

Molly Joseph Ward
Secretary of Natural Resources



Joe Elton
Interim Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

600 East Main Street, 24th Floor
Richmond, Virginia 23219
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DAM SAFETY AND FLOODPLAIN MANAGEMENT

**Dam Safety Conditional Operation and Maintenance Certificate
Significant Hazard Dam, Inventory Number 08539**

Pine Slash Homeowners Association, owner of Mattawan Dam in Hanover County, is entitled to operate and maintain this dam pursuant to the provisions of the Dam Safety Act (Section 10.1-604 et seq., Code of Virginia) and Virginia Soil and Water Conservation Board Regulations (Regulations) promulgated thereunder.

This Conditional Operation and Maintenance Certificate is issued because the dam does not satisfy the current Regulations. The conditions that must be corrected to qualify for a Regular Operation and Maintenance Certificate are:

- Complete a Dam Break Inundation Zone Map and Hazard Class Determination no later than March 30, 2015
- Provide an appropriate Emergency Action Plan no later than May 30, 2015
- Establish a project schedule for rehabilitation should an increased spillway capacity be needed no later than June 30, 2015
- Complete an application for an Alteration Permit should increased spillway capacity be needed no later than August 30, 2015
- Complete all improvements to the impounding structure and spillway no later than December 30, 2015
- Complete and provide the remaining recertification forms for a Regular O&M Certificate 90-days prior to the expiration of this Conditional Certificate

This certificate is for a term of two years, effective March 31, 2014 and expires March 31, 2016.

Joe Elton
3/27/14



Date Prepared: 05/14/2018
Prepared By: Robert F. McCarty, P.E.

ANNUAL INSPECTION REPORT FOR VIRGINIA REGULATED IMPOUNDING STRUCTURES

Reference: Impounding Structures Regulations, 4VAC 50-20-10 et seq., including 4VAC 50-20-105, Virginia Soil and Water Conservation Board

Owner's Information

Name of Dam: Mattawan Dam
Owner's Name: Pine Slash Association, Inc.
Contact Person (if different from above): James White – Board Director
Owner's Address: 6373 Pine Slash Road, Mechanicsville, VA 23116
Name of reservoir: Mattawan Lake
Purpose of reservoir: Recreational
Telephone No.: (Residential) [REDACTED] (Business) N/A
Other means of communication: [REDACTED]

Owner's Engineer

Name of Engineering Firm and Engineer: Robert F. McCarty, PE
Professional Engineer Virginia License Number: 007779
Mailing Address: 9368 Sarah Shelton Lane, Mechanicsville, VA 23116

Telephone No.: (Business) [REDACTED]

Directions: Make note of all pertinent conditions and changes since the last inspection, or, if this is the first inspection, since the filing of a design report.

Date of This Inspection 05/12/2018
Date of Last Inspection 03/13/2016

1. EMBANKMENT

- a. Any alteration made to the embankment? None
- b. Erosion on embankment? None other than minor erosion on lake side of dam at water line caused by wave action.
- c. Settlement, misalignment or cracks in embankment? None observed.
- d. Seepage? If so, seepage flow rate and location (describe any turbidity and observed color within the flow):
See Page 3 of the 11/16/2010 Annual Inspection Report. Seepage not related to the dam embankment.

2. UPSTREAM SLOPE

- a. Woody vegetation discovered? Upstream side of dam has been seeded.
- b. Rodent burrows discovered? None observed.
- c. Remedial work performed? None

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3. INTAKE STRUCTURE

- a. Deterioration of concrete? Intake is bituminous coated corrugated metal standpipe in very good condition.
- b. Exposure of rebar reinforcement? N/A
- c. Is there a need to repair or replace the trash rack? N/A. Bituminous coated corrugated vortex cap.
- d. Any problems with debris? No
- e. Was the drawdown valve operated? No. Drain valve was opened last December and operating properly.

4. ABUTMENT CONTACTS

- a. Any seepage? If so, estimate the flow rate and describe the location of the seep or damp areas (describe any turbidity and observed color within the flow):

N/A

5. EARTHEN EMERGENCY SPILLWAY

- a. Obstructions to flow? If so, describe plans to correct: Spillway is mortared riprap.

- b. Rodent burrows discovered? No signs of any rodent damage.

- c. Any deterioration in the approach or discharge channel? No

6. CONCRETE EMERGENCY SPILLWAY

- a. Deterioration of concrete? See 5a. above.

