The State of New Hampshire

# DEPARTMENT OF ENVIRONMENTAL SERVICES

**Robert R. Scott, Commissioner**

Village District of Eidelweiss, Chairman
1680 Conway Road
Madison, NH 03849

September 24, 2021

RE: **Request for Action:** Pea Porridge Pond Middle & Little, D149004, Significant, Madison

Dear Chairman:

The New Hampshire Department of Environmental Services, Dam Bureau (NHDES) is responsible for ensuring the safety of dams in New Hampshire through its dam safety program. In accordance with RSA 482:12 and Env-Wr 302.02, an inspection of the subject dam was conducted on June 4, 2020. Based upon the results of the inspection, NHDES is issuing this Request for Action to advise you of the observations and related recommendations made by our dam safety engineer. We understand that a significant amount of time has passed between the inspection and this letter and apologize for the delay.

You should implement the following recommendations, as they are aimed at improving the condition and longevity of the dam and ensuring that it meets New Hampshire's current dam safety standards. We've suggested dates by which the items could be completed; however, these are provided as a guide and you should schedule activities as your resources allow. If the condition of the dam has changed since the inspection, or if you have any other questions related to the dam, please contact the dam safety engineer named at the close of this letter.

**Suggested completion date: December 1, 2021**

1. Please review the Operation, Maintenance and Response (OMR) form for your dam and, if changes are warranted, update it as required and return it to NHDES. The form should include monitoring and maintenance items consistent with the findings of the inspection as noted below. A blank version of the form may be found on NHDES's Dam Safety, Maintenance and Management webpage under the Dam Permitting and Forms tab.

**Suggested completion date: September 1, 2022**

2. Cut all trees, brush and weedy growth from the footprint (earthen, stone and concrete embankment) of the dam and 15 ft. beyond the footprint of the dam to prevent damage to the dam from root penetration, blow down of the trees and to create a buffer zone to monitor the dam for seepage and other maintenance concerns. Areas to clear include:
    a. Along the entire downstream slope of the embankment. The original design plans indicate that the embankment is close to 175' long, with 75' to the right of the outlet and 100' to the left. (See photos A, B and C);
    b. The brush/weedy growth on the upstream slope of the embankment on both sides of the outlet structure. (See photos D and E); and
    c. The inlet area to the auxiliary spillway and along its 160'+ length. The original design plans indicate that the spillway has a base width of 80' from inlet to outlet. (See photo F).

**NOTE:** After clearing the areas listed above, all eroded, disturbed or sparsely vegetated areas should be properly regraded and protected with erosion resistant vegetation or other acceptable treatment to prevent erosion and degradation. Consideration should be given to using hard armor adjacent to either side of the outlet to stabilize the upstream slope in these areas.

3. Prepare and submit an Emergency Action Plan (EAP) for review by NHDES. Please visit NHDES's Dam Safety, Maintenance and Management webpage and click the Emergency Action Plans tab to access the complete set of administrative rules related to EAPs, as well as to view the current template and other EAP guidance.

**On a continuing basis:**

4. Monitor the leakage, seepage and areas of rust-colored iron bacteria in the following locations:
    a. Interior left wall of the concrete drop inlet at the joint. (See photo G).;
    b. Interior left wall at the beginning of the outlet culvert. (See photo G); and
    c. Toe of embankment along the outlet's left channel. (See photo H).

**Hazard Classification: Significant**

The dam's hazard classification was evaluated in 2018/2019 and upgraded from a low to significant hazard dam based on overtopping of and related damage to NH-113.

**Condition Assessment Rating: Fair**

The dam is able to pass its design storm event, but does not have the required (1) foot of remaining freeboard and has maintenance deficiencies as identified above. Under the criteria NHDES uses to rate the condition of a dam, a dam with a condition assessment rating of Fair is one with types and/or quantities of deficiencies beyond those that may be considered as minor maintenance items. These may include, but may not be limited to, such things as tree or brush growth, surface erosion of earthen sections, leakage or seepage issues that have yet to be adequately investigated/assessed, poor vegetative cover quality, areas of non-structural deterioration to concrete, metal or timber components, moderate to high amounts of debris in the outlets or other deficiencies that are presently not deemed to affect the continued safe operation of the dam.

Should you consider performing modifications to spillways or other outlet works, regardless if such recommendations are included above, then a more in-depth analysis of the dam related to its contributing watershed, structural characteristics and hazard classification should be completed to ensure that any modifications proposed meet the design requirements consistent with current dam safety regulations. In addition, should you consider performing work that otherwise meets the definition of "reconstruction" (see below), please contact the Dam Bureau for guidance.

