OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RESOURCES

DAM SAFETY INSPECTION REPORT

SWIFT RUN LAKE DAM

FILE NUMBER: 0142-001

INSPECTED: NOVEMBER 26, 2024

MIAMI COUNTY

CLASS II

2045 MORSE ROAD, BUILDING B-3
COLUMBUS, OHIO 43229-6693
WWW.DNR.STATE.OH.US

Dam Safety
Legal Obligations and Responsibilities in Ohio

In accordance with Ohio Revised Code (ORC) Section 1521.062, the owners of dams must monitor, maintain, and operate their dams safely. Negligence of owners in fulfilling these responsibilities can lead to the development of extremely hazardous conditions to downstream residents and properties. In the event of a dam failure, dam owners can be subject to liability claims and potential criminal charges.

The Chief of the Division of Water Resources has the responsibility to ensure that human life, health, and property are protected from the failure of dams. Conducting periodic safety inspections and working with dam owners to maintain and improve the overall condition of Ohio dams are vital aspects of achieving this purpose.

Representatives of the Chief conducted this inspection to evaluate the condition of the dam and its appurtenances under authority of Ohio Revised Code Section 1521.062. This inspection does not take the place of the owner's responsibility for performing dam inspections, nor does it provide any guarantee of the safety of the dam.

In accordance with Ohio Administrative Code (OAC) Rule 1501:21-21-03, the owners of dams must implement all remedial measures listed in the enclosed report.

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REQUIRED REMEDIAL MEASURES

The requirements listed below are based on observations made during inspection, calculations performed, and requirements of the Ohio Administrative Code (OAC). A checklist noting all observations made during the inspection is included as an appendix of this report. References to right and left in this report are oriented as if you were standing on the dam crest, looking downstream.

ENGINEER REPAIRS AND INVESTIGATIONS

The owner must retain the services of a registered professional engineer to address the items listed below. It is strongly recommended that the engineer contact the Division of Water Resources prior to commencing work to discuss the scope of any necessary repairs and/or investigations so that the requirements to adequately address the required remedial measures are fully understood. All plans, specifications, investigative reports, and other supporting documentation, as necessary, must be submitted to the Division of Water Resources for review and approval prior to construction. **These items have been noted previously and the appropriate time period for completion has already been exceeded. The owner must complete these items immediately.** A record of all repairs should be included in the operation, maintenance, and inspection manual. Please refer to the fact sheets included in the Dam Safety Fact Sheet Booklet for additional information.

1. The dam's discharge/storage capacity must be sufficient to safely pass the required design flood without overtopping the embankment and canal system. Prepare plans and specifications as necessary to increase the discharge/storage capacity to pass the required design flood. In accordance with OAC Rule 1501:21-13-02, the minimum design flood for Class II dams is 50% of the Probable Maximum Flood or the critical flood. See the Flood Capacity section for additional information.

2. Every dam shall have a spillway system which will safely operate during the design flood without endangering the safety of the dam in accordance with OAC Rule 1501:21-13-03. Review of the structural investigation performed by Stantec in 2023 indicates the need for both concrete spillways to be fully replaced. Prepare plans and specifications for the construction of a new spillway. The condition of the two spillways must be monitored quarterly until repairs can be made. See the "Open Channel Spillways (Concrete chutes and Weirs)" fact sheet for additional information. This item should be completed in coordination with Item 1 above.

3. The erosion on the upstream slope of the embankment must be repaired and the upstream slope must be protected from erosion. Prepare plans and specifications for repairing the erosion and installing erosion protection. The erosion must be monitored quarterly until repairs can be made. See the "Upstream Slope Protection" fact sheet for additional information.

4. The embankment crest alignment must be uniform. Investigate the variable vertical alignment of the crest and, as necessary, prepare plans and specifications for the correction of any problems. This item should be completed in coordination with Item 1 above.

OWNER REPAIRS AND MONITORING

The dam owner must address the items below as part of the required dam maintenance. The owner may perform the work or hire a contractor. The owner must implement all owner repairs and monitoring items within a timely manner. Repair activities should be documented in the Operation, Maintenance, and Inspection Manual (OMI). Please refer to the fact sheets included in the Dam Safety Fact Sheet Booklet for additional information.

The monitoring items in this section must also be incorporated in the OMI. Information in the OMI must include inspection frequency, method of assessing the condition, and documentation of observations. See the Owner Dam Safety Program section of this report for additional information regarding an OMI.

Owner Repairs

1. Remove the trees and brush from the upstream slope, downstream slope, and the canal embankments. After the slopes are cleared, inspect for cracks, rodents, erosion, and slides. Seed all disturbed areas to establish a proper grass cover. See the "Trees and Brush" fact sheet for additional information.

2. Seed all bare areas on the dam crest and downstream slope to establish a proper grass cover. See the "Ground Cover" fact sheet for additional information.

3. Repair the rodent burrows on both the dam and canal embankments. See the "Rodent Control" fact sheet for additional information.

4. Continue to perform routine maintenance of the lake drains. The maintenance should be performed annually and should include operation and lubrication of the valves and sluice gate in accordance with the manufacturer's specifications. Use caution if the operability of the lake drain valve is unknown. See the "Lake Drains" fact sheet for additional information.

Monitoring Items

No additional monitoring items.

Resolving all Engineering Repair and Investigation items as well as Owner Repair items listed in the sections above makes a dam eligible to receive a 15% discount off the annual fee for the dam. The Engineering items must be resolved as directed in this report. The Owner Repair items may be resolved by submitting a description of the repairs and photographs. There are no partial discounts available.

OWNER DAM SAFETY PROGRAM

Assuring the safety of dams is a cooperative effort between owners, consultants and the Division of Water Resources - Dam Safety Program, with the most important role being that of the owner. The owners see the dam regularly and through their surveillance and monitoring, can detect changing and/or deteriorating conditions.