- b. Exposed steel reinforcement? N/A

- c. Any leakage below concrete spillway? No

- d. Obstructions to flow? If so, lists plans to correct: None

7. DOWNSTREAM SLOPE

- a. Woody vegetation discovered? None

- b. Rodent burrows discovered? None observed.

- c. Are seepage drains flowing? N/A

- d. Any seepage or wet areas? None related to dam embankment.

8. OUTLET PIPE

- a. Any water flowing outside of discharge pipe through the
Impounding Structure? No

- b. Describe any deflection or damage to the pipe: No damage noted.

9. STILLING BASIN

- a. Deterioration of concrete structures? N/A

- b. Exposure of rebar reinforcement? N/A

- c. Deterioration of the basin slopes? N/A

- d. Repairs made? N/A

- e. Any obstruction to flow? N/A

10. GATES

- a. Gate malfunctions or repairs? N/A

- b. Corrosion or damage? N/A

- c. Were any gates operated? If so, how often and to what extreme? N/A

11. RESERVOIR/WATERSHED

- a. New developments upstream of dam? No

- b. Slides or erosion of lake banks around the rim? No

- c. General comments to include silt, algae or other influence factors: None

12. INSTRUMENTS

- a. List all instruments N/A
- b. Any readings of instruments? N/A
- c. Any installation of new instruments? N/A

13. DOWNSTREAM/HAZARD ISSUES

- a. New development in downstream inundation zone? None in floodplain.
- b. Note the maximum storm water discharge or peak elevation during the previous year. No flow over the weir last year.
- c. Was general maintenance performed on dam? If so, when? Slopes mowed last Spring and Fall. Mowing scheduled for June.
- d. List actions that need to be accomplished before the next inspection: Principle spillway outlet channel needs to be cleared of several branches and small trees that have fallen into it.

14. OVERALL CONDITION ASSESSMENT OF IMPOUNDING STRUCTURE AND APPURTENANCES

(Check one) ☒ SATISFACTORY ☐ FAIR ☐ POOR ☐ UNSATISFACTORY ☐ NOT RATED

1. SATISFACTORY

No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the applicable regulatory criteria or tolerable risk guidelines.

2. FAIR

No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

3. POOR

A dam safety deficiency is recognized for loading conditions which may realistically occur. Remedial action is necessary. 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.

4. UNSATISFACTORY

A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

5. NOT RATED

The dam has not been inspected, is not under state jurisdiction, or has been inspected but, for whatever reason, has not been rated.

General Comments: Dam was observed to be in good condition with no major problem areas and is in good maintenance.

Recommendations: Clean out principle spillway outlet channel.

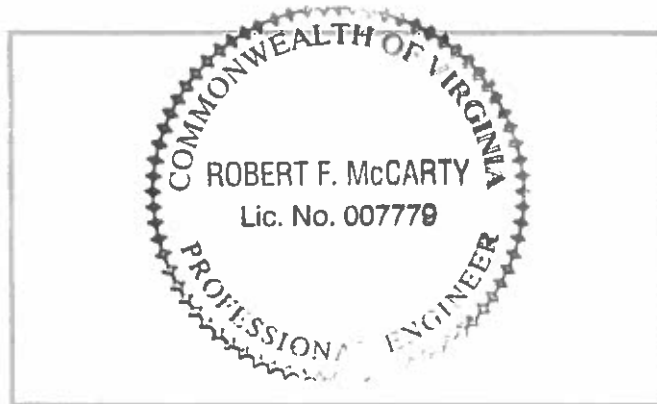
CERTIFICATION BY OWNER'S ENGINEER (required only when an inspection by an engineer is required)

I hereby certify that the information provided in this report has been examined by me and found to be true and correct in my professional judgment.

Signed: Robert F. McCarty Robert F. McCarty Virginia Number: 007779
Professional Engineer's Signature Print Name

This 14th day of May, 20 18.

Engineer's Virginia Seal:



CERTIFICATION BY OWNER

Cxp 5-31-1

I hereby certify that the information provided in this report has been examined by me.

Signed: James White James White – Board Director Pine Slash Subdivision
This 15th day of May, 20 18.

Mail the executed form to the appropriate
Department of Conservation and Recreation
Division of Dam Safety and Floodplain Management
Regional Engineer