inspection, approximately 3 to 4 inches of sediment and bacterial growth were observed at the bottom of the concrete stilling basin. Continue to monitor the potential build-up of sediment and bacterial growth and clean out as needed.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam

Date: 29 March 2023

E. Principal and Emergency Spillways (refer to Glossary for description)

1. What types of spillways does the dam have (such as corrugated metal, concrete or siphon pipe; concrete or earth channel)?
Principal Spillway Gunite, Stepped Spillway Emergency Spillway None, other than a low-level outlet pipe.
Other/Corrective Action: Also has an auxiliary siphon system to control partial drawdown of reservoir when needed.
2. Has the emergency spillway activated (had flow) since the last inspection? Yes _____ No X
If yes describe (date(s) of flow, reason for activation, depth of flow) /Corrective Action: A specialty underwater contractor inspected the low-outlet pipe and back side of the sluice gate structure in December 2022 and indicated that the pipe is in satisfactory condition. Work associated with the performance of a testing program of the low-level outlet sluice gate is planned to be completed in the 2nd quarter of 2023.
3. For pipe spillways, is the intake obstructed in any way (such as with excessive debris)? Yes _____ No X
If yes, describe (type of debris, reason for obstruction, etc.) /Corrective Action: The intake for the low-level outlet is not visible from the surface, but was inspected by a dive team in September 2020. The sluice gate structure was noted to not have been obstructed by sediment or debris following cleaning by divers during that inspection.
4. For pipe spillways, what is the condition of any trash racks (for example, adequate, inadequate, damaged)? /Corrective Action: The intake for the low-level outlet is not visible from the surface but was inspected by a dive team in September 2020. The sluice gate structure was noted to have an intact trash rack by the divers.
5. For pipe spillways, are there any visible cracks, separations or holes in the pipe(s) (intake or outlet)? Yes _____ No X
If yes, describe (location, width of crack or separation, etc.) /Corrective Action: The December 2022 inspection of the pipe rated the pipe in satisfactory condition.
6. For pipe spillways, are there any apparent leaks in the pipe(s)? Yes _____ No X
If yes, describe (location, rate of flow from leak, etc.) /Corrective Action: A camera inspection of the low-level outlet pipe was completed in December 2020. The inspection identified a few pipe joints with calcite formations, indicating minor inflow, but otherwise did not identify any apparent leaks or issues with the conduit's overall condition. For the testing of the program of the low-level outlet sluice gate, an inspection of the low-level outlet pipe and inlet structure was conducted in December 2022. The inspection identified build up of calcite deposits, minor corrosion, and sediment build up at the inlet structure. These areas are planned to be cleaned out as part of the testing program for the low-level outlet sluice gate.
7. For pipe spillways, how would you describe the overall condition of the pipe(s)? (Check all that apply)
Functioning Normally X Not Functional _____ Deteriorated _____ Damaged _____ Adequate _____ Inadequate _____
8. For concrete or earth channel spillways, is the entrance or channel obstructed in any way? Yes _____ No X
If yes, describe (type of obstruction, location, etc.) /Corrective Action: Small branches (less than 4 inches in diameter) observed at the entrance of the overflow spillway, however, these items are not impeding the flow into the spillway. Recommend clearing any debris at the entrance of the overflow spillway.
9. For earth channel spillways, how would you describe the vegetation in the spillway? (Check all that apply)
Recently Mowed _____ Overgrown _____ Good Cover _____ Sparse _____
Other (describe) /Corrective Action: N/A
10. For earth channel spillways, are there any trees or other inappropriate vegetation in the spillway? Yes _____ No _____
If yes, describe (type of vegetation, size, location, etc.) /Corrective Action: N/A

↑ Check if corrective action is noted/required.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam Date: 29 March 2023

11. For earth channel spillways, are there any eroded areas in the spillway? Yes _____ No _____
If yes, describe (size of area, location, severity, etc.)/Corrective Action: N/A
12. For concrete channel spillways, are there any cracks or holes in the spillway? Yes X No _____
If yes, describe (width of crack or hole, location, etc.)/Corrective Action: The spillway was fully operational, and the spillway repairs conducted in April 2022 were observed to be intact and withstanding the flows within the spillway. Continue to monitor the status of the repairs. The spillway repairs addressed deficiencies that were required for the acceptable performance of the spillway. Throughout the spillway, there are still minor cracks observable, however, these smaller cracks and holes were classified as deficiencies that do not hinder the performance of the spillway. These minor cracks should continuously be monitored for changes.
13. For concrete channel spillways, are there any leaks or evidence of undermining (flow under the concrete)? Yes X No _____
If yes, describe (location, rate of flow from leak, indicators of undermining, etc.)/Corrective Action: Additional repairs along the left side of Step 45 were observed to have been completed since the previous inspection. Repairs consisted of additional backfilling against and under the walls to prevent further erosion. As of this inspection, surficial erosion was observed over the backfilled areas. Water flow was observed to daylight over the backfilled areas. The flows were measured to be approximately 15 gpm. The flow appears to remain clear and are daylighting near the bridge abutment along the left, downstream end of the spillway channel. The flow does not appear to hinder the performance of the spillway or present an immediate dam safety deficiency. This flow should be monitored for changes in discoloration and flow rate, and additional investigation and maintenance repairs to fill in the eroded areas be conducted.
14. For earth or concrete channel spillways, how would you describe the overall condition of the spillway? (Check all that apply)
Functioning Normally X Not Functional _____ Deteriorated _____ Damaged _____ Adequate _____ Inadequate _____
15. Other observations on the spillways/Corrective Action: No other observations.