The scope of a particular owner's dam safety program should be commensurate with the size, type, and complexity of the owner's dam(s). There is no "one size fits all" dam safety program. At a minimum, the owner's dam safety program must include:

- A person (owner or owner's designated representative) responsible for dam safety (Dam Safety Officer) with the authority to maintain dam safety (clear designation of responsibility, oversight, and authority).
- Access to sufficient technical resources and expertise.
- A proactive and informed owner inspection and engineering evaluation program.
- Adequate on-site presence and/or remote monitoring capability.
- An approved Operation, Maintenance, and Inspection Manual that is kept up-to-date, requirements and recommendations followed, and proper records kept.
- An approved Emergency Action Plan that is kept up-to-date and is well coordinated with the local emergency management agencies.

Operation, Maintenance, and Inspection Manual (OMI)

A dam, like any other infrastructure, will change and deteriorate over time. Appurtenances such as gates and valves must be routinely exercised to ensure their operability. Inspection and monitoring of the dam identifies changing conditions and problems as they develop, and maintenance prevents minor problems from developing into major ones. Dam owners must have these procedures documented in an OMI.

1. Swift Run Lake Dam has an approved, up-to-date OMI on file with the Division of Water Resources.

Emergency Action Plan (EAP)

Despite efforts to provide sufficient structural integrity and to perform inspection and maintenance, dams can develop problems that can lead to failure. Early detection and appropriate response are crucial for maintaining the safety of the dam and downstream people and property. The ORC requires the owner to fully and promptly notify the Division of Water Resources of any condition which threatens the safety of the structure. A rapidly changing condition may be an indication of a potentially dangerous problem. The Division of Water Resources - Dam Safety Program can be contacted at 614/265-6731 during business hours or at 614/799-9538 after business hours. Dam owners must have emergency preparedness procedures documented in an EAP. All contact names and phone numbers in the EAP must be verified on an annual basis. Any revisions to the EAP must be submitted to the Division of Water Resources and the local county Emergency Management Agency (EMA).

1. Swift Run Lake Dam has an approved, up-to-date Emergency Action Plan (EAP) on file with the Division of Water Resources.

Having an approved EAP on file with Division of Water Resources makes a dam eligible to receive a 10% discount off the annual fee charged to the dam.

DISCUSSION ITEMS

1. No Discussion Items.

Representatives of the Chief of the Division of Water Resources conducted this inspection to evaluate the condition of the dam and its appurtenances. The owner(s) of the dam must implement all remedial measures listed in the report.

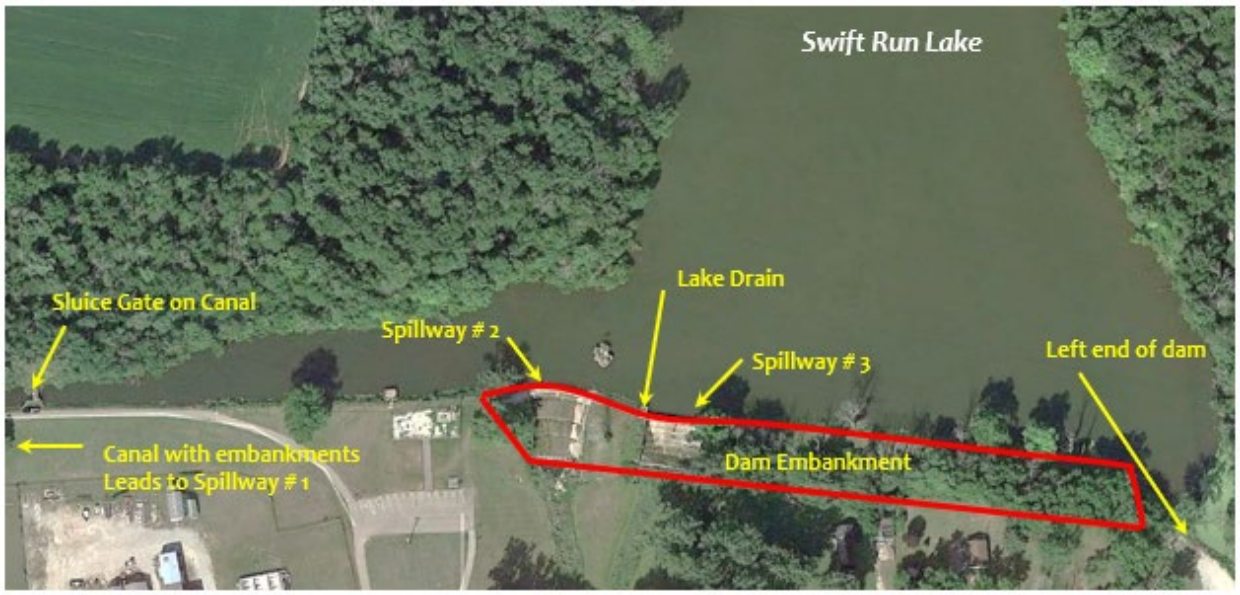
4/2/25	4/4/2025
Matt Marquis, P.E. Date	Ryan Heskett, E.I. Date
Program Manager	Project Engineer
Dam Safety Program	Dam Safety Program
Division of Water Resources	Division of Water Resources

This inspection was performed pursuant to the authority granted to the Chief of the Division of Water Resources in ORC Section 1521.062.

4/9/2025

Matthew J. Hook, P.E. Date
Program Manager
On behalf of Dena C. Barnhouse, P.E., Chief
Division of Water Resources

SITE MAP


Swift Run Lake
Sluice Gate on Canal
Spillway # 2
Lake Drain
Spillway # 3
Left end of dam
Canal with embankments
Leads to Spillway # 1
Dam Embankment

PHOTOGRAPHS

	1. Upstream slope and crest at the far-right end of the dam.
	2. Upstream slope adjacent to the right sidewall of spillway #2. Note the erosion and lack of vegetal cover.
	3. Retaining wall and upstream slope between spillway #2 and #3. The vegetation on the slope is too tall.

