



DAM SAFETY INSPECTION REPORT



Roaming Rock Shores Lake Dam
File Number: 1506-001
Class I
Ashtabula County, Morgan Township
Inspection Date: October 15, 2008



In accordance with Ohio Revised Code 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, owners can be subject to liability claims.

The Chief of the Division of Water 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. In accordance with Ohio Administrative Code Rule 1501:21-21-03, the owners of dams must implement all remedial measures listed in the enclosed report.

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 has been enclosed in Section 3. References to right and left in this report are oriented as if you were standing on the dam crest and looking downstream.

Engineer Repairs and Investigations: The owner must retain the services of a professional engineer to address the following items. Plans, specifications, investigative reports, and other supporting documentation, as necessary, must be submitted to the Division of Water for review and approval prior to construction. The owner must complete this item and implement all engineered plans for improvement within 3 years unless otherwise stated. A record of all repairs should be included in the operation, maintenance, and inspection manual.

Not Completed
1. The principal spillway sidewall drain system must function properly. Investigate the condition of the pipe exiting the sidewalls of the principal spillway system. As necessary, prepare plans and specifications for the repair of the drain system.

Owner Repairs: The owner must address the following items. The owner may hire a contractor or perform the work him or herself. Repair activities should be documented in the operation, maintenance, and inspection manual.

Scheduled for Fall 2011
1. Repair the concrete deterioration and reapply joint sealant in the principal spillway outlet chute. Also, clean the gutter drains located behind the spillway sidewalls. See the "Open Channel Spillways (Concrete Chutes and Weirs)", "Problems with Concrete Materials", and "Concrete Repair Techniques" fact sheets and Discussion Item No. 1 included in this section for additional information.

on going
2. Repair the rodent burrows on the upstream slope. See the "Rodent Control" fact sheet included in this section for additional information.

on going
3. Perform routine maintenance and clean the pipe outlets of the auxiliary spillway relief drains which exit into the stilling basin. See the "Seepage Through Earthen Dams" fact sheet included in this section for additional information.

Owner Dam Safety Program: In accordance with Ohio Revised Code (ORC) Section 1521.062, the owner of a dam shall maintain a safe structure and appurtenances through inspection, maintenance, and operation. A dam, like any other part of the 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. Dams must have these procedures documented in an operation, maintenance, and inspection manual.

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 of any condition, which threatens the safety of the

Discussion Items

1. As concrete structures age, the joint material may start to deteriorate. It is important to protect the joints from water and freeze/thaw damage. A small amount of preventive maintenance can extend the life of the concrete structure.

To repair a joint, start by removing all loose joint material and debris in the expansion joint. Clean out the joint with a wet-dry vac or compressed air. Clean the sides of the joint to clean dry concrete – grind if necessary. Do not leave any old joint adhesive, oils, greases, or other material that may prevent the new sealant from adhering. Use a putty knife to pack a strip of foam backer rod into the joint so there is firm support for the new joint sealant. Backer materials must be at a depth no greater than $\frac{1}{2}$ the width of the joint. Example, a joint 2 inches wide should have sealant no more than 1 inch in depth. Cover the backer rod and seal the joint with a liberal layer of self-leveling urethane sealant for horizontal joints. For vertical or sloping joints, a non-sagging sealant must be used. Follow manufacturer's directions and wear safety goggles and rubber gloves when applying the sealant.



Use a putty knife to pack a strip of foam backer rod into the joint.



Cover the backer rod and seal the joint with a liberal layer of sealant.

Dam Safety Intermediate Inspection Checklist

Complete All Portions of This Section (Pre-inspection)

Name of Dam: Roaming Rock Shores Lake Dam

Ashtabula County

Date of Inspection: JUNE 27, 2011

File Number: 1506-001

Class: I

Interview with Owner (at the site or phone):

Owner/Representative present: (Yes, No) Name(s): KEVIN Grippi, Bob Cook, Al Rubosky, Barny O'Connell

Address: PO Box 237, ,

City: Roaming Shores

State: OH

Zip (+4): 44084

Contact Person: Mayor, Carl Biats, Jr. / KEVIN Grippi Telephone: 440/563-5083

Email Address: administrator@roamingshores.oh.gov.

Owner Dam Safety Program

Emergency Action Plan

EAP (document): Yes

ICODS

Change in EAP status? No change

Operation, Maintenance, and Inspection

OMI (document): Yes-on file Acceptable

Change in OMI status? No change

All drains/gates operable? (yes, no) Lake drain was operated in May 2011.