F. Instrumentation (refer to Glossary for description)

1. Are there any toe drains at the downstream toe or any other seepage drains on the dam? Yes X No _____
If yes, describe the condition (for example, clogged, free flowing, deteriorated, good condition) /Corrective Action: The interceptor drains along Bench No. 1 were identified (as noted in Item E.8). The drains at the toe of the dam had flow exiting. The inverts for the internal drain system of the dam are located at the concrete stilling basin. Four pipe outlets were observed in the vicinity of the concrete stilling basin: (i) 3 pipes to the right of the concrete stilling basin; and (ii) one to the left of the concrete stilling basin. Pipes were observed to be free flowing with clear flow, except for one of the pipes to the right of the impact stilling basin which was observed to be dry.
2. For drains, is an animal guard installed at the outlet of each drain? Yes _____ No X _____
If no, which drains lack animal guards? /Corrective Action: Animal guards are not installed on interceptor drainpipes nor the other pipe outlets; however, they do not appear necessary on the interceptor drains or internal drain system pipes due to continuous flow and relatively small diameter.

Embankment (Earth) Dam Inspection Form (continued)

Name of Dam: Lake Petit Dam Date: 29 March 2023

F. Instrumentation (Continued)

3. For drains, measure the rate of flow from each drain and record below (use additional pages if necessary):

Designation/Location of Drain	Flow Rate	Flow Rate in GPM*	Turbidity of Flow (describe - clear, muddy, etc.)
Interceptor Drains on Bench No. 1 (With the exception for Interceptor Drain No. 1, 13, and 14)	Very low	Less than 0.5 GPM from each observable drain	Clear
Internal Drain System	½" height of flow over the weir of the concrete impact basin	--	Clear
Drainpipe No. 2	Moderate	Approximately 11 GPM	Clear
Drainpipe No. 3	Very low	Approximately 0.8 GPM	Clear
Drainpipe No. 4	Very low	Less than 0.5 GPM	Clear

4. Are there any piezometers on the dam? Yes X No _____

If yes, describe the condition (for example, good condition, damaged, etc.)/Corrective Action: The piezometers are generally in good condition. The annular spaces between the monument covers and corresponding standpipe piezometer casings were observed to be full of water due to recent precipitation. The bolt seals on the well covers were replaced during this inspection. Recommend replacing well cover gaskets at boring P2 and G1A.

5. For piezometers, does each piezometer have a cap with a lock? Yes _____ No X

If no, which piezometers need caps (to prevent rain water intrusion) and/or locks (to prevent tampering)? /Corrective Action: Individual piezometers have caps to prevent water from intruding but no locks. Monument covers have bolted lids to prevent tampering.

6. For piezometers, are you able to take a measurement (depth to water) in each piezometer? Yes X No _____

If yes, record depth to water (in feet) in each piezometer, record on a separate page, and attach to this form.

7. Are there any other monitoring devices on the dam? Yes _____ No X

If yes, describe what type and the condition (for example, monitoring wells - good condition, damaged) /Corrective Action: N/A

8. Other observations on instrumentation/Corrective Action: No other observations.

G. Photographs

At a minimum, photographs should be taken of the crest, upstream slope, downstream slope and any other notable features.

List of photographs (be sure to date stamp the photos): Photographs have been attached to this inspection report.

*GPM (gallons per minute): to convert from oz/sec multiply by 0.4688; to convert from ml/sec multiply by 0.01585

GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN9418

**Site Name: March 2023 (Q1) Lake Petit Dam
Quarterly Owners Inspection**

Site Location: Pickens County, Georgia

Photograph 1

Date: 3/29/2023 1:34 PM

Direction: NW

Comments: Crest - View of the asphalt roadway on the crest of the dam. Photograph was taken from the left abutment.