	4. Upstream slope and crest to the left of spillway #3.
	5. Erosion of the upstream slope near the left end of the dam.
	6. Upstream slope at the far-left end of the dam. Again, note the tree and the too tall vegetation.

	7. Crest at the left end of dam. Note the large bare area.
	8. Large bare areas on the downstream slope near the left end of the dam. Also note the trees.
	9. A view of a rodent burrow identified on the downstream slope.

	10. Downstream slope to the right of spillway #2. Note trees and dense overgrowth of brush.
	11. Inlet to spillway #2. Note the severe deterioration of the concrete (circled) and the location of the staff gauge (arrow).
	12. Spillway #2 outlet. Note the seepage through the joints.

	13. Left sidewall of spillway #2. Note the stone is deteriorating and vegetation growing between the joints.
	14. A surface drain discharging over the right sidewall of spillway #2.
	15. Although Spillway #2 was not flowing, the stepped faces of the outlet were wet.

	16. Outlet channel downstream of spillway #2 (center). The channel on left side of this photo is the outlet channel for spillway #3.
	17. Lake drain control at the right side of spillway #3.
	18. Spillway #3 inlet.

	19. Spillway #3 outlet.
	20. Right sidewall of spillway #3. Note the deterioration, efflorescence, and seepage.
	21. The lake drain discharges through the right sidewall of spillway #3.

	22. Cracking and seepage through the left sidewall of spillway #3.
	23. View of spillway #3 outlet steps and stilling basin. Note the delamination of the concrete on the steps. Arrow points to a drain for the stilling basin.
	24. Gate to separate the canal from Swift Run Reservoir. Arrow points to a valve control to allow water to bypass gate.

CLASSIFICATION

Swift Run Lake Dam

			Class
Height	39.4 ft		III
Storage	629.0 ac-ft		II
Potential Downstream Hazard			II
		Final Class:	**II**

The classification of a dam is based on three factors:

- the dam's height,
- storage capacity, and
- potential downstream hazard.

HEIGHT AND STORAGE CRITERIA

Class	Height (ft)		Storage (ac-ft)
I	> 60		> 5000
II	> 40		> 500
III	> 25		> 50
IV	≤ 25		≤ 50
Exempt	< 10	and	< 50
Exempt	< 6	or	< 15

The height of the dam is the vertical distance from the top of dam (crest) elevation to the lowest point along the downstream toe. The storage capacity is the total volume of water that the dam can impound at the top of dam (crest) elevation. The potential downstream hazard consists of roads, buildings, homes, and other structures that would be damaged in the event of a dam failure. Potential for loss of life is also evaluated. Various dam failure scenarios must be considered, and they include failures when the dam is at normal pool level and failures during significant flood events. Each of the three factors is evaluated, and the final classification of the dam is based on the highest individual factor. Class I is the highest and Class IV is the lowest. The classification of a dam can change based on future development or other changes along the downstream channel or from changes made to the dam.

During this inspection, the classification of Swift Run Lake Dam was re-evaluated according to the mandates of Ohio Administrative Code (OAC) Rule 1501:21-13-01. Based on a detailed hydrologic and hydraulic dam breach analysis performed by Stantec, the classification of Swift Run Lake Dam has been changed from Class I to Class II. In accordance with OAC Rule 1501:21-13-02, the design flood for a Class II dam is 50% of the Probable Maximum Flood or the critical flood. Also, the annual fee amount for Swift Run Lake Dam will change in accordance with OAC Rule 1501:21-24-01 and will be reflected on your 2025 invoice.

