



5 Minute Break



Maryland
Department of
the Environment

Questions & Answers from Today's Workshop

AGENDA, March 16, 2021

- 10:00 – 10:20 Introductions and Opening Remarks - Jennifer Smith
- 10:25 – 11:55 Hiring a Dam Engineer - Hal Van Aller
- 11:00 – 11:30 Lessons Learned from the FEMA HHPD Grant Program – Visty Dalal
- 11:35 – 12:10 Permitting Process 101 – John Roche
- 12:15 – 12:35 Dam Ownership and Enforcement Issues – Hira Shrestha
- 12:40 – 12:55 Safety Issues at Dams – Kelly Flint
- 1:00 – 1:30 Dam Safety Guidance Documents – John Roche
- 1:35 – 2:00 Closing Remarks and Q&A – Raymond Bahr



Harrington Manor Lake Spillway

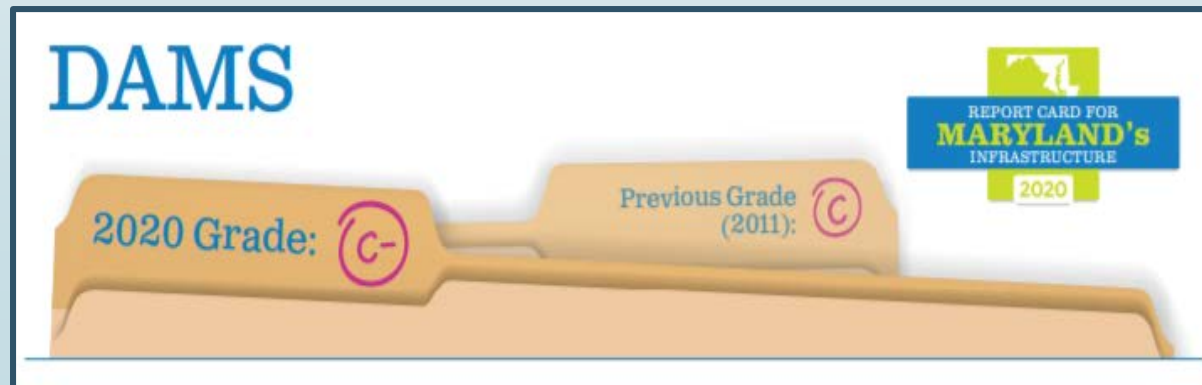


Dam Safety News and Notes

- We will be posting the presentations within a few days of the event, and hopefully a video recording as well
- We cannot offer PDH Certifications, but will provide a Certificate of Attendance if you wish to self-certify for PDH credit
- Maryland Dam Safety Program will provide a Frequently Asked Questions (FAQ) document from today's proceedings

ASCE Report Card of Maryland's Infrastructure

- Maryland Dams Infrastructure “C --”
 - Often the “overlooked” infrastructure
 - In critical need of the public’s awareness
 - As dam owners you are important in helping us get the message out



The figure is a report card titled "Maryland's ASCE 2020 INFRASTRUCTURE REPORT CARD". It contains a table with 12 rows of infrastructure categories and their corresponding grades, plus an overall grade at the bottom.

Category	Grade
Aviation	B-
Bridges	B
Dams	C-
Drinking Water	C
Energy	C-
Ports	B-
Rail	C+
Roads	C
Solid Waste	B-
Stormwater	C
Transit	D+
Wastewater	C+
Overall G.P.A.	C

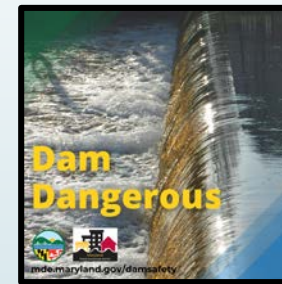
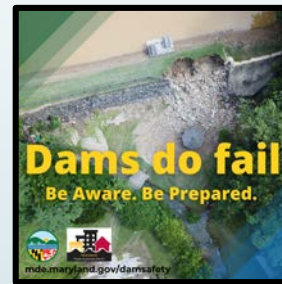
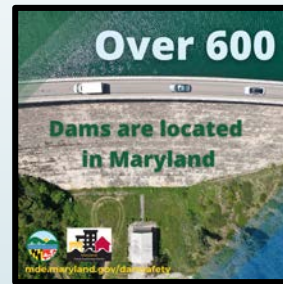
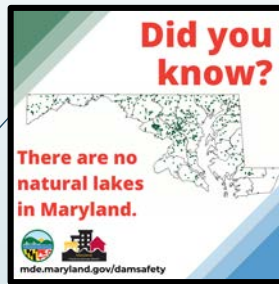
A decorative graphic on the left side of the slide. It features a dark blue vertical bar on the far left. A black arrow points to the right from the top of this bar. Several thin, light blue lines curve downwards and to the right from the bottom of the arrow, creating a sense of movement and design.

