

National Dam Safety Concerns

Genesis

Thousands killed in US by dam failures in late 1800s and early to mid 1900s

Federal law in 1972 required USACE to inspect dams

- 70 Mississippi dams inspected from 1977-1980



Johnstown, PA flood from South Fork Dam, 1889



Mississippi Dam Safety Program

Beginning in 1978

Mississippi's Dam Safety Program formed in 1978, when Section 51-3-39 required any person or entity to obtain permit to construct, enlarge, repair, or alter a dam.

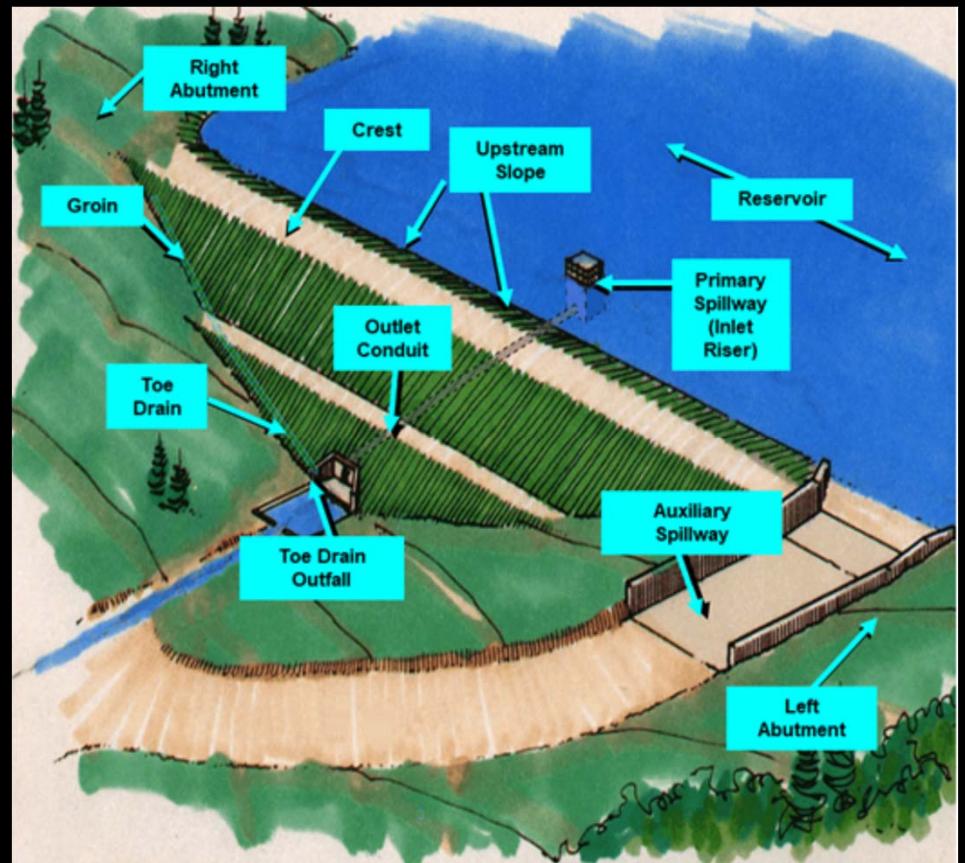
Must obtain permit prior to commencement of any site work related to the project.



Mississippi Dam Safety Regulations

What dams are “**exempt**” from written authorization in Mississippi?