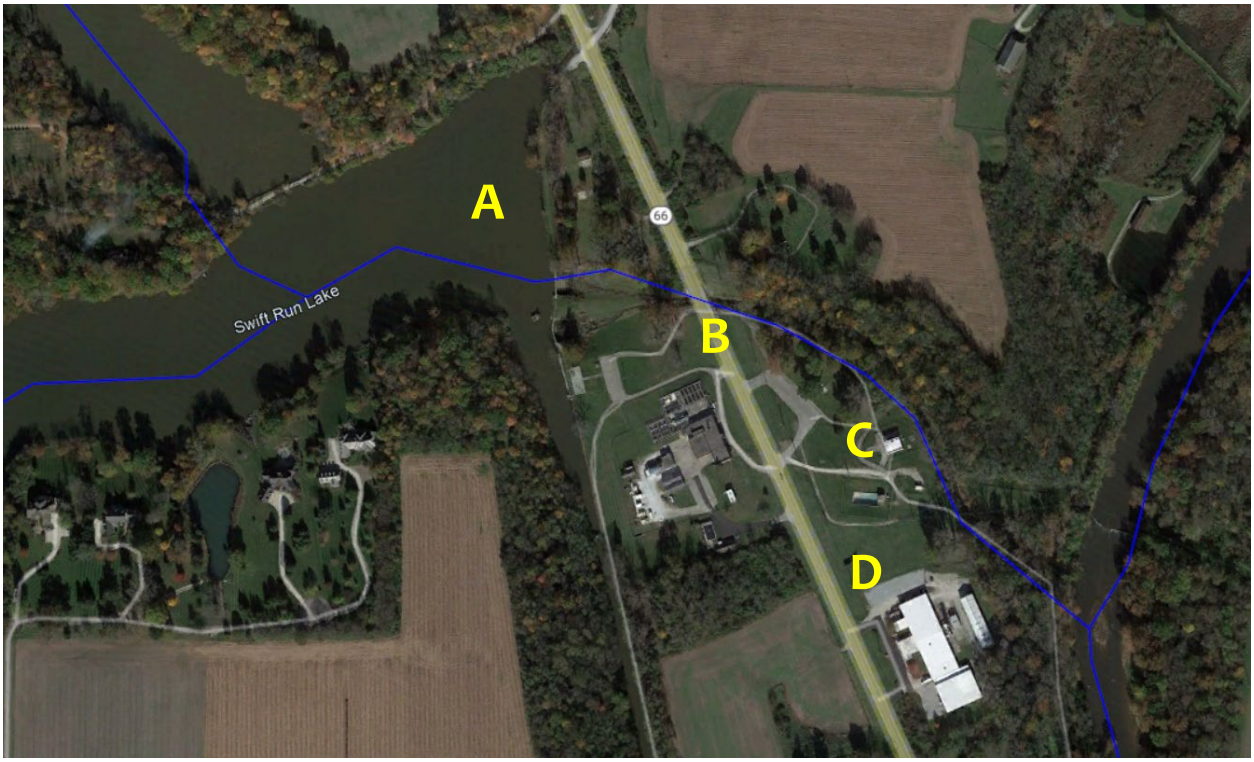
POTENTIAL DOWNSTREAM HAZARD

The following table shows the structures such as homes, businesses, roads, etc. that have been identified as part of the potential downstream hazard investigation. The letter in the table corresponds to the structure on the aerial photograph. The table is intended to establish or verify the appropriate classification in accordance with the OAC. It does not necessarily show all potential hazards or the full extent of inundation. Furthermore, in the event of dam failure, property owners in addition to those identified in the table should be made aware of the situation. This potential downstream hazard investigation is based on detailed hydrologic and hydraulic dam breach analysis performed by Stantec in 2023.

Swift Run Lake Dam Potential Downstream Hazard Classification

Hazard Class:	I	II					III		IV	—		Distance (ft)		
Potential Hazard	Probable loss of human life.	Loss of public water supply or wastewater treatment facility, release of health hazardous waste	Flooding of structure or high-value property	Damage to high-value or Class I, II, III dam or levee	Damage to major road (US or state route), disruption of only access to residential or critical facility area	Damage to railroad or public utility	Damage to rural building, not otherwise high-valued property, or Class IV dam or levee	Damage to local road (county and township)	Loss restricted mainly to the dam or agricultural, rural land	No hazard to structure noted	No hazard assessment; further investigation needed	Downstream - Dam to affected structure	Vertical - Streambed to base of affected structure	Horizontal – Stream to affected structure
Swift Run Lake		A										0	0	0
State Rte. 66					B							225	0	0
Treatment building		C										1450	5	65
Manufacturer			D									2050	5	450

Downstream Map



FLOOD CAPACITY

A dam must be able to safely pass severe flood events. A dam uses a combination of spillway discharge capacity and the reservoir's ability to store floodwater (storage capacity), known as discharge/storage capacity, to prevent floodwater from overtopping the embankment crest and destabilizing the dam. When a dam has inadequate discharge/storage capacity, floodwater will overtop and most likely erode the embankment. This can cause severe damage and dam failure.

As part of this inspection, the Division of Water Resources did not thoroughly investigate the ability of this dam to safely pass the required design flood. However, in 2023, Stantec performed hydrologic and hydraulic calculations to estimate the size of the design flood and the total spillway discharge capacity of the dam. These calculations combined with the reservoir storage capacity were used in the flood routings to estimate the maximum water surface elevation in the reservoir for various flood events (see Table).

Swift Run Lake Dam is a Class II dam; therefore, in accordance with OAC Rule 1501:21-13-02, the required design flood is 50% of the Probable Maximum Flood (PMF) or the critical flood. This dam and its spillway system must safely pass the design flood without overtopping the embankment crest or destabilizing the dam. Flood routing calculations indicate that the dam can pass 25% of the PMF; Swift Run Lake Dam does not appear to be able to safely pass the design flood.

Flood Routing Summary

			Overtopping	
Flood Event	Maximum Inflow (cubic feet per second)	Maximum WSEL[1] (feet)	Depth[2] (feet)	Duration (hours)
PMF	19210	911.10	4.30	4.0
75% PMF	14407			
50% PMF	9605	909.80	3.00	2.0
25% PMF	4802	907.80	1.00	0.0
12% PMF[3]	2305	906.80	0.00	0.0

1. WSEL – water surface elevation, in feet
2. A negative number indicates that the dam does not overtop and represents the elevation difference between the Maximum WSEL and the Top of Dam Elevation (freeboard)
3. 12% PMF is similar to the 100-year flood. The 100-year flood event has a 1% chance of occurring in any given year. This is only an approximation.