Recommendations to Raise the Grade

1. Dedicate and fully fund state and federal programs for the rehabilitation and repair of high and significant hazard dams
2. Provide greater resources for MDE to educate dam owners about the importance of performing the necessary dam operation and maintenance activities
3. Increase the amount of public education to dam owners to increase the number of updated and exercised EAPs
4. Promote more frequent inspections and maintenance of high and significant hazard dams

Dam Safety News and Notes

- April is Flood Awareness Month
 - Look for an announcement in early April from Governor Hogan



- Sediment, Stormwater, and Dam Safety Week
- Hurricane Season is Coming
 - Tuesday June 1, 2021 -- Tuesday November 30, 2021

National Dam Safety Awareness Day

May 31, 2021

On May 31, 2021, the Department is joining together to commemorate *National Dam Safety Awareness Day*. On this day, we remember the lessons learned from past dam failures, push for strong dam safety programs, *encourage investment in America's critical infrastructure* and rededicate ourselves to the effective public-private partnerships that work to keep America's dams safe, operational, and resilient.



Exercise Your Dam's Emergency Action Plan

- Required once every five years (Spring 2022)
- New National Weather Service contact information
- Dam Safety's Model EAP is updated and online (May 1)

Emergency Action Plan Template

The Dam Safety Division has modified the national "Model Emergency Action Plan" which was the outcome of a multi-agency work group initiated in 2004 by the USDA Natural Resources Conservation Service (NRCS) and the Association of State Dam Safety Officials (ASDSO). The Maryland-specific template documents are available at the following hyperlinks in Microsoft Word format. Note that the former individual templates for High or Significant Hazard dams have been combined into a single document that applies to both hazard classes.

[EAP Template \(2021\)](#)

A description of the template documents, as well as helpful tips for EAP generation, review and updates is available in the following document:

[Instructions and Helpful Tips for Preparation of Emergency Action Plan](#)

Tools and Resources in 2021 and Beyond

- Dam Safety **Technical Bulletins**
- Regulatory Updates** that focus more squarely on Dams
- FEMA and CBP Grants** for
 - High Hazard Potential Dams** – Federal funding and hazard mitigation plans
 - Dam Inundation Zone Mapping** – Consistent Statewide information and EAP
 - Probable Maximum Precipitation** – Design capacity and criteria
- Make Dam Safety Program’s Website** one of your favorites, and make sure that you are signed up to receive our **Newsletters**
- <https://mde.maryland.gov/programs/Water/DamSafety/Pages/index.aspx>

Maryland Dam Safety Update

Issue 6, December 2020

Dams provide many benefits for Maryland's citizens; however, dams can also be a great threat to the safety and well being of downstream property and people if they are not properly constructed or maintained. Maryland has been assuring the safety of dams since 1834.

Federal Funding Aids Maryland's Dam Safety Program

The Maryland Department of the Environment's (MDE) Dam Safety Program (DSP) spent considerable time and energy in 2020 to pursue grants that will help aid the implementation of the DSP and assist dam owners. Some notable grant awards are listed below.

The Environmental Protection Agency's Chesapeake Bay Regulatory and Accountability Program awarded the MDE DSP \$54,000 to create a state-specific probable maximum precipitation (PMP) study, which will replace the NOAA Hydrometeorological report (HMR 51/51) with data through 2020. Impacts from climate change, including heightened nutrient and sediment loads to the Chesapeake Bay. Output from this project will be used to improve the design of larger dam embankments, control structures, and spillway components making them more resilient to extreme precipitation storm events, and helping to sustain nutrient reductions from these impoundments into the future.

The Federal Emergency Management Administration's (FEMA) Pre-Disaster Mitigation Program awarded Maryland's DSP \$110,850 to develop a dam failure inundation mapping set for all dams in the state. Output from this project will enhance the dam failure sections of local hazard mitigation plans by providing risk and vulnerability assessment information generated by DSS-WISE Lite, a FEMA-developed program specifically designed to identify risk, assess vulnerability, and determine the effects of dam failure. The inundation maps will be public domain products and will be available to the public through MDE's Flood Risk Application, also known as the "Maryland DFIRM Outreach tool" (www.mdffloodmaps.com).