No problems noted

Recent problems/ changes?

Field Information

Pool Elevation (during inspection): 2 inches above normal pool

Time: 1:30 (a.m. p.m.)

Site Conditions (temp., weather, ground moisture): 75°, Sunny, Dry

Inspection Party: P. George and J. Huitger

Significant Changes in Condition:

- No changes in downstream hazard.
- The "Owner Repairs" were scheduled for late in the fall of 2011.
- The "Engineer Repairs and Investigations" one outstanding item has not been completed.



DAM SAFETY INTERMEDIATE INSPECTION REPORT



Roaming Rock Shores Lake Dam

File Number: 1506-001

Class I

Ashtabula County, Morgan Township

Inspection Date: June 27, 2011



Representatives of the Chief conducted this intermediate inspection to evaluate the condition of the dam and its appurtenances under authority of Ohio Revised Code Section 1521.062. An intermediate inspection addresses the requirements of the Ohio Administrative Code with regard to scope but the report is more brief since it is being performed at a shorter interval than a five-year periodic inspection.

Division of Soil & Water Resources • 2045 Morse Road, Bldg. B-2 • Columbus, Ohio 43229-6693

www.dnr.state.oh.us

In July 2009, the Ohio Department of Natural Resources, Division of Water, merged with the Division of Soil & Water Conservation to become the Division of Soil & Water Resources.



Photograph No. 1:

Upstream Slope



Photograph No. 2:

Upstream Slope / Lake Drain Valve



Photograph No. 3:

Crest



Photograph No. 4:

Downstream Slope



Photograph No. 5:

Downstream Slope



Photograph No. 6:

Downstream Slope



Photograph No. 7:

Downstream Slope



Photograph No. 8:

Principal Spillway Inlet



Photograph No. 9:

Principal Spillway Right Side



Photograph No. 10:

Principal Spillway Concrete Chute



Photograph No. 11:

Principal Spillway Stilling Basin



Photograph No. 12:

Principal Spillway Overview



Photograph No. 13:

Auxiliary Spillway / Right Abutment



Photograph No. 14:

Auxiliary Spillway Concrete Chute



Photograph No. 15:

Auxiliary Spillway Concrete Chute



Photograph No. 16:

Auxiliary Spillway Stilling Basin



Photograph No. 17:

Lake Drain Outlet Pipe



Photograph No. 18:

Emergency Spillway / Grass Channel

Dam Inventory Sheet

Name: ROAMING ROCK SHORES LAKE DAM File No: 1506-001
National #: OH00397
Reservoir: Permit No.: 67-021
Class (Ht-Vol): I (II-I)

Owner Information
Owner: Village of Roaming Shores Owner Type: Public, Local
Address: PO Box 237 Multi-Dams: -
Parcel No.:
City: Roaming Shores State: OH Zip: 44084
Contact: Mayor, Carl Biats, Jr. Phone No.: 440/563-5083

Location Information
County: Ashtabula Latitude Deg.: 41 Min.: 39 Sec.: 16
Township: Morgan Longitude Deg.: 80 Min.: 50 Sec.: 22
Stream: Rock Creek
Nearest Affected Community: Rock Creek
Community's Distance from Dam (miles): 0.4
USGS Quad.: Jefferson USGS Basin No.: 04110004

Design/Construction Information
Designed By: Research, Planning & Design Associates, St. Louis, Mo.
Constructed By: Koski Construction Company, Ashtabula, Ohio
Completed: 1967 Plan Available: YES At: ODNR, DIVISION OF WATER
Failure/Incident/Breach:

Structure Information
Purpose: Recreation, Private
Type of Impound.: Dam And Spillway
Type of Structure: Earthfill
Drainage Area (sq. miles): 73.5 or (acres): 47040

Embankment Data
Length (ft): 730 Upstream Slope: 3H:1V
Height (ft): 45.3 Downstream Slope: 2.5H:1V
Top Width (ft): 20 Volume of Fill (cub. yds.): 159300

Spillway Outlet Works Data
Lake Drain: 36-IN CMP & SLUICE GATE W/INVERT @ ELEV. 840
Principal: 180-FT-WIDE OGEE-SHAPED WEIR DISCHARGING INTO 250-FT LONG CONCRETE CH
Emergency: 80-FT WIDE OPEN CHANNEL @ ELEV. 854.0
Maximum Spillway Discharge (cfs): 55678 Design Flood: 1.0 Flood Capacity: 1.0

