

LAKE LEMON 2025 DAM INSPECTION REPORT

Monroe County, IN

Prepared For:

Lake Lemon Conservancy District
7599 North Tunnel Road
Unionville, Indiana 47468

Prepared By:

DLZ Indiana, LLC



DLZ Job No. 2563-5067-90

April 23, 2025

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1.0 Site Information

1.1 General

The Lake Lemon Conservancy District requested DLZ Indiana, LLC (DLZ) perform a field inspection of the Lake Lemon Dam. The Lake Lemon Dam is located near Unionville, Indiana in Monroe County. DLZ staff completed the dam inspection on April 1, 2025.

The Lake Lemon reservoir was constructed in the 1950's, and its main function at that time was to provide the City of Bloomington its primary source of drinking water. The reservoir is used today for recreation and as a secondary source of drinking water supply for the City of Bloomington. The normal pool area is approximately 2.66 square miles and is located within portions of Monroe and Brown Counties. The reservoir's watershed covers approximately 71 square miles.

The dam's earthen embankment is roughly 50 feet high with a crest length of approximately 660 feet. The crest width is approximately 13 feet, and the upstream and downstream slopes are approximately 3 feet horizontal to 1 foot vertical. The primary spillway is a 329-foot long, concrete ogee overflow structure in a valley northeast of the earthen embankment. The auxiliary spillway consists of a 42-inch diameter reinforced concrete pipe near the western abutment from its inlet to the outlet via a gatewell. Flow through the pipe is controlled by a slide-gate drawdown structure located within the fenced area on the western end of the upstream slope of the embankment. The pipe discharges into a stilling basin near the downstream toe of the dam. The dam embankment and spillway location map are provided in **Appendix I**.

Photographs taken during the inspection and a Photograph Orientation Map are provided in **Appendix II**. This report contains all the observations and recommendations resulting from the inspection. The previous inspection report from 2023 was also reviewed as part of the assessment. The completed IDNR Dam Inspection Checklist for the 2025 inspection is presented in **Appendix III**.

1.2 Recent Maintenance Activities

In the 2023 Inspection Report, recommendations were made for additional monitoring and maintenance. It is understood that the downstream western concrete retaining wall of the auxiliary spillway has been repaired near the bottom where undermining was previously observed with additional concrete and cinderblocks. The woody vegetation observed at the downstream toe of the embankment has been removed.

1.3 Security

The access to the dam embankment is along a private drive with a locked gate. The lake manager has access to this lock, as does the City of Bloomington Utilities. While the embankment, south end of the primary spillway, and the auxiliary spillway have no public access, there is public access to the north end of the primary spillway structure via Spillway Road.

2.0 Field Inspection

Weather conditions during the inspection were mostly sunny. The high temperature of the day was 57°F. The inspection was completed on April 1 with the previous rainfall for the Bloomington area showing 0.15 inches on March 31, 2025.

2.1 Embankment

There were no serious problems in the physical condition of the embankment found by DLZ. The slopes were relatively uniform. Grass and vegetation on the embankment slopes and crest had been mowed. The lake supervisor stated the embankment is typically mowed two times a year.

There were several signs of animal burrows ranging from 7 to 22 inches observed during the inspection. The embankment should continue to be regularly monitored for animal burrows because they can create seepage pathways if not filled.

2.2 Ogee Primary Spillway

The primary spillway did not change significantly since the last inspection. The previous inspection noted minor displacements of $\frac{1}{2}$ to $\frac{3}{4}$ inches at joints located along the eastern retaining wall. There appeared to be minimal changes, as the displacement is now $\frac{3}{4}$ to 1 inch at the joints.

Erosion at the downstream toe of the spillway could not be verified at the time of inspection due to the amount of water flowing over the spillway. The addition of riprap along the outside bank of the eastern abutment has prevented additional erosion per previous recommendations (2021). No new erosion control measures are needed on this bank.

There is riprap accumulation at the toe of the spillway in the stilling basin on the eastern side. It is recommended that the riprap be removed, and the area be continuously monitored for additional riprap deposition.

2.3 Auxiliary Spillway

The visible portions of the auxiliary spillway appeared satisfactory and the stilling basin conditions appeared to remain unchanged from previous inspections. Previously scoured areas downstream of the sluiceway are backfilled with properly sized riprap, as was recommended in the previous inspection report. There has been some migration of the placed riprap, which needs redistribution. The vertical crack and exposed earth under the western downstream concrete retaining wall has been mostly repaired with additional concrete and cinderblocks. Additional concrete or riprap along the western concrete retaining wall closer to the spillway is recommended, as well as monitoring of the erosion.

