

The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Robert R. Scott, Commissioner

Ms. Jennifer Perry
Town of Exeter Public Works
13 Newfields Road
Exeter, NH 03833

July 25, 2019
Letter of Deficiency
DSP #19-016

RE: Pickpocket Dam #D029007, Brentwood

Dear Ms. Perry:

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, inspections of the subject dam were conducted on March 7, 2018 and July 1, 2019. Based upon the results of these inspections, NHDES is issuing this Letter of Deficiency (LOD) to advise you that it believes the following deficiencies can be remedied in accordance with the deadlines indicated:

By October 1, 2019:

1. Remove the log from the spillway. (Photos: L, O & P).
2. Repair the sinkhole on the left embankment crest. (Photo: F).
3. Update the Operations, Maintenance and Response form (OMR) form included the following items, at a minimum;
 - a. High hazard classification;
 - b. Downstream area description; and
 - c. Observation and recording of seepage in the old mill foundation and adjacent to the fish ladder.
4. Remove the trees and brush from the crest, upstream and downstream portions of the embankment, within 15 feet of the spillway abutment walls and within 15 feet of the toe of the embankments. (Photos: B - E, G - N).
5. Repair the erosion and loss of material adjacent to left downstream spillway abutment wall on the left embankment section. (Photo: G).
6. Repair the erosion and loss of material, likely due to foot traffic, left of upstream wing wall on the left embankment section. (Photo: H).
7. Repair the erosion and loss of material adjacent to end of the right spillway abutment wall on the right embankment section. (Photos: N & O).

By January 1, 2020:

8. As required by RSA 482:11-a and in accordance with Env-Wr-500, the owner shall develop and Emergency Action Plan (EAP).

By June 1, 2020:

9. Engage the services of a consultant qualified in dam-related work to complete an engineering evaluation or analysis of, at a minimum, the items noted below and submit a report to NHDES. The report should include all investigation findings and include

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recommendations and a schedule for reconstruction, as warranted, to make the dam compliant with the current standards for high hazard dams. In order to insure that the selected consultant meets the requirements of Env-Wr 403.03(a)(1). NHDES recommends that you submit the resume of your proposed engineering consultant for review in accordance with Env-Wr 403.03 (a)(1) prior to contracting services.

- a. NHDES has reviewed the December 30, 2016 (Revised: December 15, 2017) VHB Dam Breach Analysis memo received by NHDES by e-mail dated January 26, 2018. NHDES met with VHB and Mr. Paul Vlasich on June 27, 2019. Many of the comments from the DRAFT February 2018 LOD have been addressed and removed from this revised LOD. NHDES has the following comments which should reviewed and addressed by your engineering consultant:

- i. The HEC-HMS model used for the dam breach evaluation was a portion of the model used to evaluate the downstream Exeter Great Dam D082001 and was reviewed and revised by the consultant using Atlas 14 rainfall and distribution and is suitable for use in the dam breach analysis;

- ii. Inundation maps;

1. Layout of maps is difficult to use;
2. Sunny day inundation limits difficult to see through 100-yr shading;
3. Edge of 100-yr breach inundation limits not distinct;
4. Potential high or significant hazard impacts;
 - a. No elevation information, contours, etc. included on maps or tables for residence located northeast of Powder Mill Road and shown surrounded but not flooded by the 100-yr inundation breach limits on Maps 2-4 and 2-5. This residence is located within the FEMA floodway and 100-yr flood hazard zone;
 - b. Residence/building at Green Gate Hall is shown on the edge of the 100-yr inundation breach limits on Map 2-11. This structure is partially located within the FEMA floodway and 100-yr flood hazard zone;
 - c. No elevation information included on maps or tables for residence located north of the Exeter River and west of Court Street and shown surround and possibly flooded by the 100-yr inundation breach limits on Map 2-10. This residence is located within the FEMA floodway and 100-yr flood hazard zone; and
 - d. No elevation information included on maps or tables for residence located south of the Exeter River and west of Court Street and shown flooded by the 100-yr inundation breach limits on Map 2-10. This residence is located within the FEMA floodway and 100-yr flood hazard zone.

- b. The hydrologic model referred to in item 9 a.i. indicates that the dam does not have sufficient discharge capacity to pass the runoff generated by the 2.5 x 100-year event required for a high hazard dam [Env-Wr 303.11 (a)(3)]. As such, a more detailed assessment of the watershed hydrology will likely be required for

use in designing reconstruction of the dam to pass this event with a minimum of one foot of remaining freeboard and without manual operations.

By June 1, 2022:

10. Submit an application for reconstruction of the dam, or a plan to otherwise comply with Env-Wr 303.12. Permits from other programs, including NHDES' Wetlands Program may be required.

By December 1, 2025:

11. Complete the reconstruction of the dam.

As part of the most recent inspection, NHDES completed detailed assessments related to the hydrology of the contributing watershed and the hydraulic capacity of your dam. Further, we performed a review of the areas downstream of the dam in order to reassess the dam's current hazard classification. The observations and recommendations in this LOD include the findings related to these more detailed analyses.

