OWNER'S INSPECTION CHECKLIST

NOTE: PRIOR TO COMPLETING THIS INSPECTION REPORT PLEASE REVIEW THE "GUIDELINES FOR INSPECTION OF DAMS" AVAILABLE ON THE MDEQ WEBSITE. ALSO, TO BE CONSIDERED COMPLETE YOU MUST INCLUDE PHOTOGRAPHS OF THE DAM AND ALL APPURTENANT STRUCTURES WITH THE INSPECTION REPORT.

DAM NAME: Oktibbeha County Lake Dam

DAM INVENTORY NO: MS00338 **COUNTY:** Oktibbeha County
HAZARD CLASS: High

LEGAL OWNER (include address, telephone number, and e-mail)**:**

Oktibbeha County Board of Supervisors
108 West Main Street
Starkville, MS 39759
(662)323-1520
wcarpenter@gtpdd.com

OPERATOR/OTHER CONTACT (include address, telephone number, and e-mail)**:**

Victor Collins, Road Manager
108 West Main Street
Starkville, MS 39759
(662)229-8177
vcollins@gtpdd.com

DATE OF INSPECTION: Inspection completed on June 18, 2024. All photos included were taken during this site visit.

RESERVOIR INFORMATION

Normal Reservoir Elevation (ft): low level outlet; survey elevation of 242.9.

Reservoir Elevation at time of inspection (ft): reservoir remaining is less than 50 acres at several feet below the current normal pool.

WEATHER CONDITIONS (including recent rainfall): 73°F and cloudy

PERSONNEL CONDUCTING INSPECTION:
Scott Taylor, PE WSP
Nikit Bhattari, WSP
Dana Waits, WSP
Christian Sims, WSP

PREVIOUS INSPECTIONS (date of)

Last Owner's Inspection: November 14, 2023 (December 14, 2023, Date of Report)

Last Formal (done by a licensed engineer) Inspection: February 25, 2016

EMERGENCY ACTION PLAN

Date of Last Approved Plan (when the plan was last distributed to the EAP holders): March 18, 2019

Date of Last Revision: March 18, 2019

Is the notification flowchart complete and current? The owner should update since the last revision

Is the downstream residents list current? The owner should update since the last revision.

When was the plan last tested? The Owner's inspection checklist dated December 17, 2020, reported activation of EAP January 14, 2020.

DAM CREST

Problems:
☐ None ☒ Ruts or Puddles ☒ Erosion ☐ Cracks with Displacement ☒ Sinkholes ☐ Not Wide Enough ☐ Low Area ☐ Misalignment ☐ Inadequate Surface Drainage ☐ Trees, Brush, Briars
☒ Other: Settlement of Conduit

If Trees, Brush, Briars is checked above please describe the nature and extent of vegetation on the dam?

Overall Summary of Condition:

The condition of the surface material was found to be in decent shape. The area above the primary spillway (12'x13' box culvert) had experienced some sinkholes caused by the settlement/shifting of the box culvert, causing gaps in the joints of the box culvert. These gaps had caused some water intrusion/soil loss above the culvert. These gaps have since been repaired with expanding foam that was holding up at time of inspection.

Comments:

UPSTREAM FACE OF DAM

Problems:

☐ None ☒ Riprap - Missing, Sparse, Displaced, Weathered ☐ Wave Erosion-with Scarps
☐ Cracks-with Displacement ☐ Sinkhole ☒ Appears Too Steep ☐ Depressions or Bulges
☐ Slides ☐ Animal Burrows ☒ Trees, Brush, Briars
☐ Other:

If Trees, Brush, Briars is checked above please describe the nature and extent of vegetation on the dam?

Overall Summary of Condition:

Some areas of the US Face have steep slopes and sparse rip rap. Thicker brush on north end. Tree saplings should be removed.

Comments:

Seemed to be potential for erosion.
Additional rip-rap should be placed on slope. Saplings should be removed.

DOWNSTREAM FACE OF DAM

Problems:

☐ None ☐ Livestock Damage ☒ Erosion or Gullies ☐ Cracks with Displacement
☐ Sinkholes ☒ Appears too Steep ☐ Depression or Bulges ☒ Slide(s) ☐ Soft Areas
☐ Trees, Brush, Briars on dam or within 50 feet of toe ☐ Animal Burrows
☐ Other:

If Trees, Brush, Briars is checked above please describe the nature and extent of vegetation on the dam and/or near the toe?