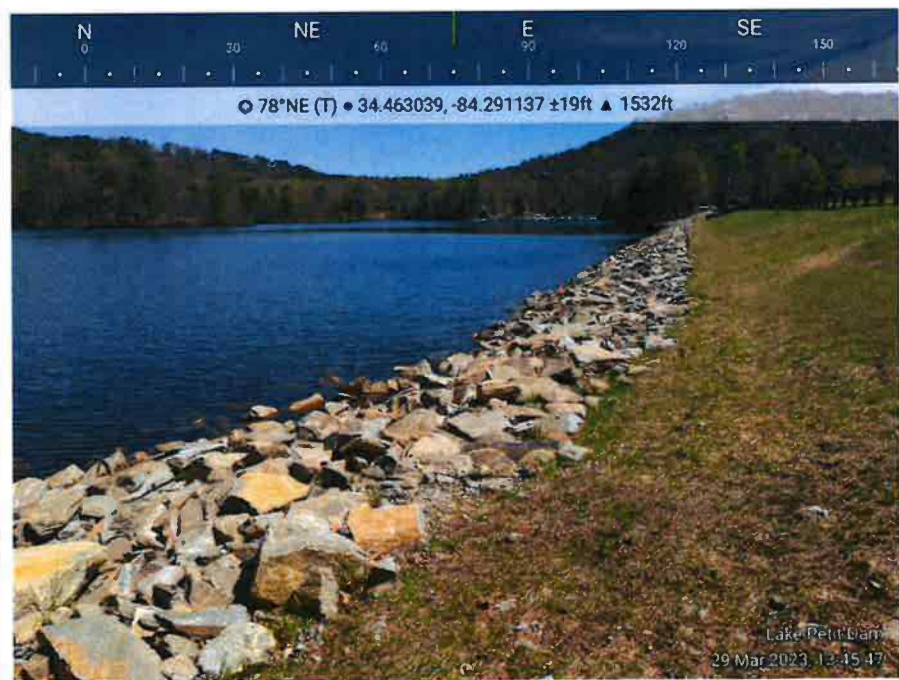


Photograph 2

Date: 3/29/2023 1:45 PM

Direction: E

Comments: Upstream Slope - View of the grass-covered upstream slope and riprap wave action protection. Photograph was taken from the right side of the upstream slope of the dam.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN9418

**Site Name: March 2023 (Q1) Lake Petit Dam
 Quarterly Owners Inspection**

Site Location: Pickens County, Georgia

Photograph 3

Date: 3/29/2023 1:10 PM

Direction: E

Comments: Downstream Slope - View of typical erosion/area of sparse vegetation (near right abutment between Benches 4 and 5).



Photograph 4

Date: 3/29/2023 11:48 AM

Direction: NW

Comments: Downstream Slope - Wet area on left side of the slope between the road and Bench No.1, approximately 10 ft up the slope and 20 ft along the slope



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN9418

**Site Name: March 2023 (Q1) Lake Petit Dam
Quarterly Owners Inspection**

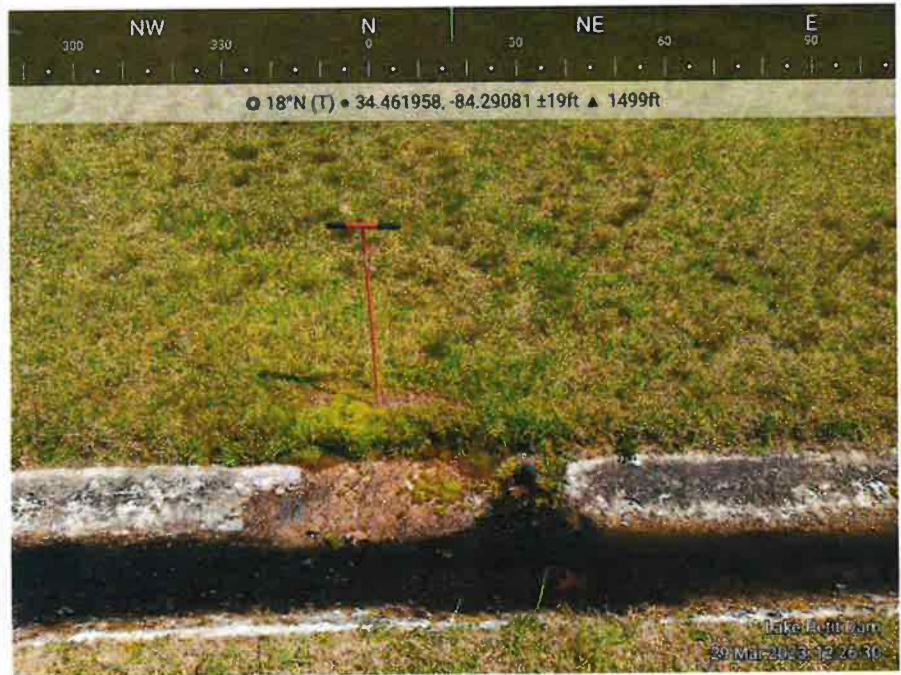
Site Location: Pickens County, Georgia

Photograph 5

Date: 3/29/2023 12:26 PM

Direction: NW

Comments: Downstream Slope - Wet area to the right of interceptor drain No. 5 at Bench No. 1, approximately 2 ft up the slope and 5 ft along the slope