3.0 Conclusions

Based on our observations, it appears the dam facility condition has not changed significantly since the 2023 inspection. The overall surficial condition of Lake Lemon Dam was determined to be "Satisfactory."

4.0 Recommendations

1. Remove the woody vegetation along the fenced area around the sluice gate drawdown structure and along the western retaining wall of the primary spillway. All undesirable vegetation growth within these areas should be removed by cutting or spraying as part of an annual maintenance program.
2. Dam should be monitored on a regular basis for the presence of any animal burrows on the embankment and the identified burrows should be filled.
3. Downstream bank of dam should be monitored for seepage and depressions. The bank should be monitored for any loss of vegetation and/or bare flow paths or patches that do not revegetate.
4. Implement erosion control measures at the western downstream concrete retaining wall of the auxiliary spillway. The retaining wall will need additional backfill for the areas of exposed earth under the concrete. The downstream riprap will need redistribution. Monitor the progression of the retaining wall undermining and riprap migration.
5. Remove the riprap accumulated on the primary spillway stilling basin and continue to monitor and remove deposited riprap.

Sincerely,

DLZ Indiana, LLC

Sarah Jones, E.I.
Civil Engineer



Jonathan E. LaTurner, P.E.
Division Manager



INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

Lake Lemon 2025 Dam Inspection Report
Monroe County, IN

APPENDIX I

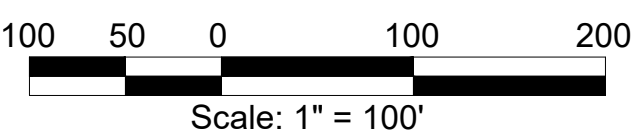
LAKE LEMON DAM SITE LOCATION MAP

138 N Delaware St, Indianapolis, IN 46204-2524 | OFFICE 317.633.4120 | ONLINE WWW.DLZ.COM

Akron Bellefontaine Bridgeville Burns Harbor Chicago Cincinnati Cleveland Columbus Detroit Fort Wayne Grand Rapids Indianapolis Joliet
Kalamazoo Knoxville Lansing Lexington Logan Madison Maumee Melvindale Merrillville Munster Muskegon Port Huron Saint Joseph San
José South Bend Waterford



Lake Lemon Dam Site Location Map





INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

Lake Lemon 2025 Dam Inspection Report
Monroe County, IN

APPENDIX II

LAKE LEMON DAM INSPECTION PHOTOGRAPHS



Inspection Date: April 1, 2025
Inspectors: Jonathan E. LaTurner, P.E.
Sarah J. Jones, E.I.

Lake Lemon Dam Inspection Photo Orientation Map

Key

Photo Number and Direction

→

50 25 0 50 100

Scale: 1" = 50'

Site Photographs



Photograph No. 1

West dam embankment facing northeast toward auxiliary spillway. Minor rutting repaired from recent maintenance access and brush cleared based on previous inspection.



Photograph No. 2

West dam embankment facing east toward other end of dam embankment and the sluice gate drawdown structure. Minor brush (vines) growing up along the fence surrounding the drawdown structure.

Site Photographs



Photograph No. 3

Upstream end of auxiliary spillway facing northeast toward the downstream end of stilling basin. Felled tree branches to be removed. No other apparent deterioration to the spillway.



Photograph No. 4

Downstream end of auxiliary spillway stilling basin facing southwest. Small access structure spanning spillway not in service.

Site Photographs



Photograph No. 5

Downstream end of auxiliary spillway stilling basin facing the western retaining wall. Vertical crack identified in last inspection and part of the retaining wall undermining has been repaired.



Photograph No. 6

Downstream end of auxiliary spillway stilling basin facing the western retaining wall. Small portion closer to the corner still undermined (left of repaired section).

Site Photographs



Photograph No. 7

Downstream end of auxiliary spillway stilling basin facing southwest. No apparent deterioration of the weir. Felled tree branch to be removed.



Photograph No. 8

Downstream end of auxiliary spillway facing northeast. Riprap to be redistributed.

Site Photographs



Photograph No. 9

Western downstream toe of dam embankment facing south. Minor rutting from recent maintenance access mostly repaired.



