

Dam Safety E-Newsletter



NJDEP BUREAU OF DAM SAFETY
Engineering and Construction



Fall 2017

100% Compliance Achieved for High Hazard Dam Emergency Action Plans

Every Class I - High Hazard Dam in New Jersey currently has an Emergency Action Plan (EAP) on file with the Division of Dam Safety and Flood Control. This is a milestone for the Department and a great improvement for emergency preparedness with regard to dam safety. The Division urges owners of all High Hazard Dams to exercise their EAP regularly and maintain current contact information. Establishing lines of communication and relationships with local and county emergency management personnel prior to an emergency will promote effective and efficient responses during dam emergencies.

Critical Infrastructure Security and Resilience Month

November is Critical Infrastructure Security and Resilience Month, a nationwide effort to raise awareness and reaffirm the commitment to keep our Nation's infrastructure secure and resilient. Managing risks to our critical infrastructure involves preparing for all hazards, evaluating the current and future resiliency of infrastructure, and staying vigilant and informed. This past hurricane season has clearly demonstrated how much we rely on our Nation's critical infrastructure, and how devastating it can be to communities without some of the basic goods and services we come to rely on. A strong relationship between the public and private sector is needed to ensure the safety and well-being of our State, including the safety of our dams. Dam safety stakeholders must all play an active role in keeping our dams strong, secure, and resilient. This month, everyone can do their part at home, at work, or in the community by educating others, incorporating safety practices into their daily lives, remaining vigilant, and reporting suspicious activity when present. Please visit the Department of Homeland Security website to learn more at <https://www.dhs.gov/cisr-month>.

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"Dam Owners Academy" Webinar Series - Free Online Class! (click [here](#) for flyer)



A series of free webinars is being developed by the Dam Owner Outreach Committee of the Association of State Dam Safety Officials (ASDSO). The pilot episode will be aired live on November 28, 2017 and recorded for an archive library which will include 12 to 15 one-hour classes when fully complete. The topic of the pilot episode is the "Dam Intervention Toolbox". To join the live presentation, participants must register in advance via the ASDSO website Learning Center - click [here](#) to register (ASDSO membership is not required).

DAM OWNERS ACADEMY

E-learning curriculum presented by the Association of State Dam Safety Officials

Highlights from the July 2017 Dam Owners Workshop

The Bureau of Dam Safety, in conjunction with the Association of State Dam Safety Officials (ASDSO) hosted a dam safety workshop for dam owners and operators at the College of New Jersey on July 25. About 50 attendees including dam owners, dam operators, and engineering consultants spent the day learning about dam safety and the New Jersey Dam Safety Program. The workshop attendees were impressed with the amount of information they obtained from the presenters. The Bureau looks forward to future workshops and needs your help to spread the word about the importance of Dam Safety in New Jersey! Details on future dam safety workshops will be posted on the Bureau's website at www.nj.gov/dep/damsafety/.



Highlights from the 2017 National Dam Safety Conference



This year's National Dam Safety Conference took place the week of September 10 in San Antonio, Texas. The conference attracted approximately 850 attendees and guests from 49 states and Washington, DC, plus international attendees from Australia, Canada, France, Great Britain, Israel, Peru, and Thailand. One of the featured sessions of the conference was entitled Lessons Learned from the Oroville Dam Spillway Incident. A comprehensive list of speakers included representatives from the California Division of Water Resources, the Failure Investigation Team, and other key players. The speakers provided a thorough presentation of the facts leading up to and during the event, as

well as discussed their roles and thoughts on lessons learned from the incident. Details of the conference proceedings can be found at <https://damsafety.org/basic-page/dam-safety-2017-agenda>.