RSA 482:2X. "Reconstruction" means:
(a) A change in the height, length, or discharge capacity of the structure;
(b) Restoring a breached dam or one in ruins;
(c) Modification of flashboards which either increases their height or increases the headwater elevation at which the flashboards will fail; or
(d) A change in the structural configuration of a dam

You are urged to implement the recommendations listed above by the dates suggested or another schedule that aligns with your resources, and to commit to regular maintenance and monitoring of your dam. Additional information specific to dams and dam-related topics may be viewed at the NHDES website (des.nh.gov) by selecting the Water then Dams links.

If you have any questions or comments, please contact me at (603) 271-3406. You may also contact me via email at steve.n.doyon@des.nh.gov. Regular mail may be sent to the Water Division at the address listed on the bottom of the cover page.

Sincerely,

Steve N. Doyon, PE
Chief Dam Safety Engineer
Dam Safety & Inspection Section

Enclosures: 2020 Inspection Photos, Copy of 2019 VDOE Pond Level Management Plan, Copy of 2016 OMR, Blank OMR form
cc: Town of Madison
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NHDES-W-02-010

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

# Operation, Maintenance and Response Form (OMR)

Water Division, Dam Bureau

RSA/Rule: Env-Wr 303.05

For information or questions, please contact the dam owner using the information below or the New Hampshire Department of Environmental Services, Dam Bureau at (603) 271-3406.

**Dam Name and Location**

| | |
|---|---|
| Dam Name: Pea Porridge Pond | Dam# and Hazard Classification: #D149004 S |
| City/Town: Madison | Downstream watercourse: Pea Porridge Pond |

**Completed on:**

**Dam Owner**

| | |
|---|---|
| Name: Village Dist of Eidelweiss | |
| Address: | |
| Telephone #:<br>Cell #: | |
| Email: | |

**Emergency Contact** (Dam incidents or flooding)

| | |
|---|---|
| Name: | |
| Address: | |
| Telephone #:<br>Cell #: | |
| Email: | |

**Alternate Emergency Contact**

| | |
|---|---|
| Name: | Telephone #: |

**Dam Information**

| | | | |
|---|---|---|---|
| Height (ft): 17 | Length (ft): 175 | Pond size (ac): 46 | Drainage Area (sq mi): 1753.6 acres |

**Outlet Works** – Include specific information on each (sizes, dimensions, inverts, etc.)

| | |
|---|---|
| Spillway (s): | Other: |
| Gate (s): | Other: |
| Stoplog Bay (s): | Other: |

**Downstream reach** – Describe downstream roadways, dams, bridges or properties that may be in danger of flooding due to dam failure or dam operations. Include the flow rates at which these are impacted as well as minimum flow requirements.

**Operations and Maintenance Information** - Normal Reservoir Management Procedures

Describe specific operations made and reference dam features or elevations

| | | |
|---|---|---|
| Summer: | | |
| Fall: | | |
| Winter: | | |
| Spring: | | |
| Fall drawdown: Y or N | When does it begin: | Depth below normal level: |

**Normal Inspection, Maintenance and Monitoring Procedures** - Types of maintenance and frequency

| |
|---|
| |

**Incident Management and Response Information** - Flood or Dam Incident Response Procedure

Describe monitoring frequencies, operational protocols and notification of local emergency response officials and affected downstream parties.

| |
|---|
| |

List the names and information of officials and downstream parties who may be impacted by failure or releases from the dam.

| **Contact** | **Contact** |
|---|---|
| Name: | Name: |
| Address: | Address: |
| Telephone #:<br>Cell #: | Telephone #:<br>Cell #: |
| Email: | Email: |