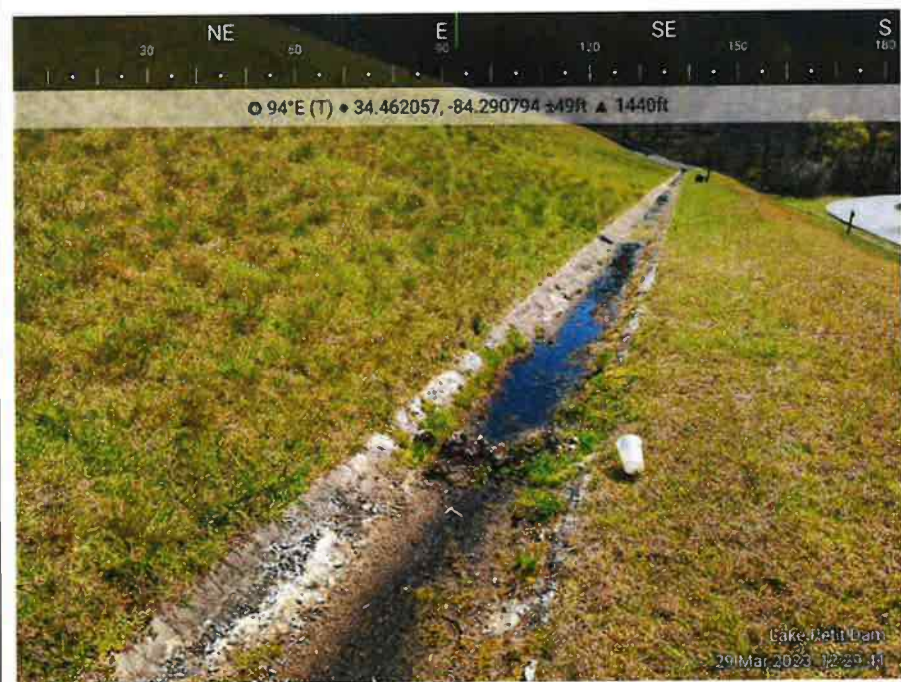


Photograph 6

Date: 3/29/2023 12:29 PM

Direction: E

Comments: Downstream Slope - View of the sediment and vegetation build-up at the concrete channel located on Bench No. 1.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Big Canoe Property Owners Association

Project Number: TN9418

**Site Name: March 2023 (Q1) Lake Petit Dam
 Quarterly Owners Inspection**

Site Location: Pickens County, Georgia

Photograph 7

Date: 3/29/2023 11:34 AM

Direction: SE

**Comments: Downstream
 Slope - Cut down trees
 and vegetation
 obstructing flow on the
 left weir, located on
 Bench No. 1.**