Dam Safety Loan Program Update

The Department recently held an application period for the Dam Restoration Loan Program. The Dam Restoration Loan Program provides loans to assist local government units, private lake associations or similar organizations, and owners of private dams for dam restoration projects. From the applications received, 15 dam rehabilitation projects have been recommended to be funded for a total of approximately \$17 million. Included in the funding are three high hazard dams, ten significant hazard dams and two low hazard dams. Upon approval of a bill to appropriate the funding by the NJ State Legislature, the Department will enter into loan agreements with the loan recipients for the design and construction necessary to complete the projects.

“Since the inception of the Dam Restoration Loan Program, 80 dams have been rehabilitated or removed at a total cost of approximately \$60 million”

The Dam Restoration Loan Program was developed as part of the “Dam, Lake, Stream, Flood Control, Water Resources, and Wastewater Treatment Project Bond Act of 2003.” The fund, developed pursuant to the bond act, is a revolving fund. Loan repayments are deposited into the fund for future use. From time to time as monies are available in the fund, the Department opens application periods to accept new projects for funding. Projects to be funded are selected based upon a priority ranking procedure and the amount of monies available at the time.



Verona Lake Dam - Verona, NJ

Since the inception of the Dam Restoration Loan Program, 80 dams have been rehabilitated or removed at a total cost of approximately \$60 million. An additional 18 dams estimated at approximately \$30 million have been authorized for funding and are in the final design phase prior to construction.

At this time, it is estimated that the Department will be able to open the next application period in late 2018 or early 2019. The Notice of Availability of Loan Funds and Application Deadline will be published in the New Jersey Register and on the Bureau of Dam Safety Web Site when available.

To learn more about the Dam Restoration Loan Program, please visit the Bureau's Grants and Loans web site at <http://www.nj.gov/dep/damsafety/engineer.htm>.



Lake Lenape Dam - Andover, NJ

Technical Design Topic: Trash Racks

Trash racks are an important part of design for pipe and riser or drop inlet spillway structures on dams, as well as some low level outlet systems. A trash rack should be designed to prevent large debris from entering the spillway and/or obstructing flow to the spillway while facilitating the passage of smaller debris such as leaves and twigs. If a trash rack can easily clog with debris, the restriction of flow may cause the dam embankment to overtop, resulting in damage or even failure of the dam. A few common mistakes in the design of trash racks include grate or bar openings that are too small and trash racks placed horizontally below the design storm water surface elevation. To reduce clogging potential, the Bureau recommends that all trash racks have, at a minimum, 6-inch by 6-inch openings and angled sides extending below the normal water surface elevation of the impoundment. For larger conduits and/or drop inlet boxes, the optimal design for trash rack openings may be greater than 6 inches. The angled sides of the trash rack will allow debris to slide up to a higher elevation on the rack during high flow events without significantly impacting spillway capacity. For further guidance or assistance with specific trash rack applications and design references, please consult with Bureau engineers.



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TRASH RACKS

- ⇒ Minimum 6-inch openings
- ⇒ Angled sides that extend below normal water surface elevation



Extension Requests

Under certain circumstances, it can be both practical and necessary to extend established deadlines for permit applications, engineering studies, and other dam safety related document submissions. However, in the interest of administering the dam safety program effectively and impartially, the Bureau will not grant extensions without adequate reason. The Bureau wishes to remind all dam owners and engineers who require an extension of time for submissions that proper justification is mandatory to obtain approval from the Bureau for the extension.

ASDSO Northeast Regional Conference: Save the Date! June 4 - 6, 2018

The Association of State Dam Safety Officials Northeast Regional Conference will be in Lancaster, PA in June 2018. Stay tuned for more information regarding registration and agenda topics at <http://damsafety.org>.

JUNE 2018

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3	★4	★5	★6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
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New Jersey Department of Environmental Protection

BUREAU OF DAM SAFETY

Helpful Dam Safety Links

[Association of State Dam Safety Officials](#)

[FEMA - National Dam Safety Program](#)

[Responsible Dam Ownership](#)

[Bureau of Reclamation - Dam Safety Program](#)

[Living With Dams](#)

[U.S. Army Corps of Engineers](#)

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