Any new seepage areas (Yes / No?): N/A. Can't currently evaluate seepage with current condition of dam. No water is on dam since dam is functioning as a dry dam in current state.

Any previously existing seepage areas where seepage has noticeably increased (Yes / No?): No

Any seepage that is muddy, milky, or turbid (Yes / No?): No

Any sand boils present at, or near the toe (Yes / No?): No

Overall Summary of Condition:

Significant erosion and slides observed right of primary spillway for several hundred feet. Slope is approximately 1.5:1 which is too steep for stability.

Comments:

UTILITIES

Utilities Installed in Embankment or Toe?

☐ Phone/Cable ☐ Water ☒ Electrical ☐ Sewer ☐ Gas

Overhead power lines on poles near toe of downstream dam slope.

Does the location of all utilities appear on the as-built plans for the dam?

No known as-built plans available

PRINCIPAL SPILLWAY

Any debris blocking spillway (Yes / No?):

No

Overall condition of material (good condition, poor condition, exposed reinforcement, cracks, corrosion):

Spalling, cracking, and scaling occurring. Exposed reinforcement. Corrosion present. Inlet obstructed. Primary spillway has been removed, thus removing permanent pool.

Any joints displaced or separated (Yes / No?):

Yes

Evidence of water leaking into or out of spillway (water entering or exiting below entrance of spillway):

N/A

AUXILIARY (EMERGENCY) SPILLWAY

Any debris blocking spillway (Yes / No?): 9 box culverts located above 100-year discharge level. No debris has reached spillway.

Erosion present on or below spillway (Yes / No?): Yes, cracks on north/downstream end

Condition of spillway cover material: Concrete in fair condition. Spillway above 100-year discharge elevation.

OUTLET STRUCTURE AND EXIT CHANNEL

Condition of structure: Due to safety concerns, official interior inspection of the riser structure has not been performed. The area above the primary spillway (12'x13' box culvert) had experienced some sinkholes caused by the settlement/shifting of the box culvert, causing gaps in the joints of the box culvert. These gaps had caused some water intrusion/soil loss above the culvert. These gaps have since been repaired with expanding foam that was holding up at time of inspection. Outlet invert and wingwalls appear to be in fair condition.

Any erosion or undermining around outlet structure (Yes / No?): Yes, bank erosion observed.

Any seepage around outlet structure (Yes / No?): None observed

Exit channel clear of debris / vegetation (Yes / No?): Channel mostly clear with minimal debris. Some erosion of plunge pool has occurred over the past 50 years.

DRAINAGE SYSTEM

Are drain pipes plugged (Yes / No?): N/A.

Are drains discharging water or are they dry? No toe drains on this dam.

Is discharge clear or muddy?

None.

Does the location of all drainage systems/filters appear on the as-built plans for the dam?

No as-built plans available. No filter drains/toe drains observed.

GATES AND VALVES

Are gates, valves or stems broken or bent? Gates/appurtenant structures have been mostly removed.

Are gates, valves or stems corroded? See above.

Are gates, valves or stems not operational? See above.

Are gates, valves or stems leaking while closed? See above.

OPERATION AND MAINTENANCE

Is dam being operated and maintained in accordance with approved operation and maintenance manual?

No. The lake during the inspection was drained thus the outflow facilities are not performing under normal operating conditions. Embankment appears to undergo periodic mowing.

INSTRUMENTATION

If instruments are present and can be read by owner / operator, then give instrument description / number, instrument readings and date of readings and relation to normal readings:

There are five (5) two-inch diameter open standpipe piezometers located adjacent to the downstream slope of the dam, along the west side of Perkins Road. The piezometers are not being monitored because of the lake has no permanent pool.

SUMMARY

List any specific concerns with the dam that should be inspected during the next formal inspection:

Continue to closely monitor the 12x13 conduit for joint separation and potential sinkholes.

CERTIFICATION OF PERSONNEL CONDUCTING INSPECTION

I certify that the above dam was personally inspected by me and the conditions described herein are correct to the best of my knowledge and belief.