Photograph 8

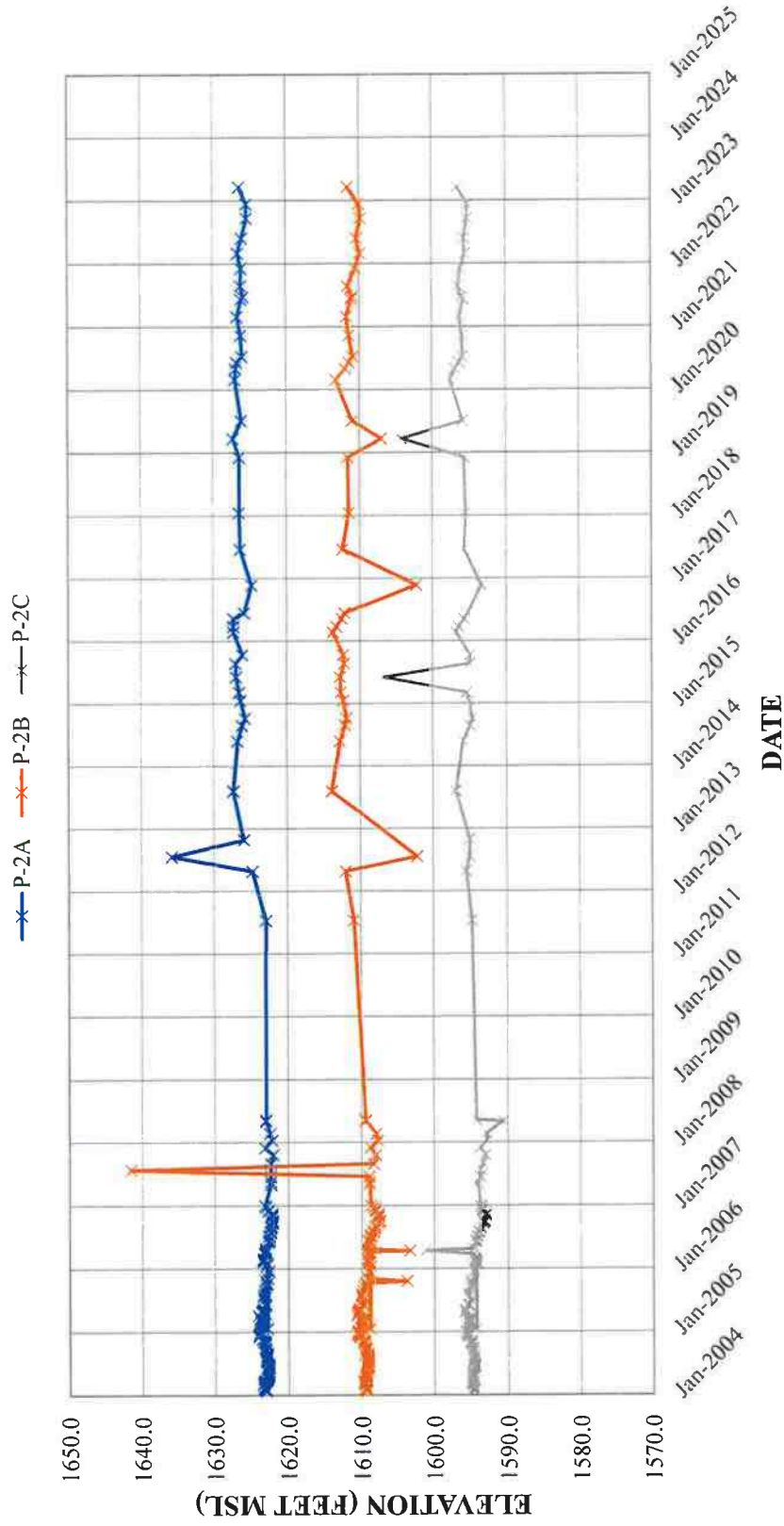
Date: 3/29/2023 2:45 PM

Direction: W

**Comments: Spillway -
 Surficial flow was
 observed on the left side
 of Step 45 of the spillway.**



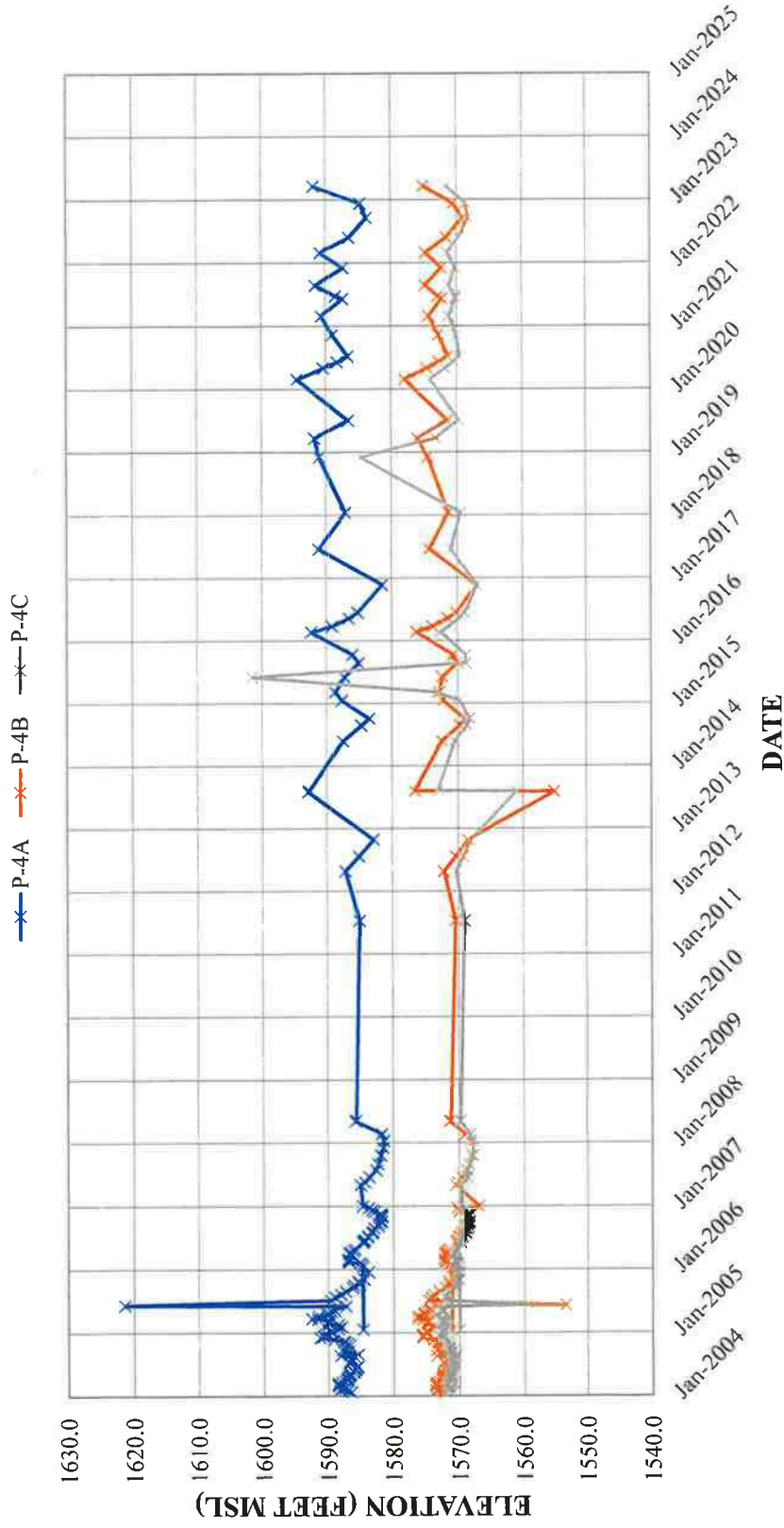
Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.

