



EARTH DAM VISUAL INSPECTION REPORT
State Form 50777 (R / 4-05)

Indiana Department of Natural Resources
Division of Water, Dam Safety Section
402 West Washington Street, Room W264
Indianapolis, Indiana 46204
Telephone: (317)232-4160 or toll free (within Indiana) 1-877-928-3755

Dam Name TRADERS POINT LAKE DAM			Quad. ZIONSVILLE		Date of Inspection 2 / 23 / 2017	
State Dam ID 49-5	Permit NOT APPROVED	County MARION	Sec. 27	T. 17	R. 2	Last Inspection 10 / 10 / 2012
Owners Name LAKESIDE IMPROVEMENT ASSOCIATION					Owner's Phone ()	
Address/Zip Code 7341 LAKESIDE Dr., INDIANAPOLIS, IN 46278-1618					Owners E-mail Address	
Contact's Name DANIEL SNYDER			Contact's Phone PLEASE PROVIDE ==>		Spillway Width Top Bot. N/A	
					Ft. FBD. 4.5	
Hazard Low	Drainage Area 1.63 MI²	Surface Area 10.0 AC	Height 18 FT	Crest Length 300 FT	Crest Width 2 FT	Inlet Below Crest 4.5 FT
						Slope: Up 1.5 Down 2:1 - 4:1

FIELD CONDITIONS OBSERVED			DRAWDOWN STRUCTURE			
Water Level - Below Dam Crest 4.6 Ft.			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> None			
Ground Moisture Condition: Dry <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Snowcover _____ Other _____			Comment _____			

MONITORING Yes None

Gage Rod Piezometers Seepage Weirs Survey Monuments Other _____ Comments _____

NOTICE TO OWNERS: PLEASE READ BOTH SIDES OF THESE TWO PAGES AND FOLLOW RECOMMENDATIONS MADE HEREIN.

This visual inspection notes the obvious surficial problems of your dam and appurtenant works. This is not a detailed engineering evaluation. There may be serious defects and/or design deficiencies with your dam that may render your dam unsafe during unusual conditions such as high pool levels and/or earthquake loading. Since you are liable for any property damage, injury or loss of life resulting from failure of your dam, you should consult with an engineer experienced in dam design about the current safety of your dam.

OWNER INSPECTION: The owner (or owner's representative) should inspect this dam routinely under normal conditions and more frequently under unusual loading conditions.

A	UPSTREAM SLOPE	PROBLEMS NOTED: <input type="checkbox"/> (A-1) None <input type="checkbox"/> (A-2) Riprap - Missing, Sparse, Displaced, Weathered <input type="checkbox"/> (A-3) Wave Erosion-with Scarps <input type="checkbox"/> (A-4) Cracks-with Displacement <input type="checkbox"/> (A-5) Sinkhole <input checked="" type="checkbox"/> (A-6) Appears Too Steep <input type="checkbox"/> (A-7) Depressions or Bulges <input type="checkbox"/> (A-8) Slides <input checked="" type="checkbox"/> (A-9) Animal Burrows <input checked="" type="checkbox"/> (A-10) Trees, Brush, Briars <input type="checkbox"/> (A-11) Other _____ Comments: _____ SEE ATTACHMENT FOR ALL ADDITIONAL COMMENTS.
	GOOD	
	ACCEPTABLE	
	DEFICIENT <input checked="" type="checkbox"/>	
	POOR	

B	CREST	PROBLEMS NOTED: <input type="checkbox"/> (B-1) None <input type="checkbox"/> (B-2) Ruts or Puddles <input type="checkbox"/> (B-3) Erosion <input type="checkbox"/> (B-4) Cracks with Displacement <input type="checkbox"/> (B-5) Sinkholes <input checked="" type="checkbox"/> (B-6) Not Wide Enough <input type="checkbox"/> (B-7) Low Area <input type="checkbox"/> (B-8) Misalignment <input type="checkbox"/> (B-9) Inadequate Surface Drainage <input type="checkbox"/> (B-10) Trees, Brush, Briars <input type="checkbox"/> (B-11) Other _____ Comments: _____ SEE ATTACHMENT FOR ALL ADDITIONAL COMMENTS.
	GOOD	
	ACCEPTABLE	
	DEFICIENT <input checked="" type="checkbox"/>	
	POOR	

