

DAM SAFETY INSPECTION REPORT



ECHO LAKE DAM

FILE NUMBER: 0142-002

INSPECTED: NOVEMBER 26, 2024

MIAMI COUNTY

CLASS I



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. **These items have been noted previously and the appropriate time period for completion has already been exceeded. The owner must complete these items immediately.** 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. 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 I dams is 100% of the Probable Maximum Flood or the critical flood. See the Flood Capacity section for additional information.
2. The embankment crest alignment must be uniform. Investigate the variable vertical alignment of the crest of the dam and canal and, as necessary, prepare plans and specifications for the correction of any problems. This item should be completed in coordination with Item 1 above.
3. This dam must have a device to permit draining of the reservoir within a reasonable period of time in accordance with OAC Rule 1501:21-13-06. Investigate the integrity of the lake drain pipe and valve and determine whether the current lake drain structure can adequately lower the pool level in a timely manner for an emergency condition. If necessary, prepare plans and specifications for the installation of such a device. See the "Lake Drains" fact sheet for additional information.

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 dam and canal embankments. Once cleared, eradicate all rodents and repair the burrows. Seed all disturbed areas to establish a proper grass cover. See the "Trees and Brush" fact sheet for additional information.
2. Remove the pipe penetrations through the dam embankment. Backfill the area with impermeable fill.
3. Investigate the standpipe and opening at the base of the Spillway #1 wall in-line with the standpipe. Include a description in the Operation, Maintenance, and Inspection Manual for the dam.

Monitoring Items

None – no 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. Echo Lake Dam has an approved, up-to-date OMI on file with the Division of Water Resources. The dam must be regularly inspected in accordance with Table 2.1 in the OMI and documented.

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. Echo 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

No Discussion Items

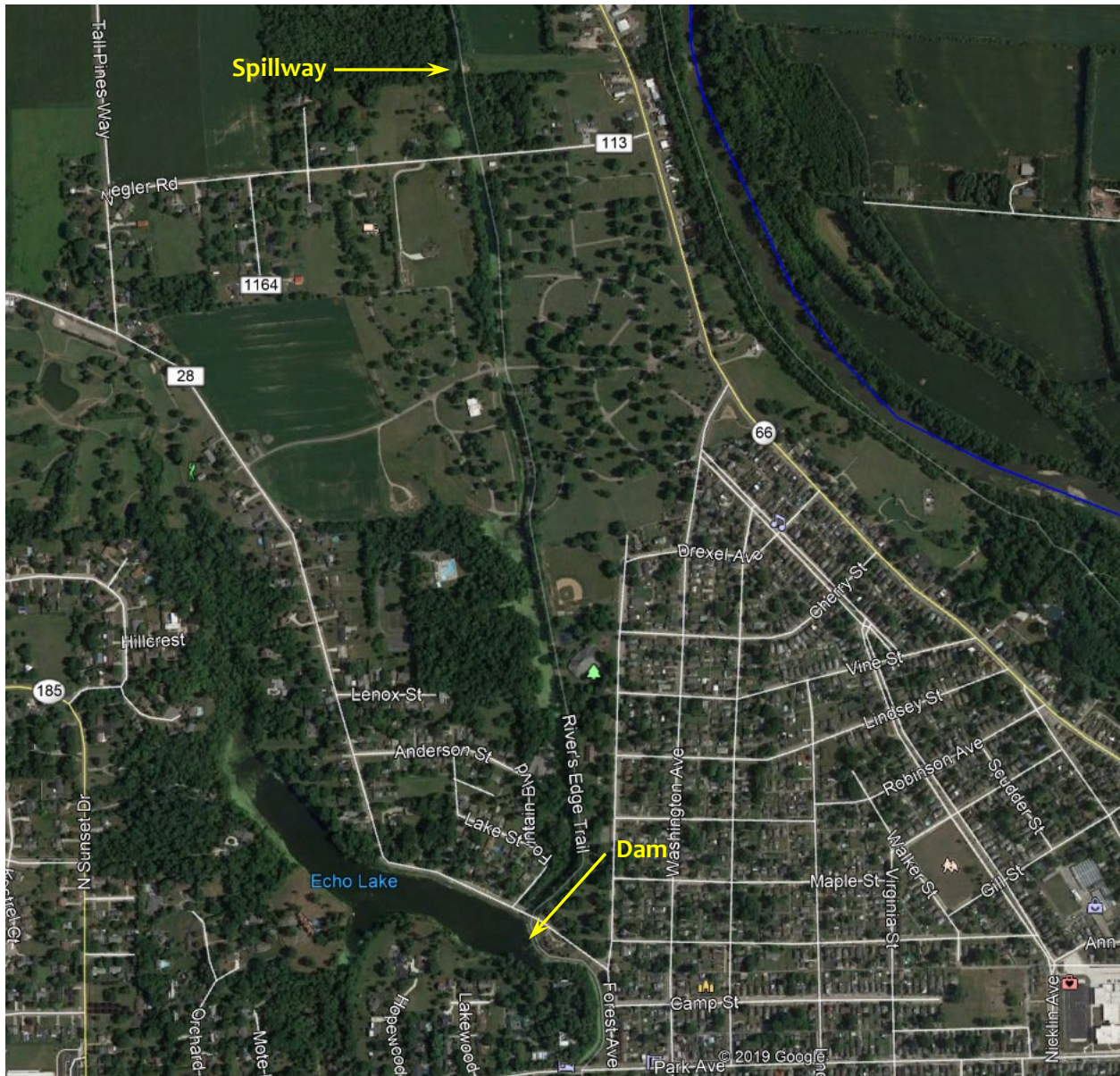
Representatives of the Chief of the Division of Water Resources conducted this inspection to evaluate the condition of the dam and its appurtenances. The owner(s) of the dam must implement all remedial measures listed in the report.