Figure 2-2. Summary of Vibrating Wire Piezometer Data, P-2A, B, C (Feb 2004 through March 2023) - Lake Petit Dam, Big Canoe, GA

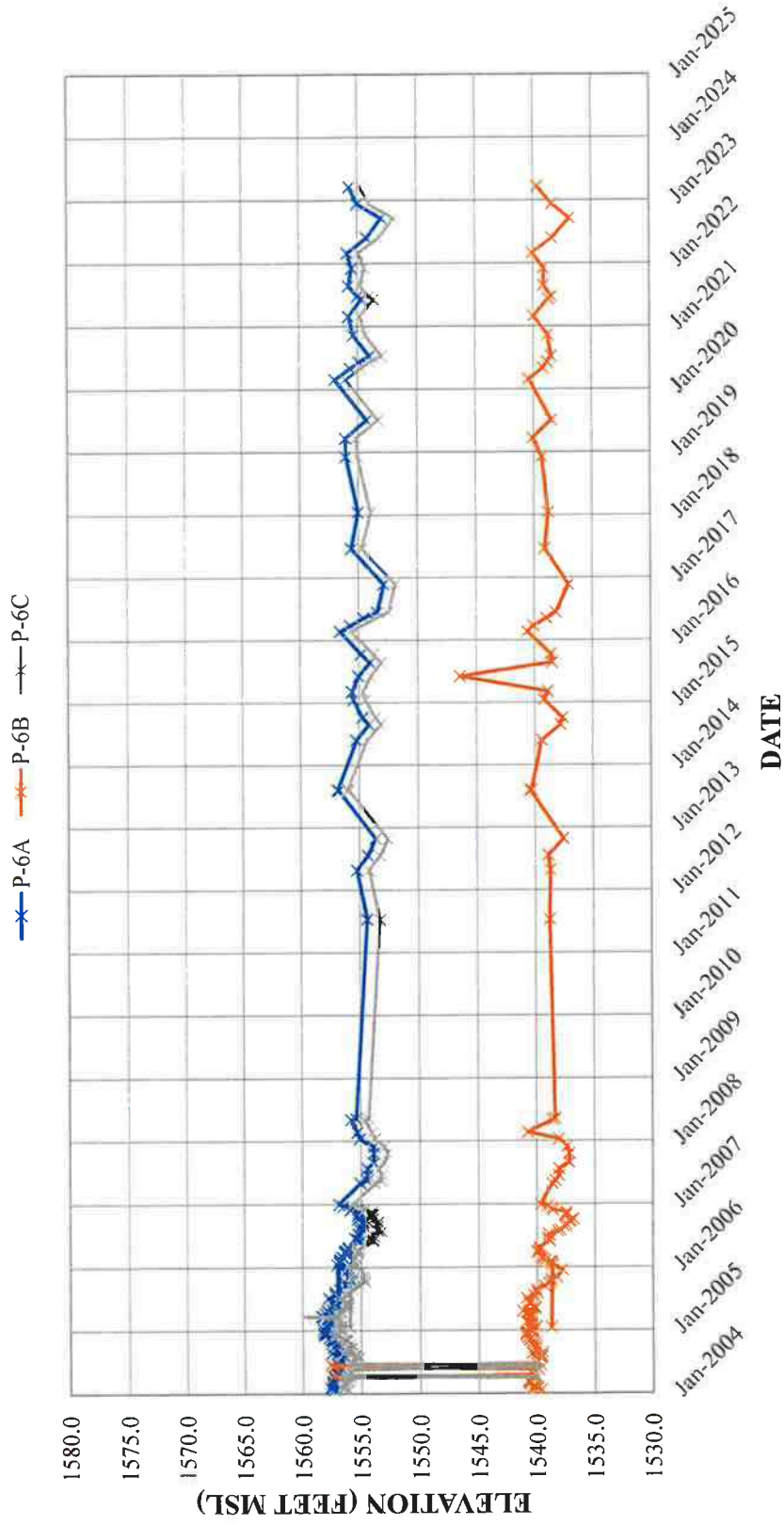
Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.

