



# State of New Jersey

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

PHILIP MURPHY  
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*Commissioner*

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*Lt. Governor*

PO Box 420, Trenton, NJ 08625-0420  
Telephone: 609-984-0859 Fax: 609-984-1908

**MAY 21 2019**

NJ Transit Corporation  
Attn: Lisa L. Fanning, P.E.  
One Penn Plaza East  
Newark, New Jersey 07105-2246

Lake Estling Corporation  
Attn: Michael DeAngelis  
PO Box 281  
Denville, NJ 07834

Re: Lake Estling Dam  
NJDEP Dam File No. 25-169

Dear Owner/Operator:

This is in reference to the Updated Hydrologic and Hydraulic Analysis Report prepared by Joseph J Skupien, P.E., and submitted under a January 7, 2019 letter prepared by Lisa L. Fanning, P.E. of NJ Transit for the Lake Estling Dam located within Denville Township, Morris County.

The Updated Hydrologic and Hydraulic Analysis (H&H) reevaluates the dam(s), lakebed and watershed areas to assure that the previously approved reduction in spillway design flood is still warranted for the Lake Estling Dam. The Updated H&H was reviewed in conjunction with our existing files for the Lake Estling Dam and the three other dams (Openaka, Shongum, and Den Brook) in the watershed. Based on the findings of the report and your engineer's recommendation, the Division of Dam Safety & Flood Control (Division) has determined that the H&H study is acceptable and concurs with your engineer's recommendation which indicates that the previously approved reduction in spillway design storm to the half-probable maximum precipitation is still valid. Also, the report demonstrates that the Lake Estling Dam does not have sufficient spillway capacity to safely handle this spillway design flood (SDF). As such, the preliminary engineering design phase should include plans to increase the existing capacity of the Lake Estling Dam spillway structure to handle the SDF, which procures a peak inflow to the lake of 13,847 cfs.

It should be noted that this reduction of SDF was permitted under the Dam Safety 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 SDF would not result in additional damage beyond the damage which would occur as a result of the flood without the failure of the dam.

Dredging within the lakebed and/or changes on land use downstream of the dam within the inundation area may render the reduction unacceptable in the future. Future formal dam safety inspections must evaluate the dam, lakebed, and watershed areas with respect to this reduction. If changed 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.

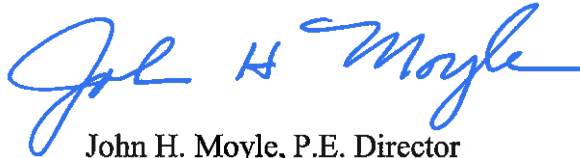
At this time, modification to the dam structure to increase the existing hydraulic capacity of the Lake Estling Dam is necessary. Prior to approval of plans and specifications for the rehabilitation

of the dam incorporating the reduced SDF, the owner of the dam must provide written acknowledgment of this responsibility (enclosed).

In accordance with the approved 2019 Compliance Schedule, the Probable Failure Mode Analysis and Spillway and Embankment Stability Evaluation are schedule to be submitted July 31, 2019.

Should you have any questions regarding this matter, please do not hesitate to contact Jillian M. Lawrence of this office at (609) 984-0859.

Sincerely,



John H. Moyle, P.E. Director  
Division of Dam Safety and Flood Control

Encl: SDF Reduction-Owner Responsibility Acceptance Letter

C: Denville Township Engineer & Clerk  
Morris County Engineer  
Joseph J Skupien, P.E., SWM Consulting, LLC

## Sample Spillway Design Flood (SDF) Reduction - Owner Responsibility Acceptance

New Jersey Department of Environmental Protection  
Bureau of Dam Safety and Flood Control  
501 East State Street  
P.O. Box 419  
Trenton, NJ 08625-0419

Attn: John Moyle, P.E., Manager

Re: (Name of dam) Dam  
NJ File No. (NJ File No.)  
Spillway Design Flood Reduction Acceptance

Dear Mr. Moyle:

This is in reference to the reduced spillway design flood (SDF) for (Name of Dam) as approved in the Bureau's Letter dated (Date of Approval Letter). I, (Name of the owner/operator or their group) as the owner of (Name of Dam) Dam acknowledge the responsibility set forth below:

- Dredging within the lakebed area and/or changes in land use downstream of the dam within the inundation area may render the reduction unacceptable for 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 (Owner/Operator's Name or their group) to modify (Name of Dam) to provide additional spillway capacity.

If you should have any further questions or need clarification in the above matter, please contact me at (Owner/Operator's phone number).

Sincerely,

(Owner/Operator's name),  
(Affiliation)