FEMA's High Hazard Potential Dams Program (HHPPD) awarded Maryland \$274,167 to assist eligible dam owners in their planning, design, and construction efforts. The eligible rehabilitation activities will reduce dam risk and increase community preparedness. As part of this application, MDE worked with the Maryland Emergency Management Administration (MEMA) to update Maryland's Dam Safety Hazard Mitigation Plan and rank Maryland's High Hazard Potential Dams for funding under this program. Funding of individual dam projects is pending at this time.

MDE in coordination with Maryland Department of Transportation (MDOT) is currently applying for \$885,000 through FEMA's Building Resiliency Infrastructure and Communities (BRIC) Program. Maryland's BRIC proposal focuses on developing new tools and resources based on current climate science for better understanding the hazards that state and local government agencies will need to address. Potential outputs from this project if accepted include the completion of Maryland-specific PMP study (partially funded by CBRAF), an update of Atlas 14, further development of the Resiliency Partnership Resource Website and Climate Change Vulnerability Viewer, and the creation of a real-time weather application.

Inside this issue

- 3 Proposed Regulatory Change
- 5 Dam Safety Guidance Documents
- 9 Emergency Action Plans: Important Updates and Reminders

mde.maryland.gov/damsafety

Maryland Dam Safety: A Year* in Numbers

Data from January 1 through November 30

9 Staff

627 DAMS

15,000+ small ponds

102	148	358
High	Significant	Low
19 Breached		

170 DAMS INSPECTED

75% HIGH HAZARD DAMS INSPECTED

87

Permit Applications Received

19

Permits Issued

83

Permit Exemptions Issued

Dams with EAPs in Compliance

76% Dams with EAP Exercise in Past 5 Years

36%

11 EAPs were exercised in 2020. Exercises conducted in Washington and Howard Counties

13 EAPs were activated in 2020. Four low hazard dams/small ponds failed or nearly failed

ASDSO Scholarship

The application for the 2021/2022 ASDSO Undergraduate Student Scholarship is [now available](#). Scholarships have ranged from \$5,000 to \$10,000 in recent years. Successful recipients must be U.S. citizens and enrolled full-time at the senior level (during the 2021/2022 school year) in an accredited civil engineering program or a related field as determined by ASDSO. Students must also demonstrate an interest in pursuing a career in hydraulics, hydrology or geotechnical disciplines, or another discipline related to the design, construction, and operation of dams. Applications are due March 31, 2021.

USSD Scholarship

The application for the 2021 USSD Student Scholarship is [now available](#). The scholarship award is given annually to students whose academic program and research studies have the potential to develop practical solutions to design and construction challenges related to dams and levees. Applicants must be U.S. citizens or permanent residents enrolled in U.S. academic institutions. Applications are due March 1, 2021.

USACE Levee Safety Program Draft Policy

The USACE has been working to address the comments made on the draft Levee Safety Program, Engineer Circular, and a revised draft is now available. You can find the updated document [here](#). Should you have feedback on or questions about this revised draft, please email EC218@usace.army.mil.

Dam Safety News and Notes

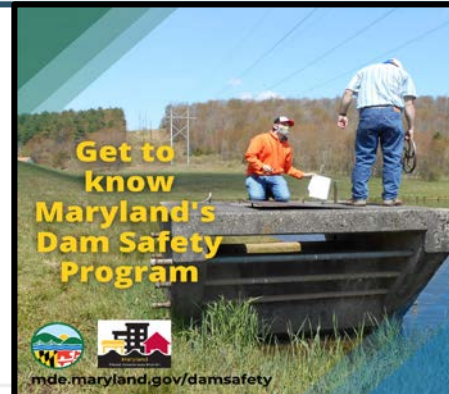


**REGULATORY AND
COMPLIANCE
ENGINEER/ ARCHITECT
SENIOR**

21-004593-0001

Baltimore
City

MDE - Water
and Science
Administration
(WSA)



Friday,
March 19,
2021 5:00
PM



AGENDA, March 18, 2021

- 10:00 – 10:10 Introductions - Jennifer Smith
- 10:15 – 11:00 Basics of Geotechnical Investigations – John Roche
- 11:05 – 11:50 Overtopping Protection 101 – Scott Bass
- 11:55 – 1:00 Construction 101 – Charlie Wallis
- 1:05 – 1:35 Introduction to Maryland PMP Update – Scott Bass
- 1:40 – 2:00 Closing Remarks and Q&A – Raymond Bahr

Manager
Stormwater, Dam Safety
Boulevard



Raymond P Bahr
Deputy Program

Sediment,

1800 Washington

All Photos MDE unless otherwise noted

Baltimore, Maryland