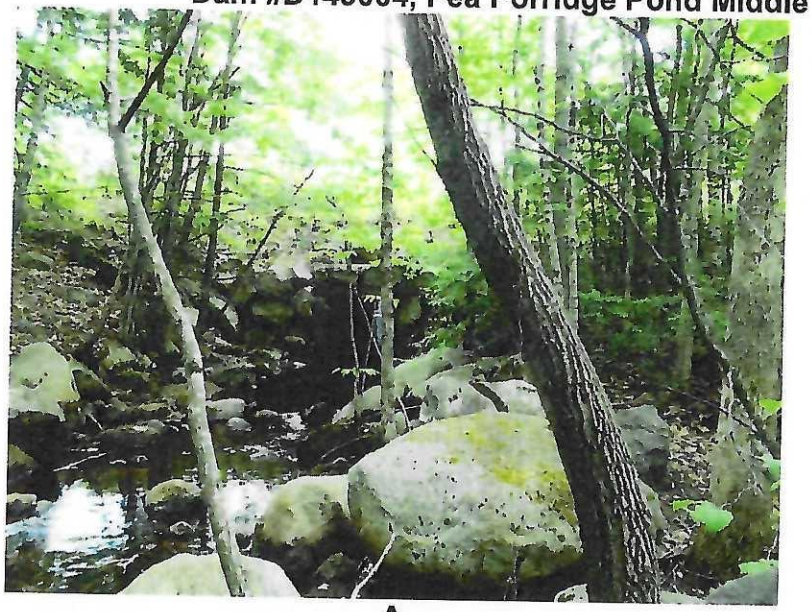
| **Contact** | **Contact** |
|---|---|
| Name: | Name: |
| Address: | Address: |
| Telephone #:<br>Cell #: | Telephone #:<br>Cell #: |
| Email: | Email: |

**Attach extra sheets with any important supplemental information needed by the response officials or NHDES.**
**This form is a quick reference guide and not intended to replace the Emergency Action Plan (EAP), if one exists.**

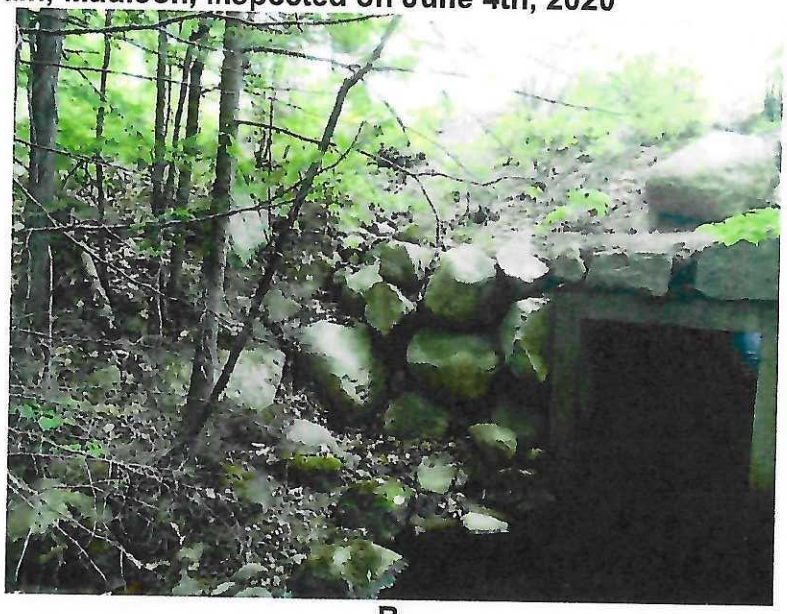
**Please send completed forms to:**
**NHDES Dams Bureau, PO BOX 95, Concord, NH 03302-0095 – or damsafety@des.nh.gov**

damsafety@des.nh.gov (603) 271-3406;
PO Box 95, Concord NH 03302-0095
des.nh.gov

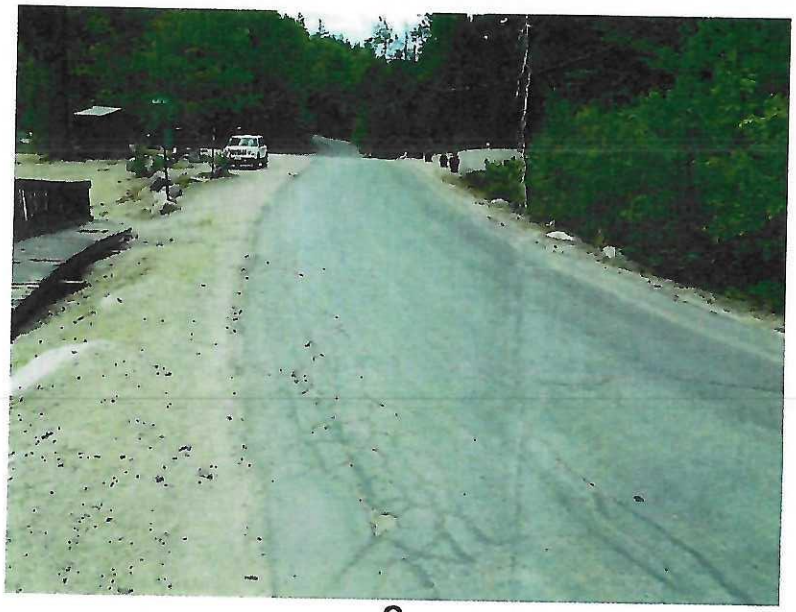
Dam #D149004, Pea Porridge Pond Middle & Little Dam, Madison, Inspected on June 4th, 2020