Signature R. Scott Taylor Date June 18, 2024

PHOTO 1—Upstream slope view from right side of dam

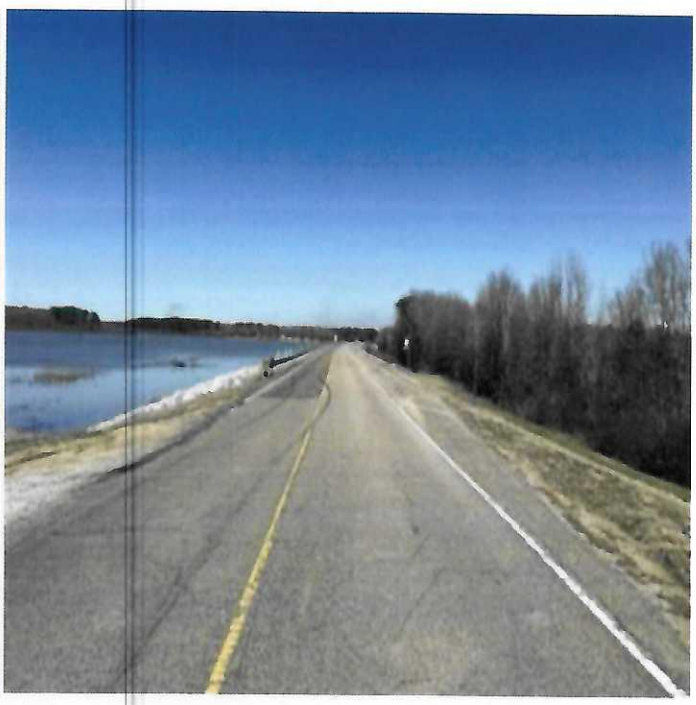

PHOTO 2—Dam crest view from right side of dam

PHOTO 3 —Downstream slope view from right side of dam

PHOTO 4—Primary spillway (note missing riser)

PHOTO 5—Upstream slope view from left side of dam

PHOTO 6—Dam crest view from left side of dam

PHOTO 7 —Downstream slope view from left side of dam
(Utility lines visible and 3 of 5 piezometers)

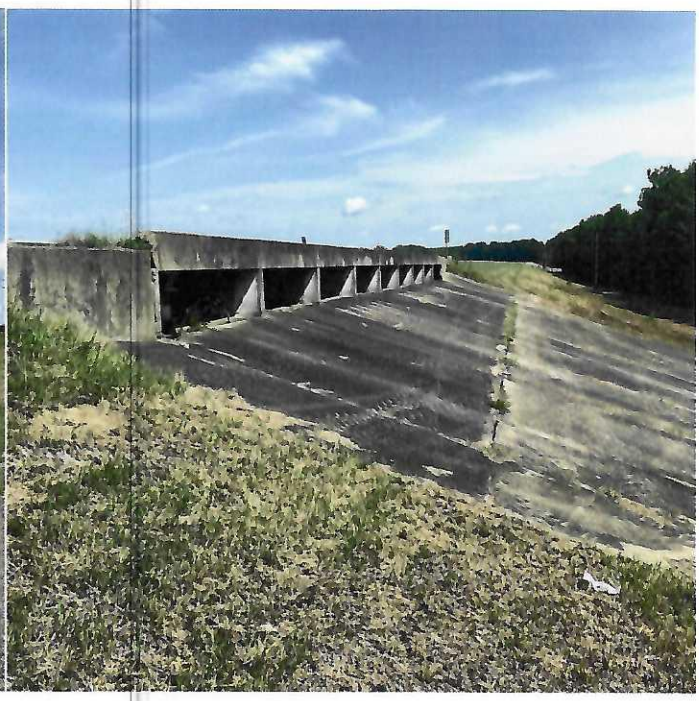

PHOTO 8—Auxiliary spillway view

PHOTO 9—Spillway outlet structures from front view

PHOTO 10—Exit channel view from end of outlet structures

PHOTO 11 — Area above primary spillway where sinkhole opened caused by joint separation

PHOTO 12— Saplings to be removed

PHOTO 13— Slide area along downstream right embankment

PHOTO 14— Bottom of auxiliary spillway

PHOTO 15 — Utility lines along Perkins Road

PHOTO 16— Structural damage at downstream left corner of auxiliary spillway