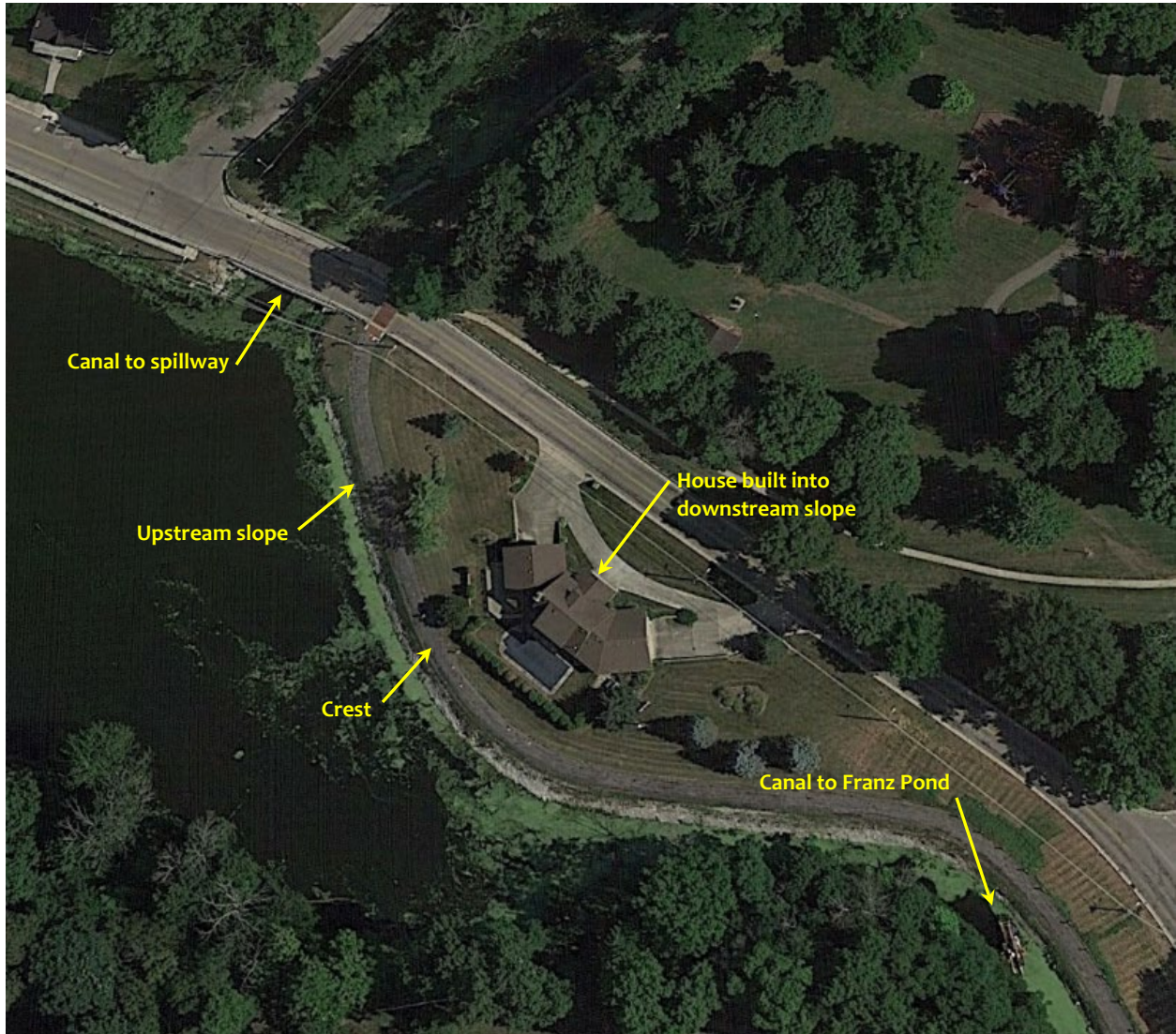
	4/2/25		4/4/2025
_____ Matt Marquis, P.E. Program Manager Dam Safety Program Division of Water Resources	Date	_____ Ryan Heskett, E.I. Project Engineer Dam Safety Program Division of Water Resources	Date