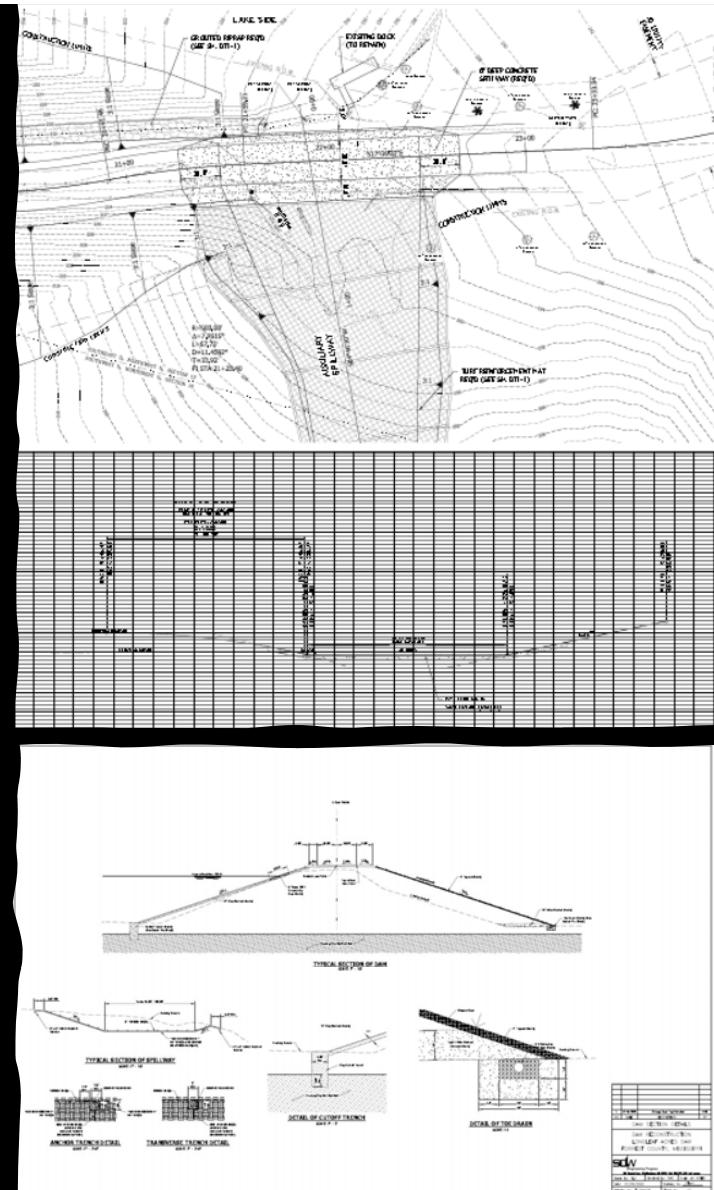
- ❖ **8 feet or less in height** regardless of storage volume
- ❖ a dam that impounds **25 acre-ft or less** at maximum storage
- ❖ A dam that does not impound a watercourse with a continuous flow of water as determined by the Commission.



Mississippi Dam Safety Program

Responsibilities

- Determine hazard classifications of dams
 - High
 - Significant
 - Low
 - Maintain an inventory of dams in the state
 - Review and approve all plans and specifications to construct new dams or modify existing dams