Dam and Spillway Elevations

Top of Dam	906.8
Emergency Spillway	
Normal Pool	903.1

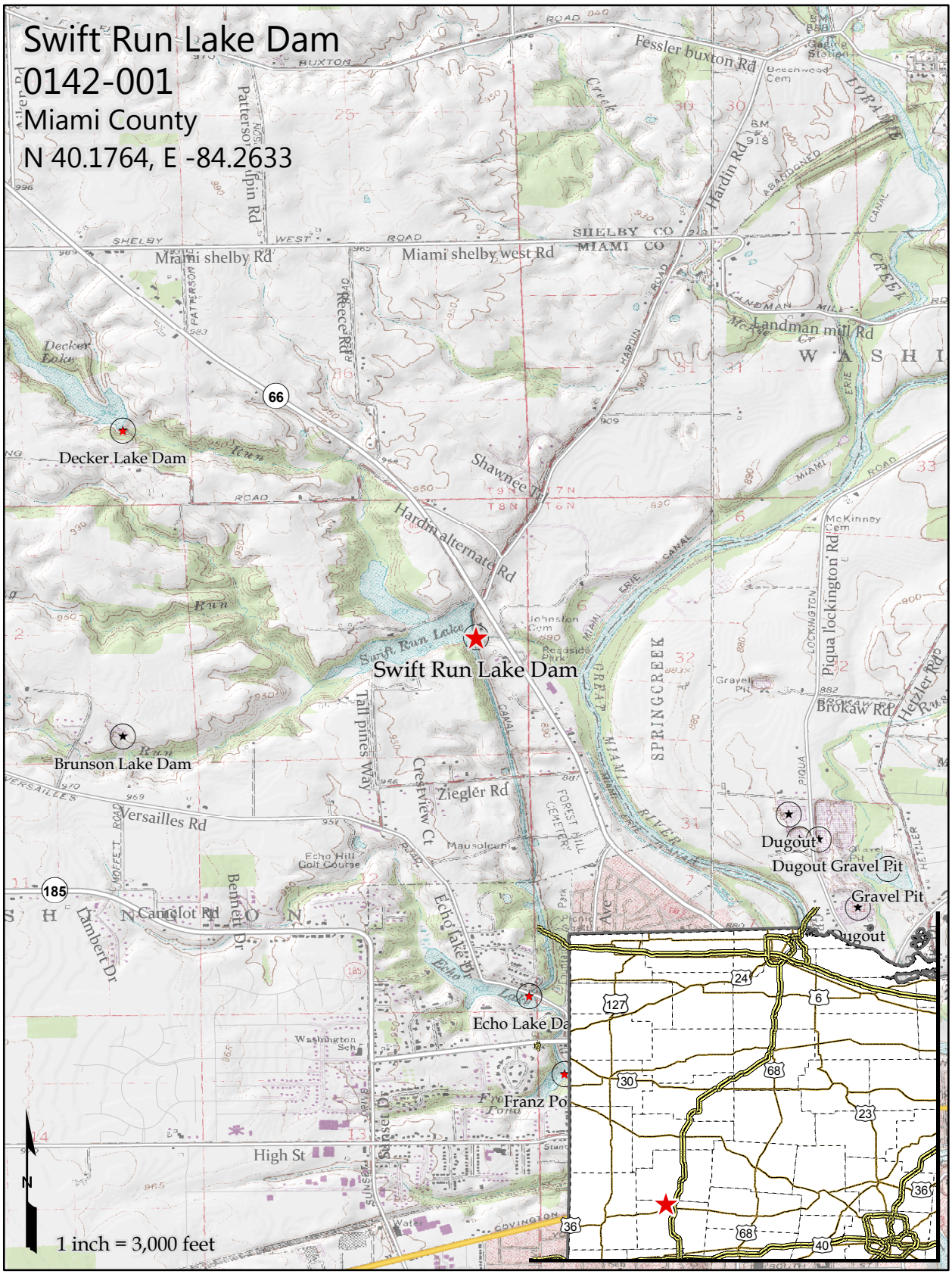
HISTORY

Swift Run Lake Dam

1876	Dam construction completed.
1924	Failure of canal embankment due to overtopping.
1925	Water plant and river pump station constructed.
1936	Canal embankment failure at Forest Hill Cemetery due to overtopping.
1961	Failure of the right end of Swift Run Lake Dam due to the installation of additional pipe to the water plant.
1975	Canal embankment failure due to utility pipe installation under the canal.
1980	All 3 spillways rehabilitated. Concrete repair and the addition of rock channel protection at the outlets.
October 28, 1980	Phase I Inspection by the USACOE.
1984-1985	Leak in canal embankment between Echo Lake and Franz Pond. Repaired by relining canal.
1989	Downstream slope of Echo Lake Dam flattened and house constructed in slope.
January 16, 1990	Dam safety inspection by the Division of Water Resources.
1995	DOWR site visit made after heavy rains caused slide to develop on the canal south of Echo Lake.
2000-2001	DOWR site visit made after heavy rains. Seepage area found on canal between Echo Lake and Franz Pond. Repaired by relining the canal with a geosynthetic clay liner.
February 6, 2002	Dam safety inspection by the Division of Water Resources.
March 10, 2005	H&H performed by Bowser Morner for all three dams and canal and approved by DOWR.
2007	Leak detected and repaired on the canal north of Echo Lake.
August 29, 2007	Dam safety inspection by the Division of Water Resources.
November 16, 2009	Intermediate dam safety inspection by the Division of Water Resources.
October 23, 2014	Dam safety inspection by the Division of Water Resources.
January 12, 2015	Emergency Action Plan approved by DOWR.
2015	EAP exercised.
2018	Leak through canal about 200 feet south of the sluice gate at Swift Run Lake. Repaired by mixing soil with bentonite and recompacting.
October 9, 2019	Dam safety inspection by the Division of Water Resources.
November 26, 2024	Dam safety inspection by the Division of Water Resources.

APPENDIX - LOCATION MAP, INVENTORY, INSPECTION CHECKLIST, OTHER AGENCIES

LOCATION MAP



Dam Inventory Sheet

Name: SWIFT RUN LAKE DAM
Reservoir:
File No: 0142-001
National #: OH00515
Permit No.: N/A
Class (Ht-Vol): II (III - II)

Owner Information

Owner: City of Piqua
Address: 201 West Water Street
City: Piqua **State:** OH **Zip:** 45356
Contact: Don Freisthler **Phone No.:** 937/778-2090
Owner Type: Public, Local
Multi-Dams: Yes: 3, Class I:2
Parcel No.:

Location Information

County: Miami
Township: City Of Piqua
Stream: Swift Run
USGS Quad.: Piqua West
Latitude Deg.: 40 **Min.:** 10 **Sec.:** 35
Longitude Deg.: 84 **Min.:** 15 **Sec.:** 48
USGS Basin No.: 05080001

Design/Construction Information

Designed By: Unknown
Constructed By: Piqua Hydraulic Company
Completed: 1876 **Plan Available:** YES **At:** ODNR - DOW
Failure/Incident/Breach:

Structure Information

Purpose: Water Supply, Public; Recreation, Public
Type of Impound.: Dam And Spillway
Type of Structure: Earthfill
Drainage Area (sq. miles): 7.42 **or (acres):** 4749