Photograph No. 10

Western downstream toe of dam embankment facing east. Brush identified in last inspection removed and the toe is mostly clear of woody vegetation. No apparent maintenance deficiencies.

Site Photographs



Photograph No. 11

Animal burrow along downstream side of the embankment. Approximately 22 inches deep and 1.5 inches in diameter.



Photograph No. 12

Animal burrow along the downstream side of the embankment. Approximately 20 inches deep and 1.5 inches in diameter.

Site Photographs



Photograph No. 13

Downstream side of the embankment facing north. Brush identified in last inspection removed and the toe is mostly clear of woody vegetation. No apparent maintenance deficiencies.



Photograph No. 14

Crest of embankment facing west. No apparent migration of the crest. Minor rutting from maintenance vehicle traffic.

Site Photographs



Photograph No. 15

Crest of embankment facing west. Minor rutting and pooling from recent maintenance vehicle traffic and rainfall two days prior the inspection.



Photograph No. 16

Upstream side of embankment facing southwest toward the sluice gate drawdown structure. Minor vegetation (vines) growing up the sides of the fence surrounding the drawdown structure.

Site Photographs



Photograph No. 17

Upstream side of embankment facing east. Minimal vegetation along the bank of Lake Lemon. No apparent maintenance deficiencies.



Photograph No. 18

Animal burrow along the upstream side of the embankment. Approximately 7 inches deep and 1.5 inches in diameter.

Site Photographs



Photograph No. 19

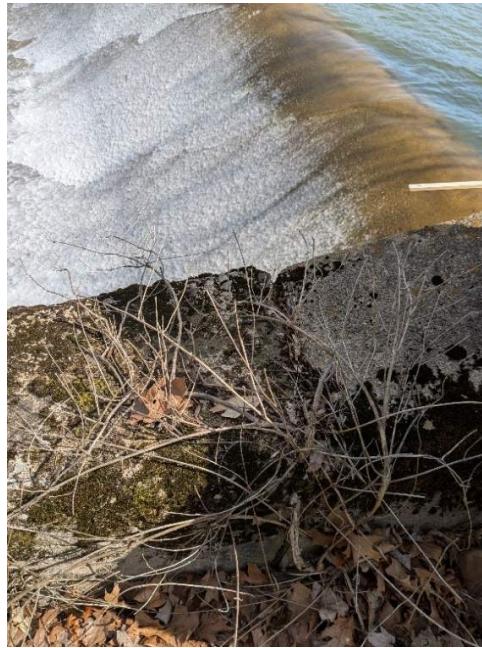
Animal burrow along the upstream side of the embankment. Approximately 15 inches deep and 1.5 inches in diameter.



Photograph No. 20

West end of the primary spillway facing north. No apparent damage to the retaining walls, ogee spillway, or the stilling basin. Moss growth along the concrete.

Site Photographs



Photograph No. 21

West end of the primary spillway facing east. Vegetation growth along the retaining wall that appears to be growing in the joint. Minor deflection at the joint (less than 1/2 inch).



Photograph No. 22

West end of the primary spillway facing north towards the western downstream retaining wall. Minor erosion to be addressed.

Site Photographs



Photograph No. 23

East end of the primary spillway looking west. No apparent damage to the ogee spillway or opposite retaining wall.



Photograph No. 24

Eastern end of the primary spillway looking west. Deflection at a joint of the retaining wall.

Site Photographs



Photograph No. 25

East retaining wall of the primary spillway. Deflection at the joint of approximately 1 inch.



Photograph No. 26

East retaining wall of the primary spillway. Gap at the deflected joint appears larger than observed in the prior inspection.

Site Photographs



Photograph No. 27

East retaining wall of the primary spillway. Deflection and cracking appears to be new compared to the prior inspection.



Photograph No. 28

East retaining wall primary spillway. Deflection along the crack of approximately 1 inch.

Site Photographs



Photograph No. 29

East retaining wall of the primary spillway facing north. Minimal vegetation observed and no apparent damage to the retaining wall facing away from the ogee spillway.



Photograph No. 30

East retaining wall of the primary spillway facing south. Riprap accumulation along the upstream edge of the stilling basin to be removed.

APPENDIX II

IDNR INSPECTION FORM

AND SAFETY INSPECTION CHECKLIST

SUGGESTED DAM INSPECTION REPORT (Refer to pages 5 and 6 for instructions.)