C	DOWNSTREAM SLOPE	PROBLEMS NOTED: <input type="checkbox"/> (C-1) None <input type="checkbox"/> (C-2) Livestock Damage <input type="checkbox"/> (C-3) Erosion or Gullies <input type="checkbox"/> (C-4) Cracks with Displacement <input type="checkbox"/> (C-5) Sinkholes <input checked="" type="checkbox"/> (C-6) Appears too Steep <input type="checkbox"/> (C-7) Depression or Bulges <input type="checkbox"/> (C-8) Slide <input type="checkbox"/> (C-9) Soft Areas <input checked="" type="checkbox"/> (C-10) Trees, Brush, Briars <input checked="" type="checkbox"/> (C-11) Animal Burrows <input type="checkbox"/> (C-12) Other _____ Comments: _____ SEE ATTACHMENT FOR ALL ADDITIONAL COMMENTS.
	GOOD	
	ACCEPTABLE	
	DEFICIENT <input checked="" type="checkbox"/>	
	POOR	

D	SEEPAGE	PROBLEMS NOTED: <input checked="" type="checkbox"/> (D-1) None <input type="checkbox"/> (D-2) Saturated Embankment Area <input type="checkbox"/> (D-3) Seepage Exits on Embankment <input type="checkbox"/> (D-4) Seepage Exits at Point Source <input type="checkbox"/> (D-5) Seepage Area at Toe <input type="checkbox"/> (D-6) Flow Adjacent to Outlet <input type="checkbox"/> (D-7) Seepage Clear/Muddy [DRAIN OUTFALLS SEEN] <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> (D-8) Flow Clear/Muddy <input type="checkbox"/> (D-9) Dry/Obstructed <input type="checkbox"/> (D-10) Other _____ Describe location of drains and indicate amount and quality of discharge. Comments: _____
	GOOD (NONE) <input checked="" type="checkbox"/>	
	ACCEPTABLE	
	DEFICIENT	
	POOR	

If following box is checked, see additional comments added to Page 2 of 4.

ADDITIONAL COMMENTS

DAM OWNER'S PROFESSIONAL ENGINEER SHOULD CONTACT THE DIVISION OF WATER'S DAM SAFETY SECTION AT (317) 232-4160 (TOLL FREE 1-877-928-3755) TO SCHEDULE A COORDINATION MEETING TO DISCUSS DEFICIENCIES WITH THE DAM AND POSSIBLE DESIGN OPTIONS TO RECONSTRUCT THE DAM AND SPILLWAY TO A SAFER CONDITION.

Emergency Plan

DURING AND FOLLOWING SUBSTANTIAL RAINFALL OR SEISMIC EVENTS, THE OWNER SHOULD MONITOR THIS DAM AND NOTIFY THE POTENTIALLY IMPACTED DOWNSTREAM PROPERTY OWNERS AND THE COUNTY EMERGENCY MANAGEMENT AGENCY IF EMERGENCY CONDITIONS BEGIN TO DEVELOP. AS PART OF THE ONGOING OWNER'S VIGILANCE FOR EARLY DETECTION OF DETERIORATING CONDITIONS AND IN PREPARATION FOR FUTURE POSSIBLE EMERGENCIES ON THIS DAM, THE OWNER SHOULD DEVELOPE AND KEEP AN UPDATED CONTACT LIST (NAMES, TELEPHONE NUMBERS, ETC.) OF THE POTENTIALLY IMPACTEDDOWNSTREAM PROPERTY OWNERS.

BEFORE ANY ALTERATIONS OR MODIFICATIONS ARE MADE TO THE DAM OR SPILLWAY(S), THE OWNER'S PROFESSIONAL ENGINEER SHOULD SUBMIT DESIGN DOCUMENTS FOR THE PROPOSED WORK TO DNR AND FIELD SUPERVISE THE WORK ONCE APPROVAL IS OBTAINED.