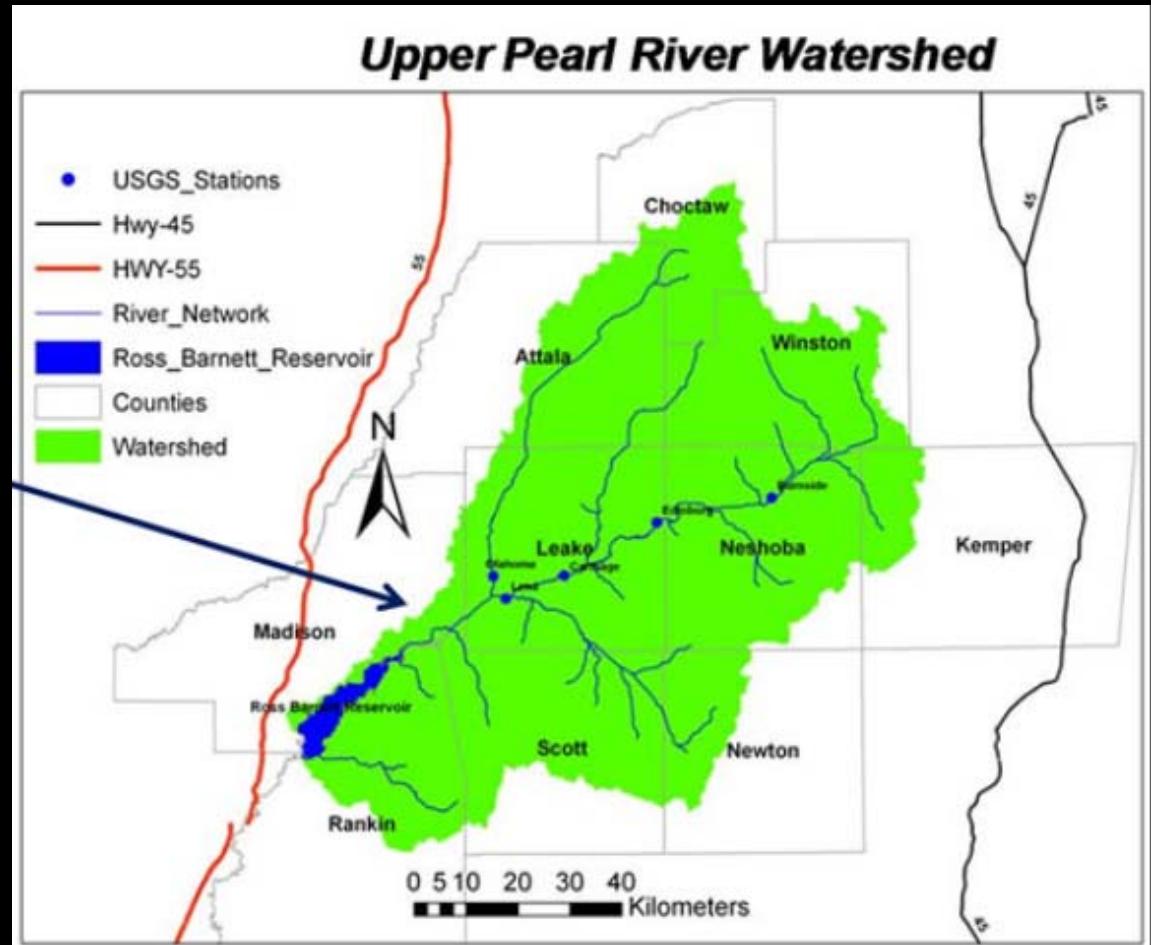
Mississippi Dam Safety

Design Reviews

Where is the water coming from?

Staff utilizes models to simulate Hydraulics & Hydrology (H&H) models to evaluate dam spillway designs to ensure proper flow.

This ensures that the dam will not overtop and fail during major storm events.



Mississippi Dam Safety

Design Reviews – Where is the water going to?