[Print Form](#)

Name of Professional Conducting Inspection Jonathan E. LaTurner, P.E	Professional License No. (Indiana) PE910028
Business Address 138 N Delaware Street, Indianapolis, IN, 46204	Phone: (day) 317 - 633 - 4120 (evening) - - -

Company Name DLZ Indiana, LLC

INSPECTION PREPARATION: Reviewed all pertinent technical documentation related to this dam and site in the State's and the Owner's files:
Yes ☒ No ☐ Comment: Last inspection report from April of 2023 was reviewed prior to inspection.

MULTIDISCIPLINARY: I am experienced in the technical disciplines or I am working with other professionals experienced in the technical disciplines to properly inspect this dam and appurtenant works. Technical disciplines, in addition to the general civil engineering, may include geotechnical, geological, hydrologic, structural, and mechanical. Yes ☒ No ☐ Comment:

Dam Name Lake Lemon Dam	Quad. Hindustan	Date of Inspection 04 / 01 / 2025					
State Dam ID 58-1	Permit (if unapproved see pg. 6)	County Monroe	Sec. T. R. 28 10 N 1 E	Last Inspection 04 / 27 / 2023			
Owners Name City of Bloomington Utilities				Owner's Phone ()			
Address/Zip Code P.O. Box 1216, Bloomington, IN, 47401							
Contact's Name Adam Casey, Manager	Contact's Phone (day) 812 - 334 - 0233 (evening) 812 - 320 - 2841	Spillway Width Top Bot. ~330	Ft. FBD. ~16				
Hazard High	Drainage Area ~71 MI ²	Surface Area ~1700 AC	Height ~50 FT	Crest Length ~660 FT	Crest Width ~13 FT	Inlet Below Crest ~16 FT	Slope: Up 3 1/2: 1 Down 3 1/2: 1

FIELD CONDITIONS OBSERVED Water Level - Below Dam Crest N/A Ft. Ground Moisture Condition: Dry ☐ Wet ☐ Snowcover ☒ Other damp - rainfall 2 days prior	DRAWDOWN STRUCTURE ☒ Yes ☐ None Comment:
--	--

MONITORING ☐ Yes ☒ None [☐ Gage Rod ☐ Piezometers ☐ Seepage Weirs ☐ Survey Monuments ☐ Other]
Comments:

A UPSTREAM SLOPE	PROBLEMS NOTED: ☐ (A-1) None ☐ (A-2) Riprap - Missing, Sparse, Displaced, Weathered ☐ (A-3) Wave Erosion-with Scarps ☐ (A-4) Cracks-with Displacement ☐ (A-5) Sinkhole ☐ (A-6) Appears Too Steep ☐ (A-7) Depressions or Bulges ☐ (A-8) Slides ☒ (A-9) Animal Burrows ☒ (A-10) Trees, Brush, Briars ☐ (A-11) Other
GOOD ☒	Comments:
ACCEPTABLE ☐	
DEFICIENT ☐	
POOR ☐	

- Minor vegetation (vines) growing up along the fenced area around the drawdown structure.
- Several smaller patches of brush with no grass cover underneath.
- Several animal burrows approximately 7 and 15 inches deep with a 1.5-inch diameter.

B CREST	PROBLEMS NOTED: ☐ (B-1) None ☒ (B-2) Ruts or Puddles ☐ (B-3) Erosion ☐ (B-4) Cracks with Displacement ☐ (B-5) Sinkholes ☐ (B-6) Not Wide Enough ☐ (B-7) Low Area ☐ (B-8) Misalignment ☐ (B-9) Inadequate Surface Drainage ☐ (B-10) Trees, Brush, Briars ☐ (B-11) Other
GOOD ☒	Comments:
ACCEPTABLE ☐	
DEFICIENT ☐	
POOR ☐	

- Minor ruts with puddles from maintenance vehicle access and the recent rainfall 2 days prior to the inspection.

Spillway Width refers to the open channel (typically the emergency or auxiliary spillway) at the control section.
Ft. FBD. refers to the vertical distance from the emergency (auxiliary) spillway control section to the lowest point of the crest of the dam.
Inlet Below Crest refers to the vertical distance from the inlet of the principal spillway to the crest of the dam.