Embankment Data

Length (ft): 1520
Height (ft): 39.4
Top Width (ft): 14
Upstream Slope: 2H:1V
Downstream Slope: 2H:1V
Volume of Fill (cub. yds.): 20300

Spillway Outlet Works Data

Lake Drain: 24-INCH-DIA SLUICE GATE & PIPE; 36-IN PIPE; 24-IN WATER LINE
Principal: THREE CONCRETE WEIRS: 93-FT, 75-FT, & 73-FT WIDE
Emergency: NONE
Maximum Spillway Discharge (cfs): 3547 **Design Flood:** 0.50 **Flood Capacity:** 0.25

Dam Reservoir Data

	Elevation (ft-MSL)*	Area (acres)	Storage (acre-feet)
Top of Dam:	908.5	64	629
Emergency Spillway:			
Principal Spillway:	902.3	38	452
Streambed:	867.4		
Foundation:			

*Elevations are not necessarily related to a USGS benchmark

Inspection Information

Inspection History:
11/26/2024 MRM
10/9/2019 TMG
10/23/2014 DCB
11/16/2009 MBO
8/29/2007 DCB
2/6/2002 DCB
1/16/1990
10/28/1980

Phase I: 10/28/1980
Other Visits:
Inspection Year: C

PIQ

Operation Information/Remarks

Box 017588 PHASE I: UNSAFE - NON-EMERGENCY. Class Changed from I to II in 2024.

Emergency Action Plan: Approved
Format: ICODS
OMI: Approved
Last Entry: 4/7/2025

Dam Safety Inspection Checklist

Complete All Portions of This Section (Pre-inspection)

Name of Dam: Swift Run Lake Dam

Miami County Required Action — None / Mon. / Maint. / Eng.

Date of Inspection: NOVEMBER 26, 2024

File Number: 0142-001

Class: ~~I~~ II Design Flood: ~~1.0~~ 0.5 Flood Capacity: 0.25 ☐ ☐ ☐ ☒

Interview with Owner (at the site):

Owner/Representative present: (Yes, No) Name(s): TODD HONE, KEVIN KREJNY

Owner's Name(s): City of Piqua

Address: 201 West Water Street, ,

City: Piqua State: OH Zip (+4): 45356

Contact Person: ~~Don Freisthler~~ KEVIN KREJNY Telephone: 937/778-~~2090~~ 2088

Email Address: kkrejny@piquaoh.gov

Purpose of dam: Water Supply, Public; Recreation, Public

Owner Dam Safety Program

Emergency Action Plan

EAP (document): (Approved) ICODS Up-to-date? (yes, no) ☒ ☐ ☐ ☐

Exercised: NO

Downstream development: NONE

Security: NO, PUBLIC ACCESS TO DAMS AND CANAL

Operation, Maintenance, and Inspection

OMI (document): (Approved) Acceptable Up-to-date? (yes, no) ☒ ☐ ☐ ☐

Operation of drains/gates

All operable? (yes, no)

Normal rate of drawdown: N/A Emerg. rate of drawdown: N/A

Accessibility for operation: ACCESSIBLE VIA CREST OF DAM

Maintenance

Frequency of mowing: WEEKLY DURING GROWING SEASON

Other maintenance: SIDE-ARM TRIMMING ON EMBANKMENTS, REMOVE LOGS

Inspection

Frequency and thoroughness of day-to-day & routine inspections: DAILY PUBLIC ACCESS, MONTHLY INSPECTIONS

Frequency and thoroughness of event-driven inspections: INSPECTIONS DURING/AFTER RAINFALL

Problems found during inspections: NONE

Field Information

Pool Elevation (during inspection): NORMAL POOL Time: 11:00 (a.m. p.m.)

Site Conditions(temp., weather, ground moisture): 40°, OVERCAST, DRY

Inspection Party: MRM, RGH

Maximum Height: 39.4 Feet (measured or inventory appears correct)

Normal Pool Surface Area: 38 Acres (measured or inventory appears correct)

The dam has two spillways on the embankment but can also outlet through the canal system to the south. The water line to the water plant is located at the downstream toe, and it can function as the lake drain by diverting discharge into the downstream channel; Multiple hydrologic and hydraulic studies performed on the dam and spillways. Most recent analysis used HECHMS to model the PMF runoff for each basin and HECRAS to simulate storage and spillway hydraulics. Models saved in	Box 017588 Phase I: Unsafe - Non-emergency

Upstream Slope

[X] Gradient: 2H:1V

Typical Problems: shoreline erosion, trees & brush, surface erosion, ruts, rodent burrows, earth slides, cracks

	Required Action			
	None	Monitor	Repair	Engineer
BETWEEN THE WOODEN PIER ALONG THE CANAL AND SPILLWAY #2, THE SLOPE HAS ROCK LINING WITH VEGETATION GROWING UP NEAR THE SPILLWAY.			X	
THE ROCK WALL BETWEEN SPILLWAY #2 + #3 IS IN GOOD CONDITION	X			
THE SLOPE TO THE NORTH OF SPILLWAY #3 IS MOSTLY GRASS-LINED, WITH SOME ROCK LINING AND TREES AND BRUSH. DIFFICULT TO INSPECT.			X	
LARGE EROSION AREAS IDENTIFIED IN 2019 INSPECTION ARE STILL PRESENT.				X

Crest

[X] Width (ft): 14 [X] Length (ft): 1520 [X] Total Freeboard (ft): 6.20

Typical Problems: low areas, trees & brush, surface erosion, ruts, cracks

	None	Mon.	Rep.	Eng.
CREST CONSISTS OF SHORT GRASS WITH SOME SPARSE AREAS. NO SIGNS OF INSTABILITIES.	X			
CREST IS NOT UNIFORM AND HUMMOKY.				X
PATH BETWEEN SPILLWAY #2 + #3 IS NOT WELL VEGETATED.			X	

Downstream Slope

[X] Gradient: 2H:1V

Typical Problems: trees & brush, surface erosion, ruts, rodent burrows, earth slides, cracks, seepage