A



B



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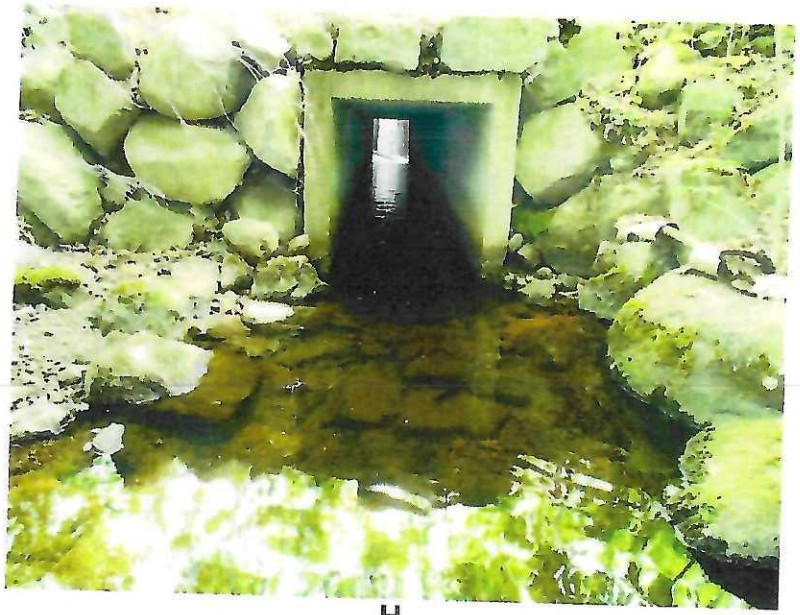
D

Dam #D149004, Pea Porridge Pond Middle & Little Dam, Madison, Inspected on June 4th, 2020

E

F

G



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# VDOE Pond Level Management Plan

Adopted – October 28, 2021

The pond level plan is to be as follows:

The VDOE manages the dam at Little Pea Porridge Pond and follows the following guidelines:

1. The VDOE is to have 4 ten-inch boards (or varying sizes for an equivalent height of 40-inches of boards) in place at all times.
2. Boards may only be removed in the case of an emergency as declared by the board of commissioners or emergency management director for the town of Madison. Or for maintenance / replacement of the dam after notifying NH Fish & Game director at least two weeks prior to said lowering for dam repair.
3. Ponds are kept as high as possible especially during drought conditions.
4. The lowest level of pond water from the top of the concrete is 4 inches below the top to insure proper operation of the dry hydrants (fire suppression).
5. If a fall draw down is necessary, it shall be performed prior to October 15th as allowed by NH state law.
6. This policy is to be reviewed every five years in conjunction with a review of all applicable local, state, and federal laws.

Commissioners:

Jay Buckley

Kathy Koziell

Michael Smith

12B
7/19/2

Please Use And For The Submittal of The Updated OMR

VDOE pond level management plan, D149004 Pea Porridge Pond Middle & Little

Adopted – 2019

The pond level plan is to be as follows:

The VDOE manages the dam at Little Pea Porridge Pond and follows the following guidelines:

1. The VDOE is to have boards of varying sizes on hand, (4) ten inch boards, (2) eight inch boards, (2) six inch boards
2. Fall draw is to begin the day after Columbus Day in October. The equivalent of two, ten inch boards are to be removed from the dam over a period of three weeks.
3. In the spring, (starting roughly April 20) the dam is to have one additional ten inch board added to the dam over a period of two weeks (so that only ten inches of board are missing from the dam). This is done to help the loons nest successfully. The remaining ten inches of boards that are missing will be place back into the dam after the loon babies are born (typically mid/late June).
4. The boards holding the water at the dam are never altered by more than 2 inches at any one time except in the case of an emergency.
5. Boards will be altered to ensure continuous and steady flow over the dam by not more than 2 inches at any one time.
6. If expected heavy rain, 2 inches of boards (except in emergency situations) are to be removed until the end of the storm and then boards are added (2 inches at a time – 2 maximum per day) to help collect water and raise the pond levels.
7. Intention is to keep pond levels as high as possible except for loon nesting time and after fall draw down to accommodate snow. Loon nesting season is typically mid-May until mid/late-June.
8. This policy is to be reviewed every five years in conjunction with a review of all applicable local, state and federal laws.
9. RSA 211:11 is to be followed. "No person shall lower the water in any stream, lake or pond without first notifying the NH Fish and Game director in writing two weeks prior... (if applicable)
10. RSA 482:13 is to be followed. "Dam owners shall not significantly lower the water level of a pond or lake..." without notifying DES and holding a public hearing.
11. The VDOE will request that the LPC install a floating loon nest on Little Pea near where the loons typically nest. If the loons use the floating nest, this plan is to be rewritten so that the ponds are kept as high as possible during loon nesting season.
12. Any commissioner can inform our office/DPW of the need to make modifications to the dam so that this policy is followed without a BOC meeting.