AUTHORITY OF THE STATE OF INDIANA

I.C. 14-28 Chapter 1 "Flood Control" - Section 1 "Legislative Intent"-

Sec. 1 The following are declared:

- (1) The loss of lives and property caused by floods and the damage resulting from floods is a matter of deep concern to Indiana affecting the life, health, and convenience of the people and the protection of property. To prevent and limit floods, all flood control works and structures and the alteration of natural or present watercourses of all rivers and streams in Indiana should be regulated, supervised, and coordinated in design, construction, and operation according to sound and accepted engineering practices so as to best control and minimize the extent of floods and reduce the height and violence of floods.
- (2) The channels and that part of the flood plains of rivers and streams that are the floodways should not be inhabited and should be kept free and clear of interference or obstructions that will cause any undue restriction of the capacity of the floodways.
- (3) The water resources of Indiana that have been diminishing should be accumulated, preserved, and protected to prevent any loss or waste beyond reasonable and necessary use.
- (4) A master plan or comprehensive plan for the entire state to control floods and to accumulate, preserve, and protect the water resources should be investigated, studied, and prepared, policy and practices should be established, and the necessary works should be constructed and placed in operation.

I.C. 14-28 Chapter 1 "Flood Control" - Section 8 "Right of entry upon premises"-

Sec. 8 The commission and the commission's agents, engineers, surveyors, and other employees may enter upon any land or water in Indiana for the purpose of making an investigation, an examination, or a survey provided by this chapter.

UNAPPROVED STATUS OF DAM

A dam that has been given an unapproved status (see entry for permit) is one in which plans, construction specifications, hydraulic analyses, and geotechnical investigations have not been received and approved by the Department of Natural Resources. The Flood Control Act (IC 14-28), as amended, requires the Commission to adopt rules for the purpose of administration of the Commission's powers and duties. The Commission has adopted rule 312 IAC 10 entitled "Flood Plain Management" that requires in Rule 4 (312 IAC 10-4-1) "License requirement for construction in a floodway"

Section 1 (a) Except as otherwise provided in IC 14-28-1 or this article, a license from the department is required to erect, make, use, maintain, suffer, or permit a structure, obstruction, deposit, or excavation in or on a floodway.

If this form indicates an unapproved status, our records do not show that progress has been made to secure the required license. The fact that the dam is inspected under the Indiana Code (IC 14-27- 7.5) "Regulation of Dams" in no way alters the alleged illegal status of the structure(s). If your dam is indicated to be unapproved, it is requested that you contact the Indiana Department of Natural Resources, Division of Water, to discuss the resolution of the unapproved status of this dam.

E	PRINCIPAL SPILLWAY
GOOD	<input type="checkbox"/>
ACCEPTABLE	<input checked="" type="checkbox"/>
DEFICIENT	<input type="checkbox"/>
POOR	<input type="checkbox"/>

DESCRIPTION: 30' LONG CONCRETE WEIR, 2.5 FEET THICK, 14 FEET HIGH AT LEFT (SOUTH) END OF DAM.

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: SEE ATTACHMENT FOR ALL ADDITIONAL COMMENTS.

F	AUXILIARY SPILLWAY
GOOD	<input type="checkbox"/>
ACCEPTABLE	<input type="checkbox"/>
DEFICIENT	<input checked="" type="checkbox"/>
POOR	<input type="checkbox"/>

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:

G	MAINTENANCE AND REPAIRS
GOOD	<input type="checkbox"/>
ACCEPTABLE	<input type="checkbox"/>
DEFICIENT	<input checked="" type="checkbox"/>
POOR	<input type="checkbox"/>

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 ATTACHMENT FOR ALL ADDITIONAL COMMENTS.

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

Remarks: CONDITION BASED ON UNDOCUMENTED SPILLWAY CAPACITY DURING DESIGN STORM EVENT, DETERIORATED SPILLWAY, GROUNDHOG DENS NEAR SPILLWAY AND TREES ON LEFT (SOUTH) END OF DAM.

ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

MAINTENANCE-MINOR REPAIR-MONITORING

- (1) Provide Additional Erosion Protection: IN SHADED AREAS OF DENSE TREE BRIAR AND VINE GROWTH.
- (2) Mow: ENTIRE DAM A MINIMUM OF 1 TIME PER YEAR.
- (3) Clear Trees and/or Brush From: ENTIRE DAM
- (4) Initiate Rodent Control Program and Properly Backfill Existing Holes: ENTIRE DAM
- (5) Repair: _____
- (6) Provide Surface Drainage For: _____
- (7) Monitor: _____
- (8) Other: _____
- (9) Other: _____