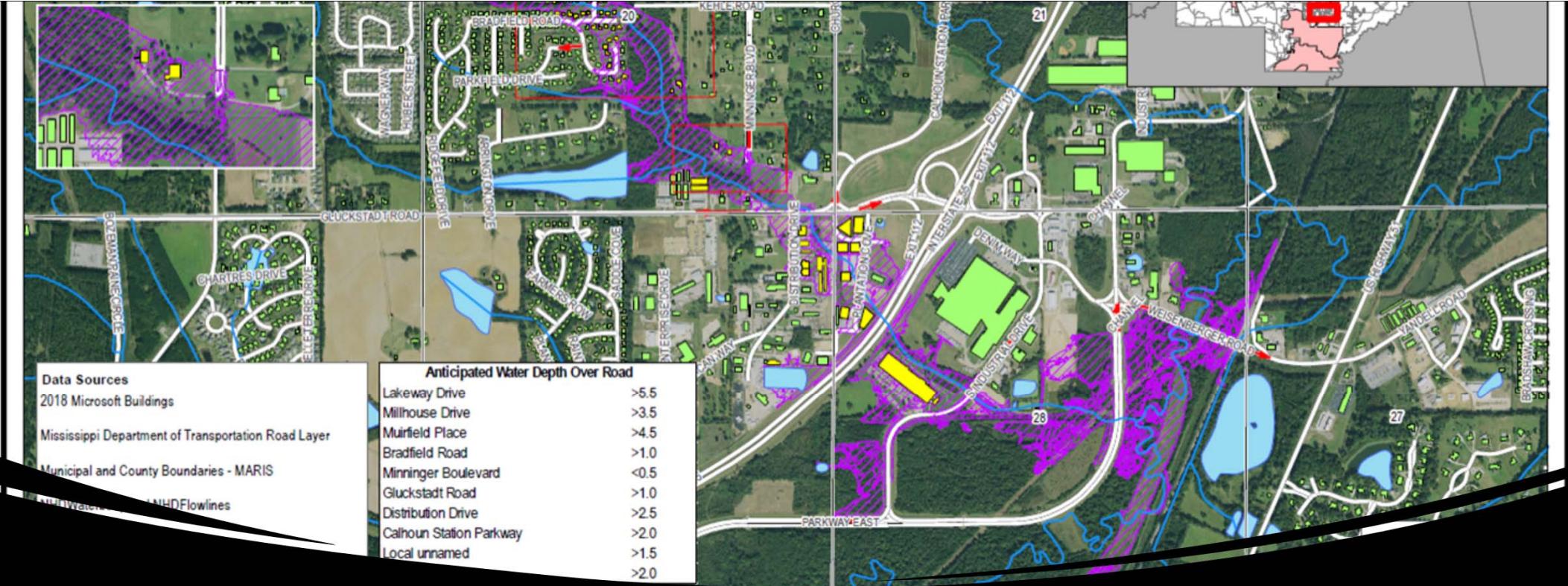
Staff also utilizes models to simulate a breach analysis to determine the flow and timing of floodwaters in the event of a dam failure.



Mississippi Dam Safety Program - Responsibilities

- Inspection of dams under construction
- Inspection of existing dams
- Review inspections of dams and work with dam owners to bring their dams into compliance with the regulations