Please note that under New Hampshire's state statute RSA 482:89, NHDES may commence proceedings to levy fines of up to \$2,000 per violation per day against a dam owner who does not respond within 45 days of receipt of a written order, directive, or any notice of needed maintenance, repair, or reconstruction issued by NHDES. To avoid proceedings under this provision, you **must respond** to this LOD. If you fail to return this form within 45 days or fail to otherwise respond in writing within 45 days indicating your intent to remedy the identified deficiencies, you will not have the benefit of the compliance deadlines indicated on the form and NHDES will commence a proceeding under RSA 482:89 to seek administrative fines for the identified deficiencies. Please note that responding as required does not preclude NHDES from pursuing other appropriate action for the identified deficiencies, in accordance with NHDES Compliance Assurance Response Policy, available on-line at <http://des.nh.gov/organization/commissioner/legal/carp/index.htm>.

We believe the easiest way to respond is to sign and return the attached "Intent to Complete Repairs" form, either agreeing to correct the identified deficiencies by the dates indicated OR by proposing amendments to the listed work items or dates, which you may do by writing directly on the form. NHDES will evaluate and respond to any reasonable requests for proposed amendments in a timely manner. We have enclosed a self-addressed stamped envelope for you to return this form. You may also scan and e-mail the completed form to damsafety@des.nh.gov or fax it to (603) 271-6120.

Our intent in issuing this LOD is to make you aware of items that require your attention to ensure the continued safe operation of your dam. It is our hope that, through the return of the attached form and correction of the identified deficiencies, you will develop and maintain a commitment to keeping a safe and well-maintained dam.

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If you have any questions or comments regarding this LOD or would like to be present at future inspections, please contact Jim Weber, P.E. at 271-8699 or me at 271-3406 or write to the address for the Water Division listed on the bottom of the cover page.

Sincerely,



Steve N. Doyon, PE
Administrator
Dam Safety & Inspection Section

Attachments: Photos, Aerial, Copy of 2014 OMR, Blank OMR form, DB8, DB13
cc: NHDES Legal Unit
Town of Brentwood

Certified #7016 1970 0000 4865 8413
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Dam# D029007, Pickpocket Dam, Brentwood, Inspected: 03/07/18



A



B

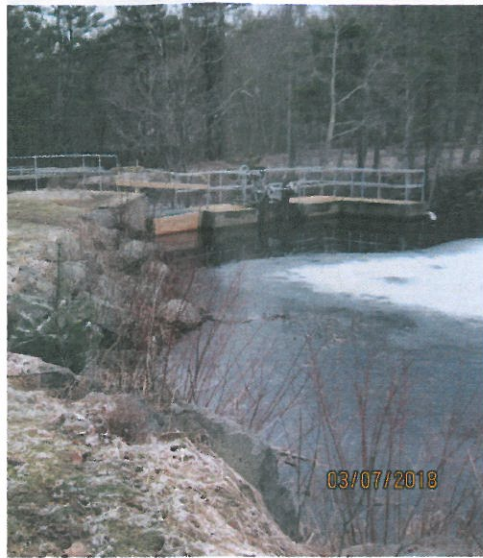


C



D

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E



F



G



H

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I



J

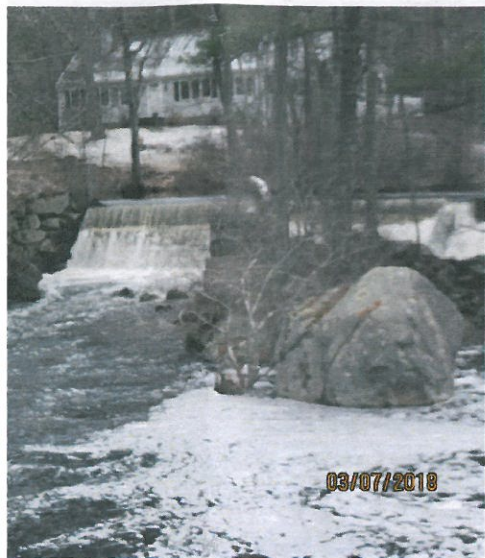


K



L

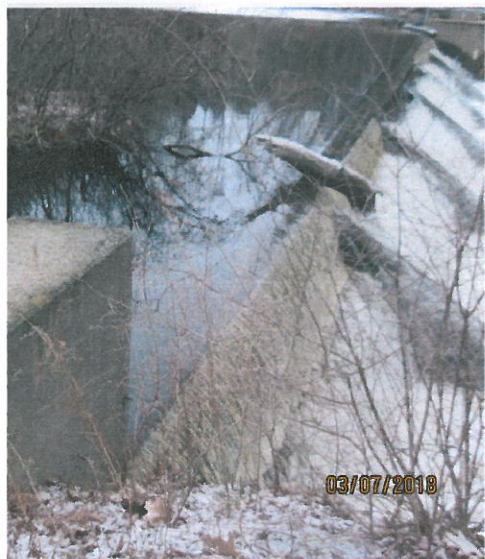
Dam# D029007, Pickpocket Dam, Brentwood, Inspected: 03/07/18



M



N



O



P

D029007 Pickpocket Dam - Inspected 03/07/2018

Left

All references of left and right are facing in the downstream direction



Right

No Scale