	None	Mon.	Rep.	Eng.
THE LEFT END OF THE DAM HAD BRUSH REMOVED, BUT THE REMAINDER OF THE SLOPE IS COVERED IN TREES AND BRUSH.			X	
THE CANAL IS ALSO COVERED IN TREES AND BRUSH, EXCEPT FOR IN THE VICINITY OF THE OLD WATER PLANT.			X	
EVIDENCE OF RODENT BURROWS ON THE DOWNSTREAM SLOPE OF THE DAM.			X	

Principal Spillway

[X] Three Concrete Weirs: 93-ft, 75-ft, & 73-ft Wide

Typical Problems: Inlet obstructed, unsatisfactory trashrack/anti-vortex plate, material deterioration, misalignment, open joints, outlet erosion, outlet overgrown, undermining

	None	Mon.	Rep.	Eng.
SEE ECHO LAKE DAM REPORT REGARDING SPILLWAY #1. SPILLWAY #2 IS STONE AND SPILLWAY #3 IS CONCRETE.	X			
SEEPAGE NOTED ON SIDEWALLS OF SPILLWAY #2 + #3 AND ON THE STEPS OF SPILLWAY #2.				X
BOTH SPILLWAYS ARE FUNCTIONAL WITH SIGNS OF CRACKING AND EFFLUESCENCE, ITS UNCLEAR IF EITHER SPILLWAY HAS A FUNCTIONING SEEPAGE COLLECTION SYSTEM.				X

[X] Sufficient measurements to perform hydraulics (dimensions, riser depth, outlet elevation)

Required Action

Emergency Spillway

[X] None
[ ] Freeboard (to normal pool, feet

Typical Problems: Flowpath obstructed, material deterioration, erosion, misalignment, overgrown, undermining

None	Monitor	Repair	Engineer
X			

NO EMERGENCY SPILLWAY REQUIRED.

[X] Sufficient measurements to perform hydraulics (dimensions, breadth, side slopes)

Lake Drain

[X] 24-inch-dia Sluice Gate & Pipe; 36-in Pipe; 24-in Water Line

Typical Problems: Poor operating access, inoperable, deteriorated/missing components, outlet erosion

None	Mon.	Rep.	Eng.
X			
		X	

SWIFT RUN AND CANAL CAN BE DRAINED VIA VALVES ON SPILLWAY #1 + #3 AND WATER LINES LOCATED SOUTH OF SPILLWAY #2.

CONTINUE TO ROUTINELY OPERATE AND MAINTAIN ALL VALVES AND DRAINS.

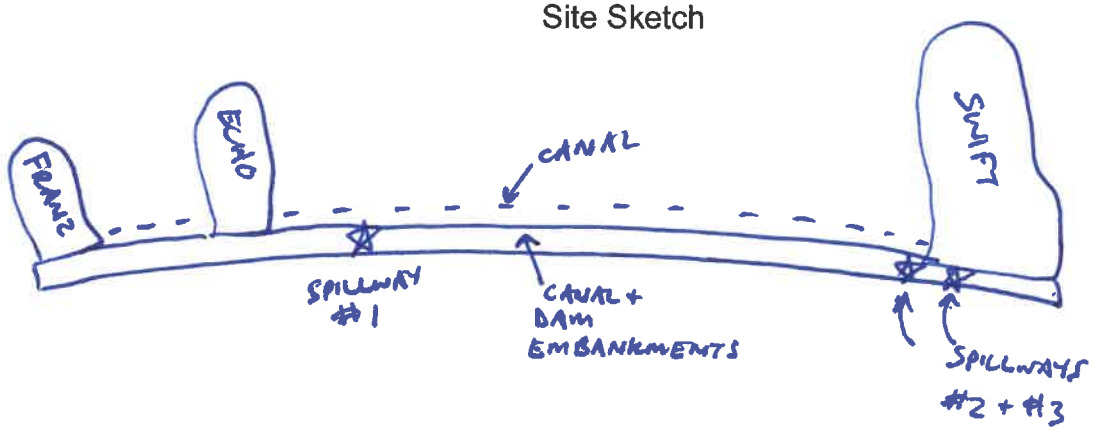
Other

None	Mon.	Rep.	Eng.
X			

THE LEFT ABUTMENT HAS A GRAVEL PULL-OFF AREA THAT COULD BE PROBLEMATIC FOR DRIVERS WHO ARE UNAWARE THAT THEY ARE ON THE DAM. CONSIDER BLOCKING ACCESS TO THAT AREA.

[X] All Field Data Gathered (inspector's inititals): MRM | RGH

Site Sketch



[X] Investigate Downstream Hazard

Agencies Associated with Dams and Lakes

The Division of Soil & Water Resources has the responsibility to ensure that human life, health, and property are protected from dam failures. The division provides fact sheets and dam safety information for dam owners on the division's web site: www.dnr.state.oh/water. Other governmental agencies are involved with the lakes and streams associated with dams, but have other responsibilities. Listed below are several relevant agencies that dam owners may be interested in contacting.

County Emergency Management Agency

County Emergency Management Agencies (EMAs) serve the public in disaster preparedness, public safety, and emergency management at the county level. County EMAs are responsible for coordinating relief efforts related to manmade and natural disasters. In the case of a dam emergency, the County EMA is one of the dam owner's first contacts.