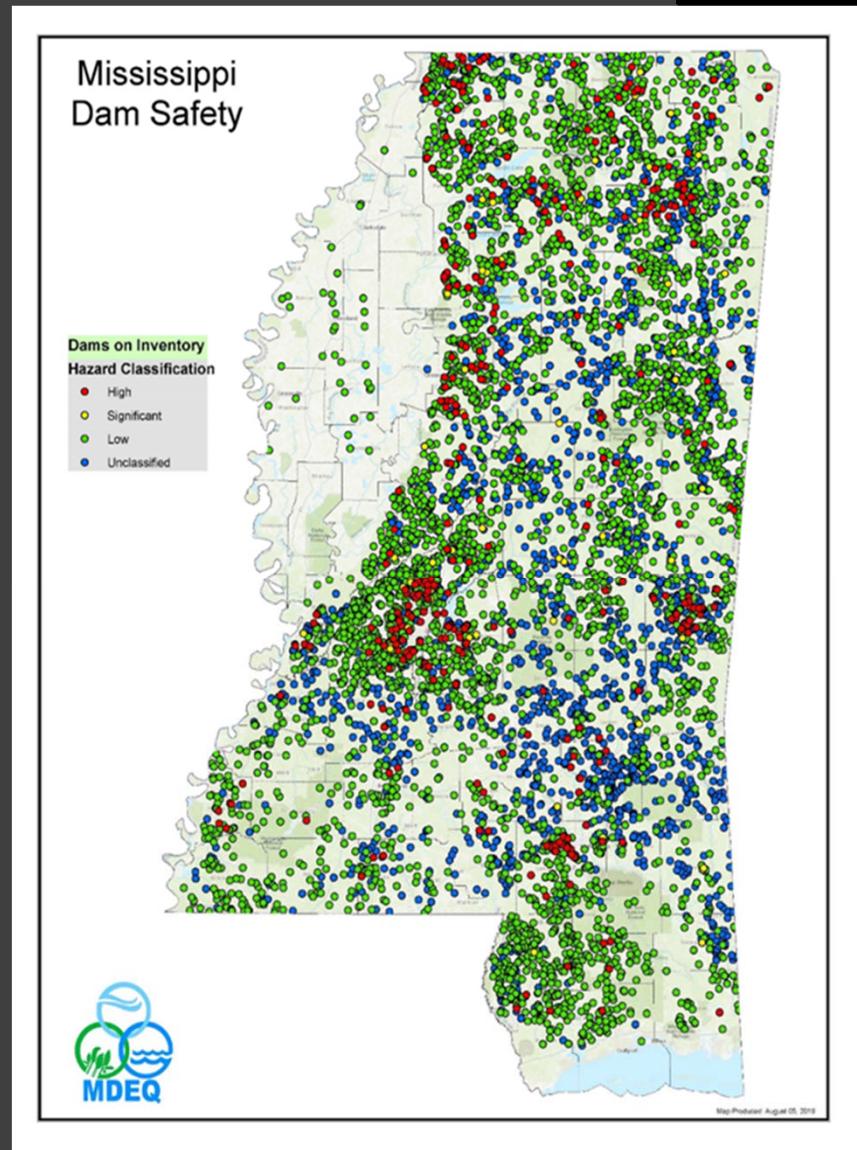


Mississippi Dam Safety Program

Responsibilities

- Review and approve Emergency Action Plans (EAPs)
- Respond to dam failures and incidents





MISSISSIPPI INVENTORY OF DAMS

Dams that are greater than 8 ft in height and which store more than 25 acre-ft of water

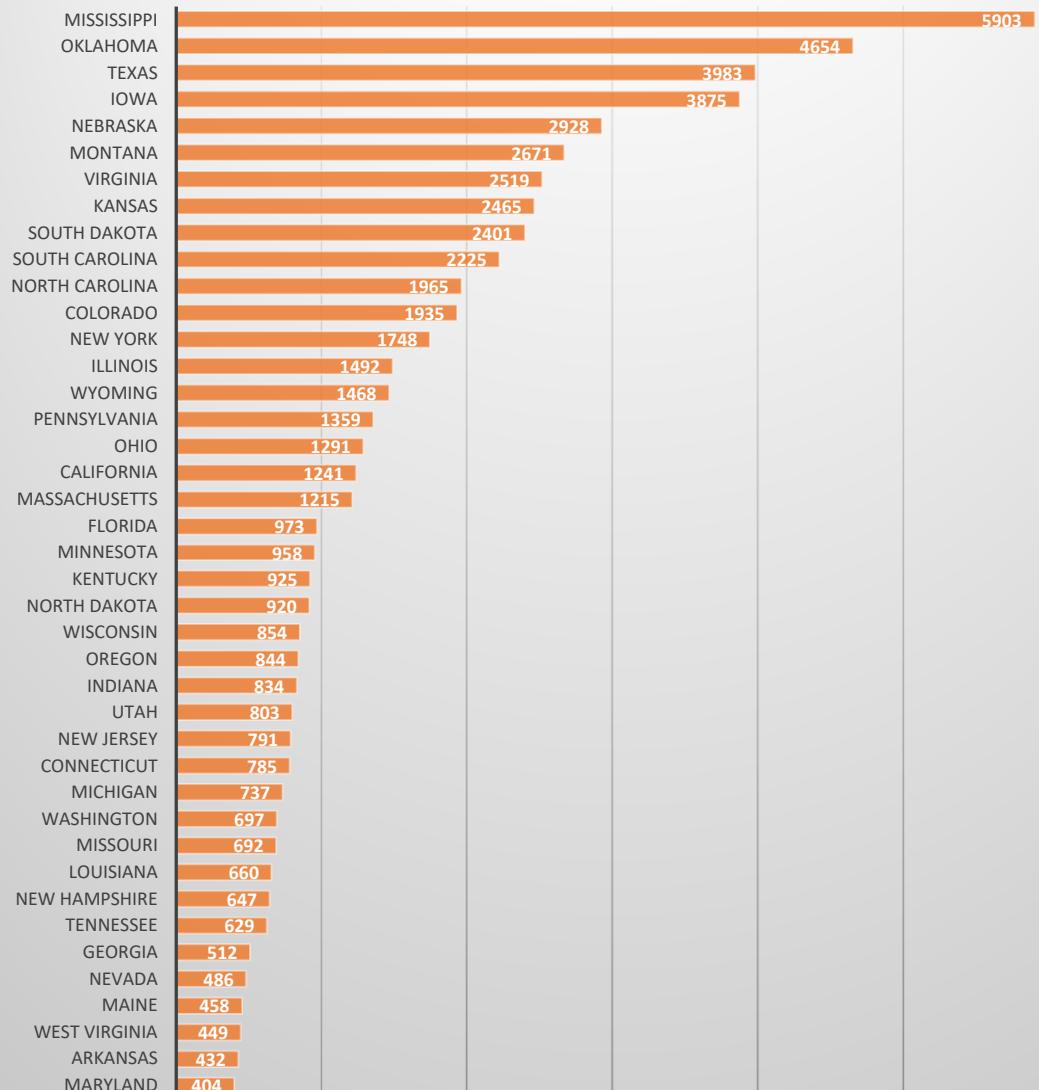
358	High Hazard Dams
54	Significant Hazard Dams
4931	Low Hazard Dams
1510	<u>Unclassified Dams</u>
6853	TOTAL