Figure 2-3. Summary of Vibrating Wire Piezometer Data, P-4A, B, C (Feb 2004 through March 2023) - Lake Petit Dam, Big Canoe, GA

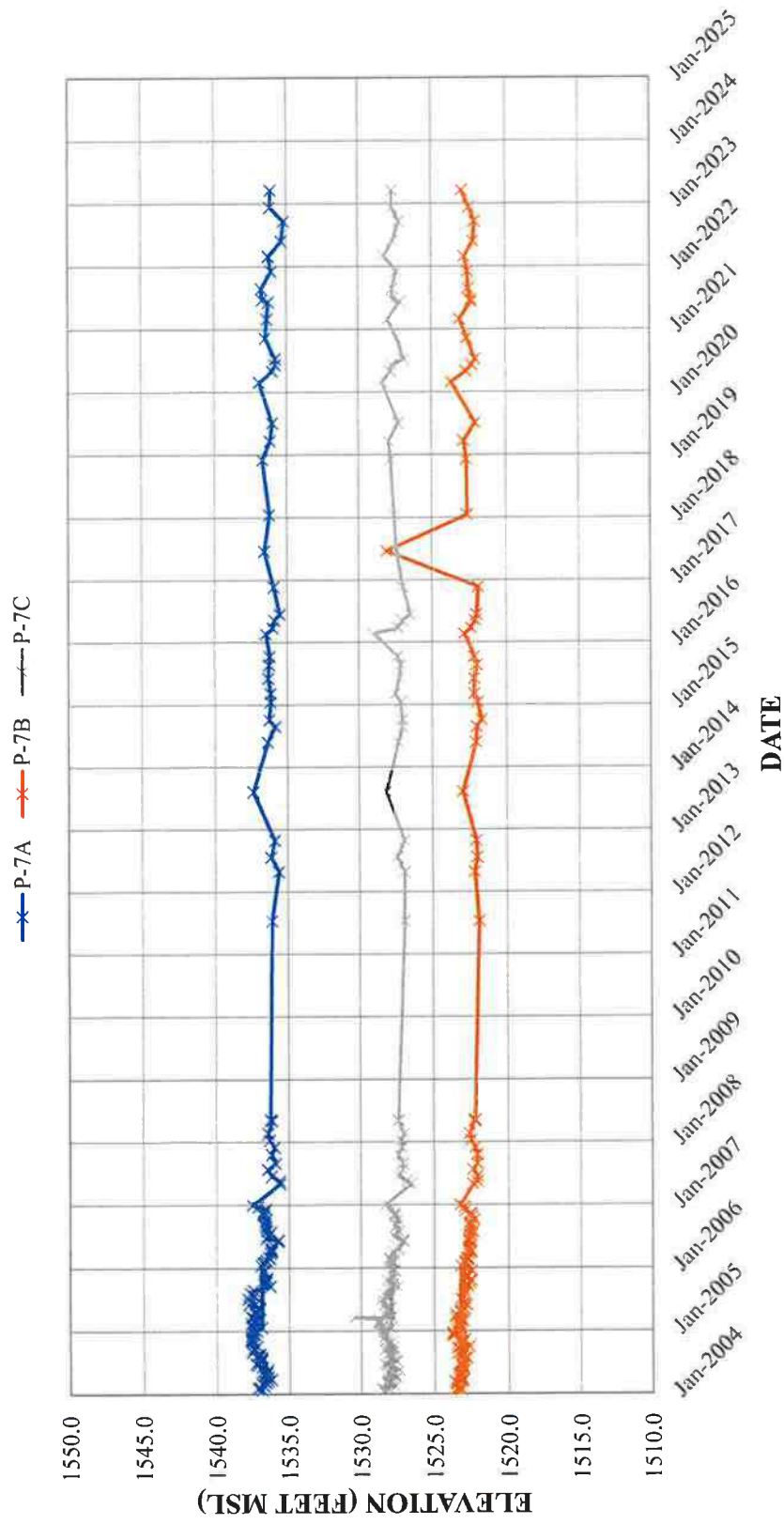
Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.