Telephone: 937 332-8560

State Web Site: http://ema.ohio.gov/index.aspx

Soil & Water Conservation District

County soil and water conservation districts (SWCDs) serve communities by providing assistance to urban and agricultural land users. SWCDs specialize in soil erosion prevention and water management. Some of services offered by county SWCD offices include survey and design of grassed waterways, erosion control structures, surface and subsurface drainage, farm ponds, and livestock waste management facilities. SWCDs also sponsor a number of information and education programs. In addition to these services, SWCDs may utilize assistance from the USDA Natural Resources Conservation Service (NRCS) for some technical matters.

http://www.dnr.state.oh.us/H_Nav2/OFFICESSWCDS/DistrictOffices/tabid/9093/Default.aspx

937-335-7645 - Telephone

Natural Resources Conservation Service

Since 1935, the Natural Resources Conservation Service (originally called the Soil Conservation Service) has provided leadership in a partnership effort to help America's private landowners and managers conserve their soil, water, and other natural resources. NRCS employees provide technical assistance based on sound science and suited to a customer's specific needs. NRCS provides financial assistance for many conservation activities.

Web Site: http://www.nrcs.usda.gov/

Division of Wildlife

The Division of Wildlife within the Ohio Department of Natural Resources manages fish and wildlife of the state. The division offers assistance in stream improvement and pollution investigations and provides fishery information and publications on pond stocking. Information regarding pest and rodent control can be obtained by visiting the division website or by contacting the regional office. The Division of Wildlife should be contacted before starting any construction activity where loss of aquatic life is anticipated.

937-372-9261 - District Office 5

http://ohiodnr.com/Home/ContactUs/tabid/18270/Default.aspx - Web Site

Ohio Environmental Protection Agency

The Ohio Environmental Protection Agency (EPA) establishes environmental guidance and enforcement standards for the state. In particular, the Division of Surface Water provides assistance for matters pertaining to rivers, lakes, and streams in Ohio. The Division of Surface Water can provide information and assistance in developing best management practices for the control of point and non-point pollution sources and spills. Suspected pollution spills can be reported directly by using the Ohio EPA Spill Hotline at 1-800-282-9378.

District Office Southwest: 937-285-6357

State Web Site: http://www.epa.state.oh.us/

OSU Extension

The Ohio State University (OSU) Extension utilizes knowledge and research developed by the Ohio Agricultural Research and Development Center, Ohio State, and other land-grant universities to assist communities, businesses, and individuals. In addition to a wide variety of community leadership and agricultural services for all ages, county OSU Extension offices offer information and assistance in agricultural water resource conservation and management, farm pond management, and safety, Ohio hydrologic cycles and non-point source pollution management. Information regarding dry hydrant fire protection and legal liabilities associated with farm ponds in Ohio can be found on the extension website.

614-688-8330 - Extension Region: West

http://extension.osu.edu/locate-an-office - Web Site

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jim Tressel, *Lt. Governor*
Mary Mertz, *Director*

Division of Water Resources
Dena C. Barnhouse, Chief
2045 Morse Road/Building B-3
Columbus, Ohio 43229
614-265-6620

April 9, 2025

City of Piqua
Don Freisthler
201 West Water Street
Piqua, OH 45356

RE: Swift Run Lake Dam, Echo Lake Dam, and Franz Pond Dam
File Numbers: 0142-001, 0142-002, and 0412-003
Miami County

Dear Mr. Freisthler:

Thank you for allowing Matt Marquis and Ryan Heskett of the Division of Water Resources to conduct safety inspections of the above referenced dams on November 26, 2024. These inspections were conducted by representatives of the Chief of the Division of Water Resources under the provisions of Ohio Revised Code Section (ORC) 1521.062 to evaluate the conditions of the dams and their appurtenances. The Chief has the responsibility to ensure that human life, health, and property are protected from dam failures. Conducting periodic safety inspections and working with dam owners to maintain and improve the overall condition of Ohio dams are vital aspects of achieving this purpose. A copy of the laws and administrative rules for dam safety is available on the division's web site or by request.

As part of this inspection, the inspection team evaluated the classification of Swift Run Lake Dam according to the mandates of Ohio Administrative Code (OAC) Rule 1501:21-13-01. Based on a detailed hydrologic and hydraulic dam breach analysis performed by your consultant, the classification of Swift Run Lake Dam has been changed from Class I to Class II due to the potential downstream hazard of the dam. In accordance with OAC Rule 1501:21-13-02, the design flood for a Class II dam is 50% of the Probable Maximum Flood or the critical flood. Also, the annual fee amount for the dam will change in accordance with OAC Rule 1501:21-24-01. This change in the annual fee amount will be reflected on your 2025 invoice. The inventory records for this dam have been revised based on the information obtained from this inspection.

The enclosed inspection reports were generated based on available information and are hereby provided for your use and study. Listed in the reports are several repair, maintenance, and monitoring items that as a dam owner you are required by law to perform. Completion of these required items will improve the safety and overall conditions of the dams. The Chief must approve any plans for modifications or repairs to these dams. Modifying or repairing a dam includes, but is not limited to, installing or replacing a spillway pipe or a portion of a spillway, raising the embankment crest elevation, raising the normal pool level, and placement of fill and/or piping in

an open channel spillway. Following approval of the engineered plans, all necessary repairs must be implemented by the owner under the supervision of a registered professional engineer.

Please be advised that you may qualify for a reduced-interest loan to make required repairs or develop an EAP through the Dam Safety Loan Program administered by the Ohio Water Development Authority (OWDA). To find out about this program, please contact the OWDA at 614/466-5822.

It is the Division's understanding that you are the owner of these dams. If you are not an owner of these dams, or believe that there are additional owners of the dams not addressed in this communication, please contact our office. Please note that ORC Section 1521.062 requires a dam owner to notify the Chief of the Division of Water Resources in writing of a change in ownership of a dam prior to the exchange of the property.

To gain information that will help improve the inspection program, a short survey has been developed and is enclosed. Please complete the survey and return it in the self-addressed envelope provided. Your feedback is important.

Your cooperation in improving the overall conditions of these dams is appreciated. Please contact Matt Marquis at 614/265-6761 if you have any questions.

Sincerely,

Matthew J. Hook, P.E.
Program Manager
Dam Safety Program
Division of Water Resources

MJH:mrm

Enclosures

Cc: The Honorable Kris Lee, Mayor, City of Piqua