NATIONAL INVENTORY OF DAMS

MAINTAINED BY THE US ARMY CORPS. OF ENGINEERS

Dams that are greater than 20 ft in height and which store more than 40 acre-ft of water

2021 NID - Dams per State





Mississippi Watershed Dams

National Background

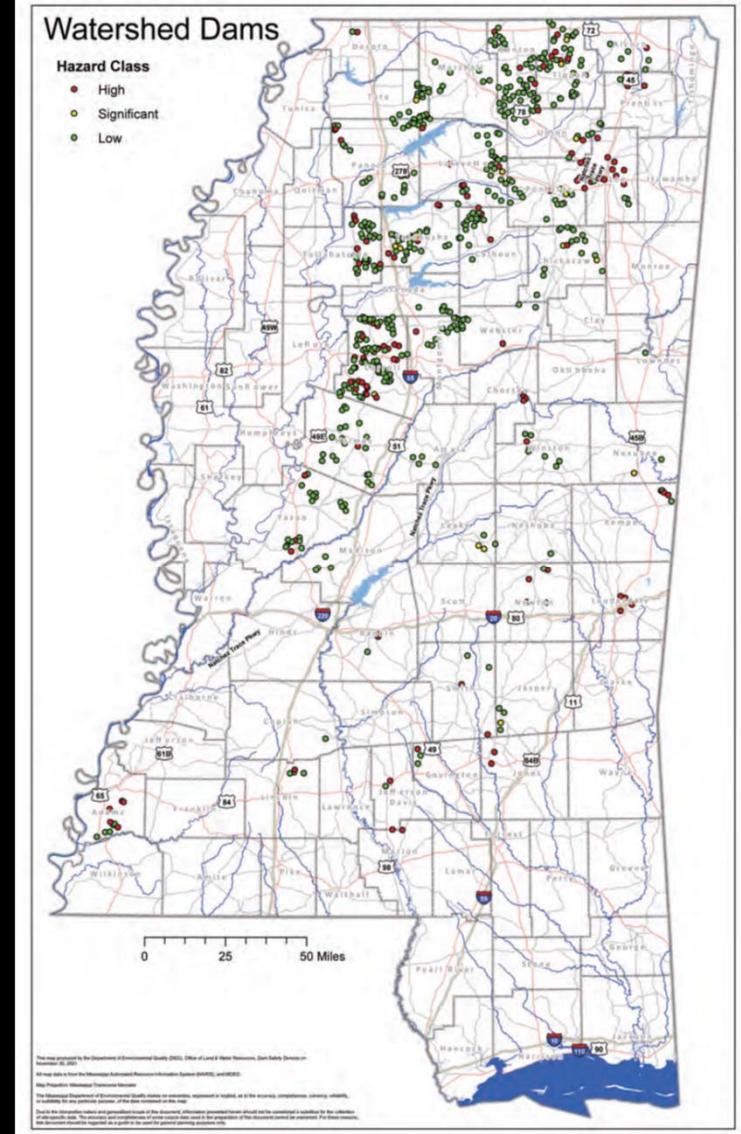
- In 1944, Congress passed Public Law 76-534 to authorize eleven watershed projects.
- Success led to the Watershed Protection and Flood Prevention Act of 1954. Extended the Soil Conservation Service's authorization to work with local sponsors to implement the watershed program in all states.
- Watershed Protection and Flood Prevention Act of 1954 led to construction of more than 11,800 watershed dams across the country.