Dam Reservoir Data	Elevation (ft-MSL)*	Area (acres)	Storage (acre-feet)
Top of Dam:	861	800	12000
Emergency Spillway:	854	595	8300
Principal Spillway:	850	460	6091
Streambed:	813		

Foundation: *Elevations are not necessarily related to a USGS benchmark

Inspection Information
Inspection History: 6/27/2011 PMG Phase I:
10/15/2008 PMG Other Visits: 4/15/96
8/27/2003 MEM
7/9/1998 EMK
12/11/1985 Inspection Year: 2008-2009
6/25/1973

Operation Information/Remarks
3 spillways - Data on P/S & E/S noted above; Aux spillway 110-ft-wide ogee-shaped weir discharging into asphalt & concrete chute w/elev 852.0, area 530-ac, capacity 7200-af

Emergency Action Plan: Approved
Yes

Format: ICODS
ICODS

OMI: Yes-on file
Last Entry: 10/17/2011



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Theodore R. Lozier, P.E. • Chief

Division of Soil & Water Resources

December 7, 2011

Village of Roaming Shores
Mayor, Carl Biats, Jr.
PO Box 237
Roaming Shores, OH 44084

RE: Roaming Rock Shores Lake Dam
File Number: 1506-001
Ashtabula County

Dear Mayor Biats:

Thank you for allowing Peter George and Jim Huitger of the Division of Soil & Water Resources to conduct a safety inspection of Roaming Rock Shores Lake Dam on June 27, 2011. This inspection was conducted by representatives of the Chief of the Division of Soil & Water Resources under the provisions of Ohio Revised Code (ORC) Section 1521.062 to evaluate the condition of the dam and its 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 and other important guidelines and resources are available on the division's web site or by request.

ORC Section 1521.062 requires the Division of Soil & Water Resources to inspect each jurisdictional dam once every five years. The division has modified its inspection process to meet this mandate. Division engineers have begun inspecting dams by geographic region to improve inspection efficiency and quality. Although it had not been five years since Roaming Rock Shores Lake Dam had been last inspected, it was inspected on June 27, 2011 to match the periodic inspection schedule for the rest of the dams in your region. Roaming Rock Shores Lake Dam, as well as the other jurisdictional dams in the area, will be on a five-year inspection schedule with the next periodic inspection occurring in 2016.

Based on the division's June 27, 2011 inspection, inspectors have concluded that the dam remains in a condition similar to the condition found during the 2008 inspection and required remedial measures listed in the 2008 periodic inspection report remain outstanding, except for the following additions and/or deletions:

- Owner is in the process of completing the "Engineer Repairs and Investigations" one outstanding item noted in the last inspection in 2008.

Roaming Rock Shores Lake Dam

December 7, 2011

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A copy of the 2008 of the Required Remedial Measures Section of the report has been enclosed for your review. Completion of the required remedial measures, noting the exemptions and additions above, will improve the safety and overall condition of the dam. The Chief must approve any plans for modifications or repairs to the dam. Following approval of the engineered plans, all necessary repairs must be implemented by the owner under the supervision of a registered professional engineer.

It is the Division's understanding that you are the owner(s) of this dam. Under Ohio's dam safety regulations, "owners" are "those who own, or propose to construct a dam or levee." OAC Rule 1501:21-3-01(V). A "dam" is defined as "any artificial barrier together with any appurtenant works, which either does or may impound water or other liquefied material ..." OAC Rule 1501:21-3-01(F). "Appurtenant works" include but are not limited to outlet works and spillway channels.

If you are not an owner of this dam, or believe that there are additional owners of the dam not addressed in this communication, please contact Peter George. Please note that ORC Section 1521.062 requires a dam owner to notify the Chief of the Division of Soil & Water Resources in writing of a change in ownership of a dam prior to the exchange of the property.

Your cooperation in improving the overall condition of this dam is appreciated and you are commended on the maintenance performed thus far. Please contact Peter George at 614/265-6725 if you have any questions.

Sincerely,



Keith R. Banachowski, P.E.
Program Manager
Dam Safety Engineering Program
Division of Soil & Water Resources

KRB:pmg

cc/enc: Peter George, P.E., Division of Soil & Water Resources

Enclosures