C DOWNSTREAM SLOPE

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☐ (C-1) None ☐ (C-2) Livestock Damage ☐ (C-3) Erosion or Gullies ☐ (C-4) Cracks with Displacement ☐ (C-5) Sinkholes ☐ (C-6) Appears too Steep ☐ (C-7) Depression or Bulges ☐ (C-8) Slide ☐ (C-9) Soft Areas ☒ (C-10) Trees, Brush, Briars ☒ (C-11) Animal Burrows ☐ (C-12) Other _____

Comments:

- Several smaller patches of brush with no grass cover underneath.
- Several animal burrows approximately 20 and 22 inches deep with a 1.5-inch diameter.

D SEEPAGE

GOOD (NONE)	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (D-1) None ☐ (D-2) Saturated Embankment Area ☐ (D-3) Seepage Exits on Embankment ☐ (D-4) Seepage Exits at Point Source ☐ (D-5) Seepage Area at Toe ☐ (D-6) Flow Adjacent to Outlet ☐ (D-7) Seepage Clear/Muddy **[DRAIN OUTFALLS SEEN** _____ **No** _____ **Yes** ☐ (D-8) Flow Clear/Muddy ☐ (D-9) Dry/Obstructed] ☐ (D-10) Other _____ Describe location of drains and indicate amount and quality of discharge.

Comments:

E PRINCIPAL SPILLWAY

GOOD	☐
ACCEPTABLE	☒
DEFICIENT	☐
POOR	☐

DESCRIPTION:

PROBLEMS NOTED: ☐ (E-1) None ☐ (E-2) Deterioration ☒ (E-3) Separation ☒ (E-4) Cracking ☐ (E-5) Inlet, Outlet Deficiency ☒ (E-6) Stilling Basin Inadequacies ☐ (E-7) Trash Rack ☐ (E-8) Other _____

Comments:

- Several areas of brush/vines encroaching on the western retaining wall.
- Minor cracking and separation of the joints, mainly on the eastern retaining wall.
- Riprap accumulation on the eastern end of the stilling basin.

F AUXILIARY SPILLWAY

GOOD	☐
ACCEPTABLE	☒
DEFICIENT	☐
POOR	☐

DESCRIPTION:

PROBLEMS NOTED: ☐ (F-1) None ☐ (F-2) No Auxiliary Spillway Found ☐ (F-3) Erosion-with Backcutting ☐ (F-4) Crack with Displacement ☐ (F-5) Appears to be Structurally Inadequate ☐ (F-6) Appears too Small ☐ (F-7) Inadequate Freeboard ☐ (F-8) Flow Obstructed ☒ (F-9) Concrete Deteriorated/Undermined ☐ (F-10) Other _____

Comments:

- There is a small portion of the downstream western concrete retaining wall that is still being undermined next to the repaired section near the corner.

G MAINTENANCE AND REPAIRS

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☐ (G-1) None ☐ (G-2) Access Road Needs Maintenance ☐ (G-3) Cattle Damage ☐ (G-4) Spillway Obstruction ☒ (G-5) Brush, Weeds, Tall Grass, on Upstream Slope, Crest, Downstream Slope, Toe ☐ (G-6) Trees on Upstream Slope, Crest, Downstream Slope ☒ (G-7) Rodent Activity on Upstream Slope, Crest, Downstream Slope, Toe ☒ (G-8) Deteriorated Concrete-Facing, Outlet, Spillway ☐ (G-9) Gate and/or Drawdown Need Repair ☐ (G-10) Other _____

Comments:

- See page 3 of 6.

H OVERALL CONDITIONS

Based on this inspection and recent file review, the overall surficial condition is determined to be: ☒ (H-1) Satisfactory ☐ (H-2) Fair ☐ (H-3) Conditionally Poor ☐ (H-4) Poor ☐ (H-5) Unsatisfactory

IMPORTANT: IF THIS RATING IS DIFFERENT THAN PREVIOUS IDNR RATING, PLEASE ATTACH EXPLANATION AND REASONS FOR CHANGE ON PAGE 4.

