



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ENGINEERING & CONSTRUCTION
BUREAU OF DAM SAFETY & FLOOD CONTROL
Mail Code 501-01A

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CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

APR 05 2012

Rock Ridge Community Club
Attn: John Murray
P.O. Box 242
Denville, NJ 07834

Re: Rock Ridge Lake Dam, NJ File No. 25-134
Denville Township, Morris County

RECEIVED APR 06 2012

Dear Mr. Murray:

This is in reference to the Regular Inspection Report and the Concept Design Report submitted under the November 10, 2010 and November 17, 2010 cover letters from Greenman-Pedersen Inc for the above referenced dam.

Based upon a review of the Inspection Report, the above-referenced dam was found to be in a poor condition with a permit submission necessary.

A Dam Safety Compliance Schedule Form was not submitted with the Inspection Report. Since the previously established due dates have passed, the Bureau of Dam Safety and Flood Control (Bureau) has assigned the following dates for the required items:

A permit application must be submitted by **December 31, 2012**, and construction must start no later than **6 months** after the permit is issued for rehabilitation. Updated inundation mapping for the proposed dam configuration must also be submitted before construction begins.

At this time, you should proceed to implement the recommendations as presented in the report by your engineer. Maintenance work such as grass mowing, brush and debris removal, minor concrete repairs, minor erosion repairs, gate maintenance, etc. may be undertaken without further approval by the Department. The Bureau of Dam Safety and Flood Control must approve any repairs that are not considered general maintenance. Please note the next Regular Inspection for this dam must be conducted by **October 2012**.

Based upon a review of the 2010 Concept Design Report, the revised hydrology demonstrated that the Significant Hazard Classification and the 100-year rainfall event for the spillway design storm (SDS) are still appropriate for the Rock Ridge Lake Dam. Per the submitted

model the 100-year storm will result in an inflow to Rock Ridge Lake equal to 1,039 cfs. The existing spillway is currently not capable of safely passing the 100-year design storm with the required freeboard. You must proceed to final design of modifications to safely pass the outflow produced by the SDS and all other applicable dam safety standards.

Please be reminded that your dam has been approved for a reduction of the spillway design storm (SDS) from the SDS as required by the New Jersey Dam Safety Standards, N.J.A.C. 7:20-1.9(a) for a Significant Hazard (Class II) Dam. This reduction is permitted under the Standards (N.J.A.C 7:20-1.9(b)) based upon quantitative and relative impact analysis which shows that failure of the dam concurrent with the selected SDS would not result in additional damages beyond the damages which occur as a result of the flood without the failure of the dam.

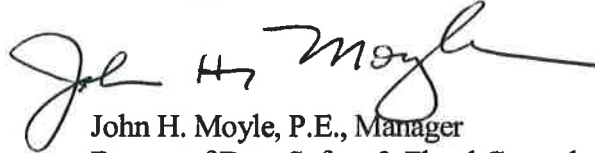
Dredging within the lakebed area and/or changes in land use downstream of the dam within the inundation area may render the reduction unacceptable in the future. Future formal dam safety inspections (required once every 10 years) must reevaluate the dam, lakebed and watershed areas with respect to this reduction to assure that the reduction is still warranted. If changes in the land use render the reduction unwarranted, it will be the responsibility of the dam owner to modify their dam to provide additional spillway capacity. **Prior to issuance of a Dam Safety Permit for the rehabilitation of the dam incorporating the reduced SDS, the owner must provide written acknowledgement of this responsibility.**

The submitted 2010 Concept Design Report included a preliminary design. Please be aware that an alternative design should be utilized to rehabilitate the dam for the following reasons:

1. The proposed design utilizes loose riprap to protect the dam from erosion during an overtopping event. Please be aware the Bureau generally does not accept riprap as an appropriate overtopping protection material. It is highly recommended that your engineer provide a strong justification for the use of riprap for the Bureau to review and approve before proceeding to design. Alternatively, more traditional overtopping materials could be specified such as concrete, articulated concrete block or grouted rip-rap.
2. The dam is required to safely pass the spillway design storm with one foot of freeboard. The proposed design provides less than one inch of freeboard. Providing 0.05 feet of freeboard for the proposed dam rehabilitation is not acceptable and the freeboard waiver must be denied.
3. The proposed design increases the frequency of overtopping at a downstream dam and road. Please revise the conceptual design to better match existing hydraulics.

Should you have any questions regarding this matter, please contact Sarah Hatala of this office at (609) 984-0859.

Sincerely,

A handwritten signature in black ink, appearing to read "John H. Moyle". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

John H. Moyle, P.E., Manager
Bureau of Dam Safety & Flood Control

C: Denville Township Engineer and Clerk
Morris County Engineer
Valerie A. Hrabal, P.P., P.E., Greenman-Pederson, Inc.

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