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

SITE MAP





PHOTOGRAPHS



1. Canal path leading from Swift Run Lake Dam to principal spillway #1.



2. Principal spillway #1 inlet. Note the lake drain valve at the left end and the staff gauge at the right end.



3. Principal spillway #1 outlet. Note the pipe opening (of unknown purpose) in the right sidewall.



4. Closer view of the pipe opening in the right sidewall.



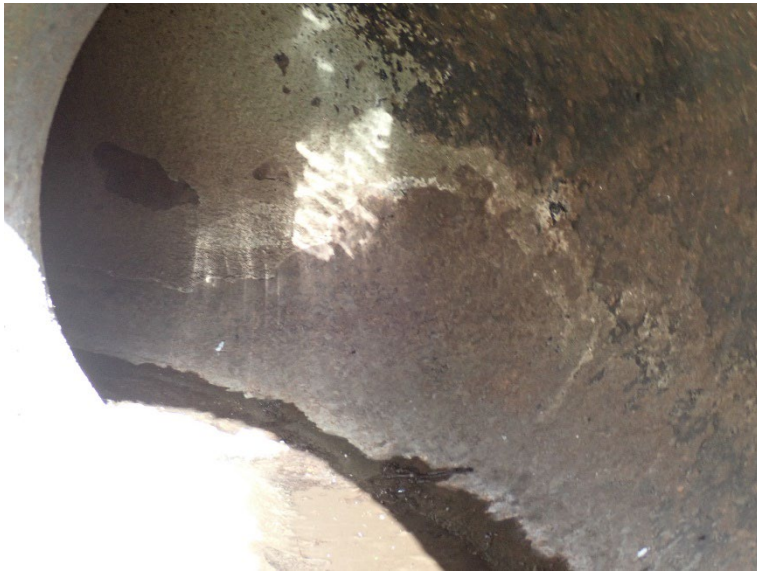
5. Interior view of the pipe opening in the right sidewall. Note the open joint and pipe displacement.