**RECOMMENDATIONS AND ITEMS REQUIRING ACTION BY OWNER
TO IMPROVE THE SAFETY OF THE DAM**

MAINTENANCE-MINOR REPAIR-MONITORING

- ☐ (1) Provide Additional Erosion Protection: _____
- ☐ (2) Mow: _____
- ☒ (3) Clear Trees and/or Brush From: Vines along the fenced area around the drawdown structure on the upstream embankment. There are patches of thicker brush emerging on the up and downstream side of the embankment. If that brush is resulting in bare patches of earth that are not revegetating, that brush is to be removed and the area revegetated.
- ☒ (4) Initiate Rodent Control Program and Properly Backfill Existing Holes: Several identified locations along the up and downstream embankments
- ☐ (5) Repair: _____
- ☐ (6) Provide Surface Drainage For: _____
- ☒ (7) Monitor: Continue monitoring the downstream slope of the embankment for flow path channels and animal activity
- ☒ (8) Other: Continue monitoring the tire rutting along the crest and any movement of the crest
- ☒ (9) Other: Continue clearing riprap collecting along the stilling basin of the primary spillway (particularly the eastern side)

ENGINEERING-EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO:

(Plans & Specifications must be approved by State prior to construction.)

- ☐ (10) Prepare Plans and Specifications for the Rehabilitation of the Dam: _____
- ☐ (11) Prepare As-Built Drawings of: _____
- ☐ (12) Perform a Geotechnical Investigation to Evaluate the Stability of the Dam: _____
- ☐ (13) Perform a Hydrologic Study to Determine Required Spillway Size: _____
- ☐ (14) Prepare Plans and Specifications for an Adequate Spillway: _____
- ☐ (15) Set up a Monitoring Program: _____
- ☐ (16) Refer to Unapproved Status of Dam: _____
- ☐ (17) Develop an Emergency Action Plan: _____
- ☐ (18) Other: _____
- ☐ (19) Other: _____

Recommended schedule for upgrades/comments (Please prioritize and note importance of each item.)

Photographs ☐ Attachments ☐

ENGINEER'S INSTRUCTION Instructed owner on the safety concerns with the structure and how to monitor and inspect the dam and appurtenant works in the interim period between the regulatory two-year inspections. Yes ☒ No ☐

Comment

Professional Engineer's Signature

Jon LaTurner

Date 4/23/25

Reviewed By

Ad

Owner/Owner's Representative

Date

4-23-25

EXPLANATION FOR CHANGE IN RATINGS (Describe all repairs, upgrades or improvements made if dam conditions and rating have improved since the last inspection. Describe deteriorating conditions if ratings have worsened.)

REASONS FOR RATING CHANGE:

PREVIOUS RECOMMENDATIONS FOR MAINTENANCE, REPAIRS, AND UPGRADES:

HAVE THEY BEEN PERFORMED ☐ YES ☒ NO (If no, please explain:)

- The woody vegetation identified along the downstream toe of the embankment was removed. The vines along the fence surrounding the sluice gate drawdown structure and the vines along the primary spillway western retaining wall are still present.
- The primary spillway western downstream concrete retaining wall is still observed to have a significantly steep slope with erosion and vegetation cracking portions of the existing concrete.
- The auxiliary spillway western downstream concrete retaining wall was being undermined and had a vertical crack. The crack was patched and the retaining wall was mostly reinforced with cinder blocks and the addition of new concrete to reinforce a section of the bottom. Additional reinforcement of the retaining wall closer to the corner is recommended, as it is still being undermined.

Supporting Documentation

Photographs ☒ Attachments ☐ Calculations ☐ Drawings ☐ Other ☐

Comments:

- Attached inspection report and site photographs.

INSTRUCTIONS FOR COMPLETING DAM VISUAL INSPECTION REPORT

1. Complete all items that are applicable; if not applicable, write in "N/A". For concrete dams, complete all applicable items and use "comments" section to cover items not included in the check boxes. Also indicate that the dam is concrete in the comments section.
2. Use page 6 to determine ratings of each dam component (items A through G) and for Overall Conditions (Item H).
3. Please write legibly and concisely.
4. Inspector must be knowledgeable with the type of dam, materials, and components being inspected. If not, qualified assistance shall be engaged.
5. The inspector shall review the dam owner's and IDNR project files prior to the inspection. Previous inspection reports shall be closely reviewed for previous problems and deficiencies.
6. If the ratings of the components (items A through G) or the Overall Conditions (item H) of the dam have changed since the last inspection, please complete page 4. If a rating has improved, dam repairs, improvements, analyses, or maintenance must have been performed and documented on page 4.
7. For a dam to have a satisfactory "Overall Conditions" rating, it must have no existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including infrequent hydrologic events (PMP for high hazard dams) and seismic events. The dam owner's project files must contain hydrologic and hydraulic analyses of the dam and its spillways to verify performance. The files must also contain slope stability analyses to verify embankment stability under full reservoir conditions and rapid-draw down conditions. The dam and all of its components must meet current IDNR and design standards. "Normal" deficiencies such as minor erosion, minor seepage, or normal concrete aging may not make a dam unsatisfactory or unacceptable. For a satisfactory "Overall Conditions" rating to be assigned, items A through G generally should all have a "good" rating; however, in some cases an "acceptable" rating may be satisfactory if the "Problems Noted" are minor, or "normal" conditions, such as minor erosion rills, small puddles on crest, or if grass needs mowed, but is in good condition.
8. An inspection report form must be submitted to IDNR along with a formal technical inspection report as described in Chapter 4.0 of Part 3 of the Indiana Dam Safety Inspection Manual.
9. Please sign and date this page in the space below to verify that you have read and understand these instructions.