Figure 2-4. Summary of Vibrating Wire Piezometer Data, P-6A, B, C (Feb 2004 through March 2023) - Lake Petit Dam, Big Canoe, GA

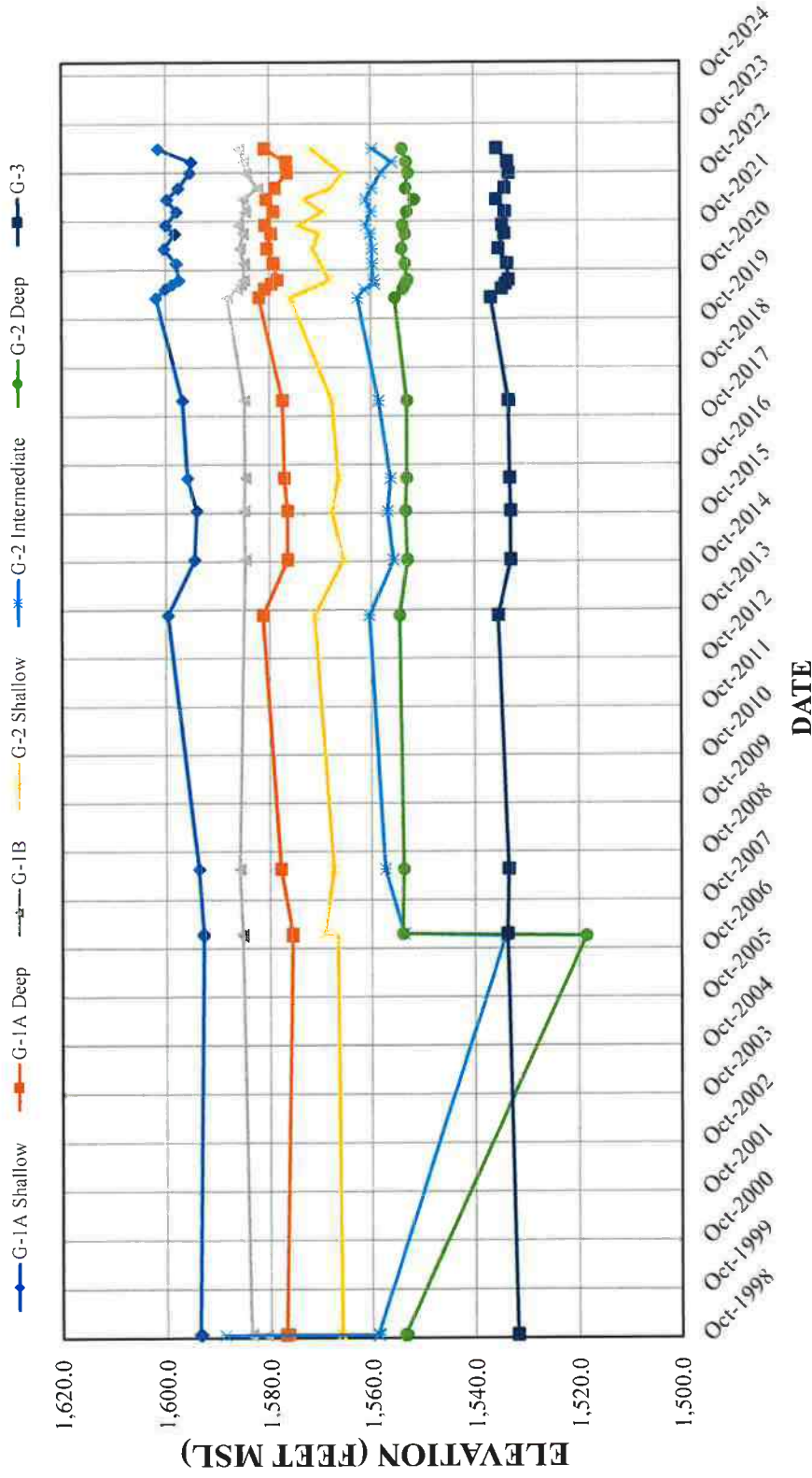
Vibrating Wire Piezometer Water Elevations



Note: Historical data anomalies generally appear to be the result of transcription errors.

Figure 2-5. Summary of Vibrating Wire Piezometer Data, P-7A, B, C (Feb 2004 through March 2023) - Lake Petit Dam, Big Canoe, GA

Standpipe Piezometer Water Elevations



Note: G-2 Shallow water levels noted as anomalous on 3 Jan 2007. Re-measured 19 Jan 2007, and levels more consistent with previous readings.

Figure 2-6. Summary of Standpipe Piezometer Data

(October 1998 through March 2023) - Lake Petit Dam, Big Canoe, GA.