6. There is a standpipe of unknown purpose adjacent to the unknown piping through the sidewall.



7. View of the principal spillway outlet facing the left sidewall. The opening in the wall is the lake drain outlet.



8. Interior view of the lake drain outlet pipe.



9. The face of the steps in the bottom of the spillway outlet had several relief drains. All drains had a trickle flow or were damp from previous flow.



10. Canal path looking north.
Note the dense trees and brush on the canal embankment.



11. Several deep rodent burrows were noted in the canal slope.



12. Bridge under Echo Lake Drive is main discharge for Echo Lake into the canal.



13. View of the upstream slope. Note the brush along the slope.



14. View of the dam crest. Note the hoses into a PVC pipe through the upstream slope.



15. There is a house, a swimming pool, and landscaping trees and bushes in the downstream slope.

CLASSIFICATION

Echo Lake Dam

		Class
Height	14.2 ft	IV
Storage	142.0 ac-ft	III
Potential Downstream Hazard		I
Final Class:		I

The classification of a dam is based on three factors:

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

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

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

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.

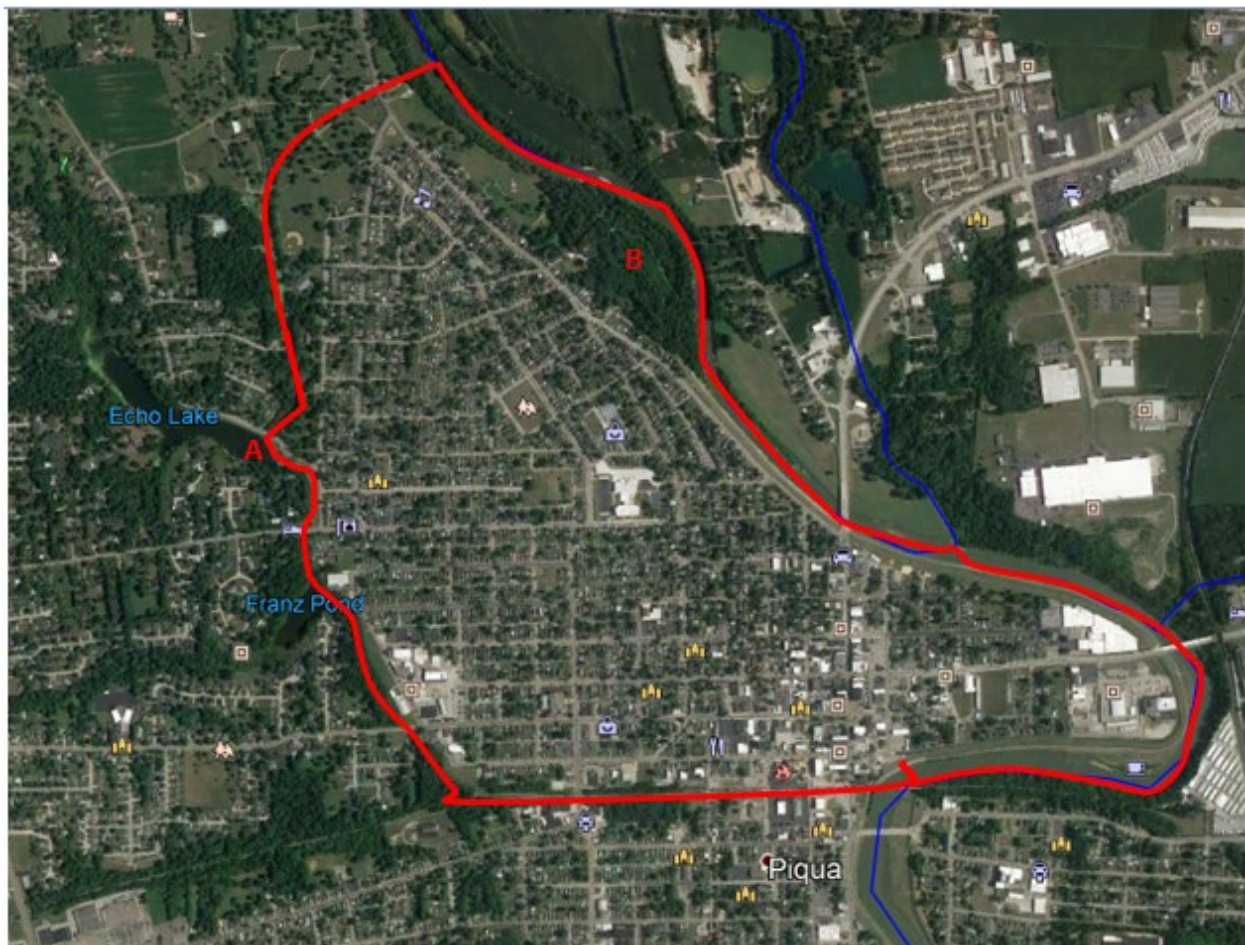
POTENTIAL DOWNSTREAM HAZARD

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 inundation maps provided in the approved Emergency Action Plan as well as field observations and 2024 aerial photography from Google.

Echo 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
Dam		A									0	0	0	
City of Piqua	B		B				B				Varies	Varies	Varies	

Downstream Map



****See inundation study in the Emergency Action Plan for additional information.**

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).

Echo Lake Dam is a Class I dam; therefore, in accordance with OAC Rule 1501:21-13-02, the required design flood is 100% 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 12% of the PMF; Echo Lake Dam does not appear to be able to safely pass the design flood.

Flood Routing Summary

Flood Event	Maximum Inflow (cubic feet per second)	Maximum WSEL ¹ (feet)	Overtopping	
			Depth ² (feet)	Duration (hours)
PMF	7018	910.60	2.90	4.0
75% PMF	5263			
50% PMF	3509	909.60	1.90	2.0
25% PMF	1754	909.00	1.30	1.0
12% PMF ³	842	908.40	0.70	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	907.7
Emergency Spillway	
Normal Pool	903.2