# Operation, Maintenance and Response Information (OMR)

DES DAM BUREAU
SEP 02 2016
RECEIVED

For information or questions, please contact the dam owner using the information below or the NH Dept. of Environmental Services, Dam Bureau at (603) 271-3406.

1. Dam and Owner/Operator Information

Completed on: 8-26-16

Dam Name Pea Porridge NH Dam Inventory # & Hazard Classification D1490004 (L)
City/Town Madison Downstream Watercourse Pea Porridge Pond

Dam Owner
Name Village Dist-Eidelweiss
Address 1682 Conway Road
City/Town/Zip Madison NH 03849
Telephone 603 367 4928 Cell
E-mail office@vdave-nh.org

Emergency Contact (Dam incidents or flooding)
Name Nancy Cole
Address 1 Chalaine View Dr
City/Town/Zip Madison NH 03849
Telephone 603 367 4928 Cell 603 [illegible] 2887
E-mail

Alternate Emergency Contact
Name Kelly Labbiteille Telephone 603-651-6070

2. **Dam Information**

Height (ft.) 17 Length (ft.) 173 Pond Size (ac.) 49
Normal Storage Capacity (ac.-ft.) 210 Drainage Area (sq. mi.) 2.74

Outlet Works – Describe the dam's discharge features, and then include specific information on each below (sizes, dimensions, inverts, etc.).

Spillway(s) ✓ Other
Gate(s) Other
Stoplog Bay(s) Other

Description of the Area Downstream of the Dam (Include information on such things as roadways, dams, bridges or property that may be in danger of flooding due to high water events, dam failure or dam operations and, if known, the flow rates at which areas begin to be impacted. Also include information on any minimum flow needs downstream.) Flows into Banfield Brook under Graeher Drive, Garison Road & Route 113. Flows checked regularly.



CSK

3. **Operations and Maintenance Information**

Normal Reservoir Management Procedures (How is the impoundment level managed throughout the course of a calendar year? Reference dam features or elevations, if possible. Describe specific operations made.)

Summer Boards added / removed as needed based on rain fall.
Fall drawdown late Fall - 2 boards removed
Winter No changes normally made during winter
Spring Levelheld for nesting loons

Do you have a fall drawdown?: Yes If so, when does it begin?: November
How deep below the normal level?: 1-2 feet

Normal Inspection, Maintenance and Monitoring Procedures (Under normal conditions, what types of and at what frequency is the dam inspected, maintained and monitored?)

As needed based on rain fall.
Monthly inspections completed to check sluiceway.

4. **Incident Management and Response Information**

Flood or Dam Incident Response Procedures (Describe the procedures employed to manage the dam during unusual conditions. Monitoring frequencies, operational protocols, and notification of local emergency response officials and affected downstream parties should be explained as applicable. Include the names and contact information of key parties and officials, including the local emergency management director, fire/police departments and downstream parties who might be impacted by releases from or failure of the dam. A cohesive communications plan is important and should result in a process that allows for the timely exchange of accurate information and a speedy response.)

Emergency Management through Town of Madison for Fire & Police.

**Contact:**
Name VDoF office; Ukasz Cale.
Address 1680 Conway Rd.
City/Town/Zip Madison NH 03849
Telephone 603-367-9222 Cell 603-738-3087
E-mail office@VDOF-NH.org

**Contact:**
Name Board of Commissioners
Address 1680 Conway Rd.
City/Town/Zip Madison NH 03849
Telephone 603-367-9222 Cell
E-mail office@vdof-nh.org

Please add additional sheets to include any supplemental information that you believe may be important for response officials or DES to know as it relates to the operation, maintenance or emergency response for this dam. Please note that this OMR form is meant to include pertinent, but limited, information for use as a quick reference and is not intended to replace the Emergency Action Plan, if one exists. (DES 06/2016)