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: FOR DESIGN STORM EVENT.
- (14) Prepare Plans and Specifications for an Adequate Spillway: BASED ON RESULTS OF HYDROLOGIC STUDY
- (15) Set up a Monitoring Program: _____
- (16) Refer to Unapproved Status of Dam: _____
- (17) Develop an Emergency Action Plan: _____
- (18) Other: OWNER'S PROFESSIONAL ENGINEER NEEDS TO EVALUATE PRINCIPAL SPILLWAY SOON TO AVERT LEAKAGE THAT
- (19) Other: WILL LIKELY CONTROL THE LAKE LEVEL AT SOME UNDESIRABLE LOWER LEVEL. HOPEFULLY THE DETERIORATED CONDITION OF THE SPILLWAY DOESN'T LEAD TO A BREACH IN THE DAM.

Inspectors Signature Doug McKinney Digitally signed by Doug McKinney
DN: cn=Doug McKinney, email=dmckin@dam.sate.in.gov, ou=ID
Safety Section, email=dmckin@dam.sate.in.gov, c=US
Date: 2017.02.15 09:18:53 -0500 Reviewed By _____ Date ____/____/____
 Technician Engineer Geologist Owner/Owner's Representative

The State of Indiana, by providing this dam inspection report, does not assume responsibility for any unsafe condition of the subject dam. The sole responsibility for the safety of this dam rests with the owner, who should perform or have performed frequent inspections of this dam.

GUIDELINES FOR DETERMINING CONDITIONS

CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, CONDUIT SPILLWAY, 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.
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

LOW - Dams located in rural or agricultural areas where failure may damage farm buildings, agricultural land, or township and country roads.

SIGNIFICANT - Dams located in predominantly rural or agricultural areas where failure may damage isolated homes, main highways or minor railroads or cause interruption of use or service of relatively important public utilities.

HIGH - Dams located where failure may cause loss of life, serious damage to homes, industrial and commercial buildings, important public utilities, main highways, or railroads.

Hazard classification is defined in 312 IAC Article 10.5 "Regulation of Dams".

During and following substantial rainfall or seismic events, the owner should monitor this dam and notify the potentially impacted downstream property owners and the County Emergency Management Agency if emergency conditions begin to develop. As part of the ongoing owner's vigilance for early detection of deteriorating conditions and in preparation for future possible emergencies on this dam, the owner should develop and keep an updated contact list (names, telephone numbers, etc.) of the potentially impacted downstream property owners.

TRADERS POINT LAKE DAM

(49-5)

A-6: FLATTER SLOPES ARE MORE STABLE & EASIER TO MAINTAIN.

A-9: Recommend all groundhogs be trapped and removed from dam & their dens be properly backfilled.

A-10: RECOMMEND ALL TREES/BRIARS/CATTILS/VINES/THISTLES GROWING ON OR WITHIN 25' OF DAM, SPILLWAY(S) BE KILLED WITH A HERBICIDE, SAFE FOR USE AROUND FISH, THEN CUT & REMOVE FROM DAM. Primarily on the left (south) side of spillway.

B-6: EFFECTIVE CREST WIDTH IS ABOUT 2' AND ACCORDING TO N.R.C.S. ENGINEERING FIELD MANUAL RECOMMENDED MINIMUM CREST WIDTHS FOR DAMS 15' – 20' HIGH IS 12' wide.

C-6: FLATTER SLOPES ARE MORE STABLE & EASIER TO MAINTAIN.

C-10: RECOMMEND ALL TREES/BRIARS/CATTILS/VINES/THISTLES GROWING ON OR WITHIN 25' OF DAM, SPILLWAY(S) BE KILLED WITH A HERBICIDE, SAFE FOR USE AROUND FISH, THEN CUT & REMOVE FROM DAM. Primarily on the left (south) side of spillway.

C-11: Recommend all groundhogs be trapped and removed from dam & their dens be properly backfilled.

E-2, E-3, & E-4: CONCRETE STRUCTURE IS SPALLING CRACKING AND DETERIORATING. RECOMMEND DAM OWNER OBTAIN THE SERVICES OF A PROFESSIONAL ENGINEER WHO IS NOT ONLY EXPERIENCED IN DAM DESIGN AND CONSTRUCTION BUT ONE WHO IS ALSO EXPERIENCED IN CONCRETE STRUCTURES ON DAMS.