Inspector's Signature: Jon LaTurner

Date: 4/23/25

GUIDELINES FOR DETERMINING CONDITIONS

CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, PRINCIPAL SPILLWAY, AUXILIARY SPILLWAY

GOOD	ACCEPTABLE	DEFICIENT	POOR
In general, this part of the structure has a good appearance, and conditions observed in this area do not appear to threaten the safety of the dam.	Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.	Continued deterioration and/or unusual loading may threaten the safety of the dam.	Conditions observed in this area appear to threaten the safety of the dam. Conditions observed in this area are unacceptable.

CONDITIONS OBSERVED - APPLIES TO SEEPAGE

GOOD (NONE)	ACCEPTABLE	DEFICIENT	POOR
No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions do not appear to threaten the safety of the dam.	Some seepage exists at areas other than the drain outfalls, or other designed drains. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.	Excessive seepage exists at areas other than drain outfalls and other designed drains. Seepage needs to be evaluated. Increased flow and/or continued deterioration in seepage conditions may threaten the safety of the dam.	Excessive seepage conditions observed appear to threaten the safety of the dam and is unacceptable. Examples: 1) Designed drain or seepage flows have increased without increase in reservoir level. 2) Drain or seepage flows contain sediment. i.e., muddy water or particles in jar samples. 3) Widespread seepage, concentrated seepage or ponding appears to threaten the safety of the dam.

CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR

GOOD	ACCEPTABLE	DEFICIENT	POOR
Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.	Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are required.	Level of maintenance of the dam needs significant improvement. Major repairs may be required. Continued neglect of maintenance may threaten the safety of the dam.	Dam does not receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam. Level of maintenance is unacceptable.

OVERALL CONDITIONS

SATISFACTORY - No existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including such events as infrequent hydrologic and/or seismic events. Project Files contain necessary hydrologic, and other engineering calculations to verify dam safety and performance.

FAIR - No existing dam safety deficiencies are recognized for normal loading conditions. Infrequent hydrologic and/or

seismic events would probably result in a dam safety deficiency.

CONDITIONALLY POOR - A potential safety deficiency is recognized for unusual loading conditions which may realistically occur during the expected life of the structure. **CONDITIONALLY POOR** may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency; further investigations and studies are necessary.

POOR - A potential dam safety deficiency is clearly recognized for normal loading conditions. Immediate actions to resolve the deficiency are recommended; reservoir restrictions may be necessary until problem resolution.

UNSATISFACTORY - A dam safety deficiency exists for normal conditions. Immediate remedial action is required for problem resolution.

HAZARD CLASSIFICATIONS OF DAMS (STRUCTURE)

LOW HAZARD- A structure the failure of which may damage farm buildings, agricultural land, or local roads

SIGNIFICANT HAZARD- A structure the failure of which may damage isolated homes and highways, or cause the temporary interruption of public utility services.

HIGH HAZARD- A structure the failure of which may cause the loss of life and serious damage to homes, industrial and commercial buildings, public utilities, major highways, or railroads.

UNAPPROVED STATUS OF DAM

A dam that has been given an unapproved status (see entry for permit) means that plans, construction specifications, hydraulic analyses, and/or a geotechnical investigation on your dam, proving the safety of the structure, have not been received and approved by the Indiana Department of Natural Resources (IDNR). IDNR records indicate that no progress has been made to secure this approval. The fact that the dam is inspected under the Regulation of Dams Act (IC 14-27-7.5) in no way alters the illegal status of the structures.

If your dam is indicated to be unapproved, it is requested that your engineer contact the Indiana Department of Natural Resources,