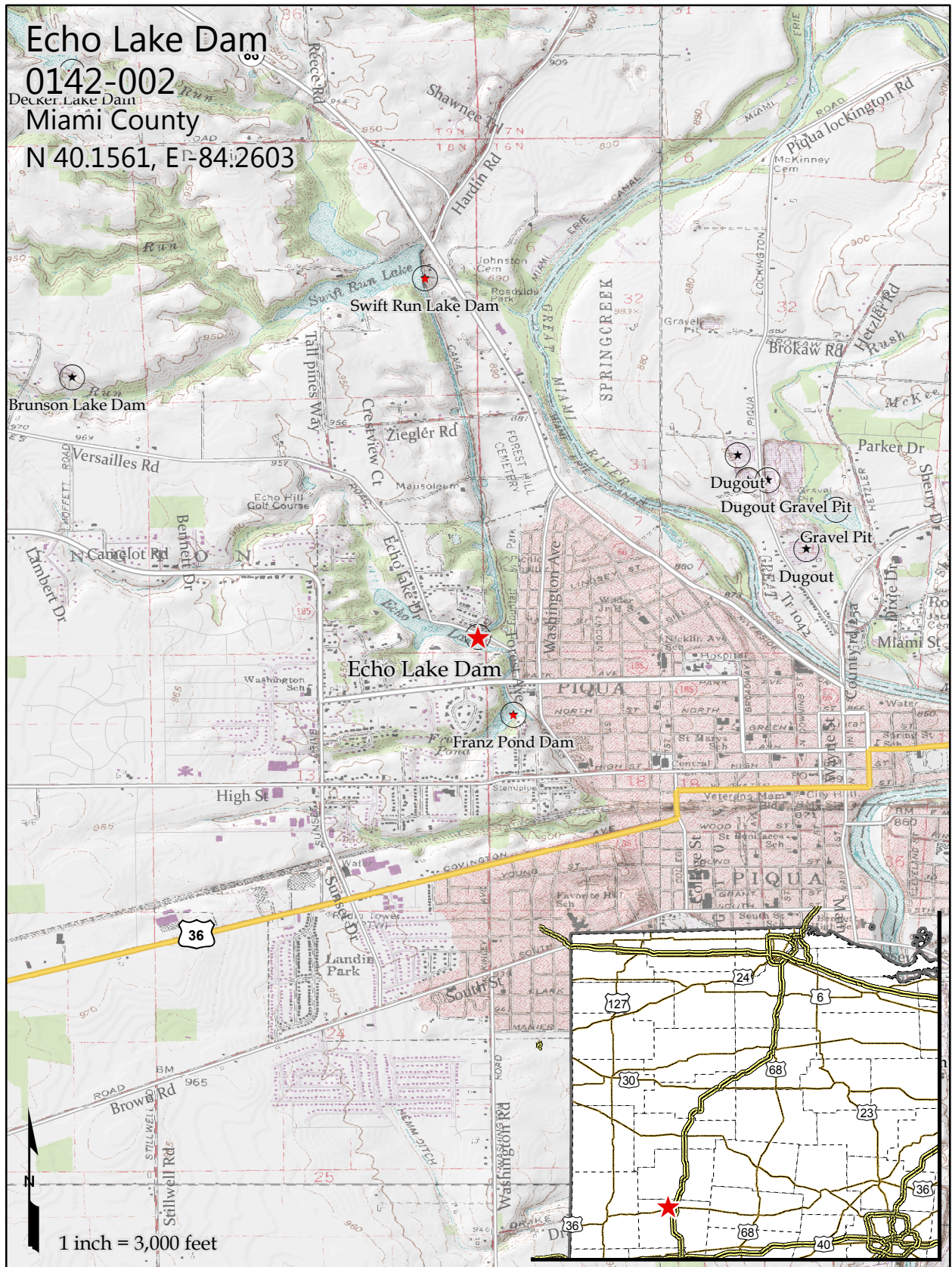
HISTORY

Echo 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: ECHO LAKE DAM File No: 0142-002
Reservoir: National #: OH02103
Permit No.: N/A
Class (Ht-Vol): I (IV - III)

Owner Information

Owner: City of Piqua Owner Type: Public, Local
Address: 201 West Water Street Multi-Dams: Yes: 3, Class I:2
Parcel No.:
City: Piqua State: OH Zip: 45356
Contact: Kevin Krejny Phone No.: 937/778-2025

Location Information

County: Miami Latitude Deg.: 40 Min.: 9 Sec.: 22
Township: City Of Piqua Longitude Deg.: 84 Min.: 15 Sec.: 37
Stream: Tributary To Swift Run
USGS Quad.: Piqua West 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
Type of Impound.: Dam And Spillway
Type of Structure: Earthfill
Drainage Area (sq. miles): 2 or (acres): 1280

Embankment Data

Length (ft): 660 Upstream Slope: 2H:1V
Height (ft): 14.2 Downstream Slope: 4H:1V
Top Width (ft): 8 Volume of Fill (cub. yds.):

Spillway Outlet Works Data

Lake Drain: NONE
Principal: 93-FT-WIDE CONCRETE WEIR ON THE CANAL TO SWIFT RUN LAKE
Emergency: NONE
Maximum Spillway Discharge (cfs): 926 Design Flood: 1.0 Flood Capacity: .12

Dam Reservoir Data

	Elevation (ft-MSL)*	Area (acres)	Storage (acre-feet)
Top of Dam:	908.4	27.5	142
Emergency Spillway:			
Principal Spillway:	902.3	16.5	46
Streambed:	893.5		

*Elevations are not necessarily related to a USGS benchmark

Foundation:

Inspection Information

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

PIQ

Operation Information/Remarks

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: Echo Lake Dam

Miami County

Date of Inspection: NOVEMBER 26, 2024

Required Action

File Number: 0142-002

None Mon. Maint. Eng.

Class: 1

Design Flood: 1.0

Flood Capacity: .12

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: 937/778-2000- 2088

Email Address:

Purpose of dam: Water Supply, 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: VIA SPILLWAY ON CANAL

Maintenance

Frequency of mowing: WEEKLY DURING GROWING SEASON

Other maintenance: SIDE-ARM TRIMMING, 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, RBH

Maximum Height: 14.2 Feet (measured or inventory appears correct)

Normal Pool Surface Area: 16.5 Acres (measured or inventory appears correct)

House built into embankment. The spillway is located about one mile to the north on the canal embankment to which this dam is connected. Pipe buried about a foot below the crest into the embankment for the purpose of filling the in-ground swimming pool located in the downstream slope. H&H study completed in 2005 in response to the requirement in the 2001 inspection report. The study was accepted for use in further repair design.

Required Action

Upstream Slope

Gradient: 2H:1V

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

UPSTREAM SLOPE IS STEEP AND OVERGROWN WITH BRUSH. PREVIOUS INSPECTION NOTED RIPRAP ON A PORTION OF THE SLOPE BUT MUCH OF THE SLOPE WAS OBTSCURED BY BRUSH DURING THIS INSPECTION.

None
Monitor
Repair
Engineer

			X	

THE PREVIOUS INSPECTION NOTED TWO HOSES THROUGH THE DAM, ENCASED IN PVC PIPE, BUT THEY WERE NOT OBSERVED DURING THIS INSPECTION. ITS UNCLER HOW THEY WERE REMOVED OR IF THEY REMAIN IN PLACE BUT WERE OBTSCURED BY VEGETATION.

None
Mon.
Rep.
Eng.

X				

Crest

Width (ft): 8

Length (ft): 660

Total Freeboard (ft): 4.50

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

CREST IS AN ASPHALT PATH IN GOOD CONDITION.

CREST IS NOT LEVEL WITH ENTIRE SYSTEM ACCORDING TO STATEC SURVEY

None
Mon.
Rep.
Eng.

X				

Downstream Slope

Gradient: 4H:1V

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

A HOUSE AND SWIMMING POOL ARE BUILT INTO THE SLOPE.

MULTIPLE MATURE TREES ASSOCIATED WITH LANDSCAPING FOR THE HOUSE NEEDS TO BE REMOVED.

CANAL EMBANKMENTS MUST BE CLEARED OF TREES AND BRUSH AND THEN INSPECTED FOR RODENT BURROWS.

None
Mon.
Rep.
Eng.

Principal Spillway

93-ft-wide Concrete Weir On The Canal To Swift Run Lake

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

SPILLWAY #1 ACTS AS PRIMARY SPILLWAY FOR FRANZ POND, ECHO LAKE, AND MOST OF THE CANAL. HOWEVER, THE PRIMARY DISCHARGE FOR ECHO LAKE IS A BRIDGE UNDER ECHO LAKE DRIVE AT THE START OF THE CANAL.

SPILLWAY CONCRETE APPEARS TO BE OK WITH A STAFF GAGE ON RIGHT WALL. UNKNOWN SANDPIPE AND OPENING AT BASE OF SPILLWAY WALL SHOULD BE INV.

OUTLET APPEARS TO HAVE SETTLED AND MUST BE REPLACED.

None
Mon.
Rep.
Eng.

X				

Sufficient measurements to perform hydraulics (dimensions, riser depth; outlet elevation)

Required Action

None
Emergency Spillway Freeboard (to normal pool, feet)

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

EMERGENCY SPILLWAY IS NOT REQUIRED.

None	Monitor	Repair	Engineer

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

Lake Drain

None VALVE LOCATED ON SPILLWAY #1.

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

FRANZ POND AND ECHO LAKE DISCHARGE ALONG CANAL TO SPILLWAY #1. THE LAKE DRAIN AT SPILLWAY #1 IS OPERABLE BUT ITS UNCLEAR HOW QUICKLY BOTH LAKES AND THE CANAL CAN BE DRAWN DOWN.

None	Mon.	Rep.	Eng.
			X

Other

CANAL DUNBANKMENTS MUST BE CLEARED OF TREES AND BRUSH.

None	Mon.	Rep.	Eng.

All Field Data Gathered (inspector's initials): MRM RBH

Site Sketch

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/OFFICESWCDs/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

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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,

A handwritten signature in blue ink that reads "Matt Hook". The signature is written in a cursive, slightly slanted style.

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