Mississippi Watershed Dams

A look at Mississippi

- Watershed Protection and Flood Prevention Act of 1954 led to construction of **604*** watershed dam projects in Mississippi.
 - * 50-year design lifespan
- Of those, **120** are currently considered **High Hazard** dams.
- Required the formation of local Watershed Districts as sponsors.



Mississippi Watershed Dams

Rehabilitation Efforts

- Federal funding available through USDA, but funding cannot exceed 65% of the total project cost, therefore local match is required.
- Between the local drainage district and the MSWCC much of the match is made up of in-kind services but some local funds are required.
- This resulted in creation of the Watershed Repair and Rehabilitation Program by the Mississippi Legislature in the late 1990's and funded by general obligation bonds in 1999, 2008, and 2014.



Watershed Dams

\$500 M in funding to the Natural Resource Conservation Service (NRCS).

- \$118 million to be made available for Watershed Dam Rehabilitation.
- Local NRCS officials must submit request for funding for consideration.



FEMA – HHPD

\$500 M in additional funding to FEMA for the High Hazard Potential Dam (HHPD) fund over five year period.

- MDEQ receives funding and grants funds to local projects
- Funding available to public entities and private dam owners with a public sponsor
- 65/35 cost match
 - * Dams built with federal funds are not eligible



Mississippi Dam Safety Fund

Applications Due by July 15

Proposed Regulations establish the Dam Safety Grant Program

- Dam owners can apply to repair, replace, or remove eligible high hazard dams
- Priority ranking system used to determine which proposed projects will reduce the most risk to downstream lives and property
- Assistance provided subject to a 35% cost match
- Award amounts capped at \$300,000.00
- Proposed activities must address all applicable deficiencies and bring the dam into satisfactory condition



MISSISSIPPI DAM SAFETY FUND Application for Grant Funding

For official use only:
Application No. _____

Please submit Application To:

MDEQ - OLWR
Attn: Dam Safety

For Electronic submittal, send applications to:
MSDamSafety@mdeq.ms.gov

P.O. Box 2309
Jackson, MS 39225

This application is for **High Hazard Dams** located in the state of Mississippi. This application is regulated by Title 11 Part 7 Chapter 4: Mississippi Commission on Environmental Quality Dam Safety Grant Program Regulations.

**APPLICATION MUST BE RECEIVED BY MDEQ DAM SAFETY DIVISION FOR REVIEW
ON OR BEFORE 5:00 PM ON AUGUST 20, 2021.**

Dam Name: _____ State ID: _____

Total Project Cost: _____ Grant Funding Requested (65% maximum): _____
Applicant Cost Share (35% minimum): _____

In-kind contribution (up to 35%): _____ (*detail to be provided in the "Opinion of Probable Cost"*)

SECTION A: APPLICANT INFORMATION

Dam Owner/Land Owner:

Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Email: _____ Phone No. _____

Applicant/Contact (if different from land owner):

Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Email: _____ Phone No. _____

SECTION B: COMPLIANCE INFORMATION

Does this dam have an Emergency Action Plan? _____ Yes _____ No

Date of EAP:

Has the plan been distributed as required and signatures on file with MDEQ? _____ Yes _____ No



Mississippi Department of Environmental Quality

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Dam Safety



[2022 MS Dam Safety Fund Grant Application](#)



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Dam Safety

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Dam Safety Maps

[Frequently Asked Questions \(FAQs\)](#)

MDEQ ON TWITTER

Tweets by @MDEQ



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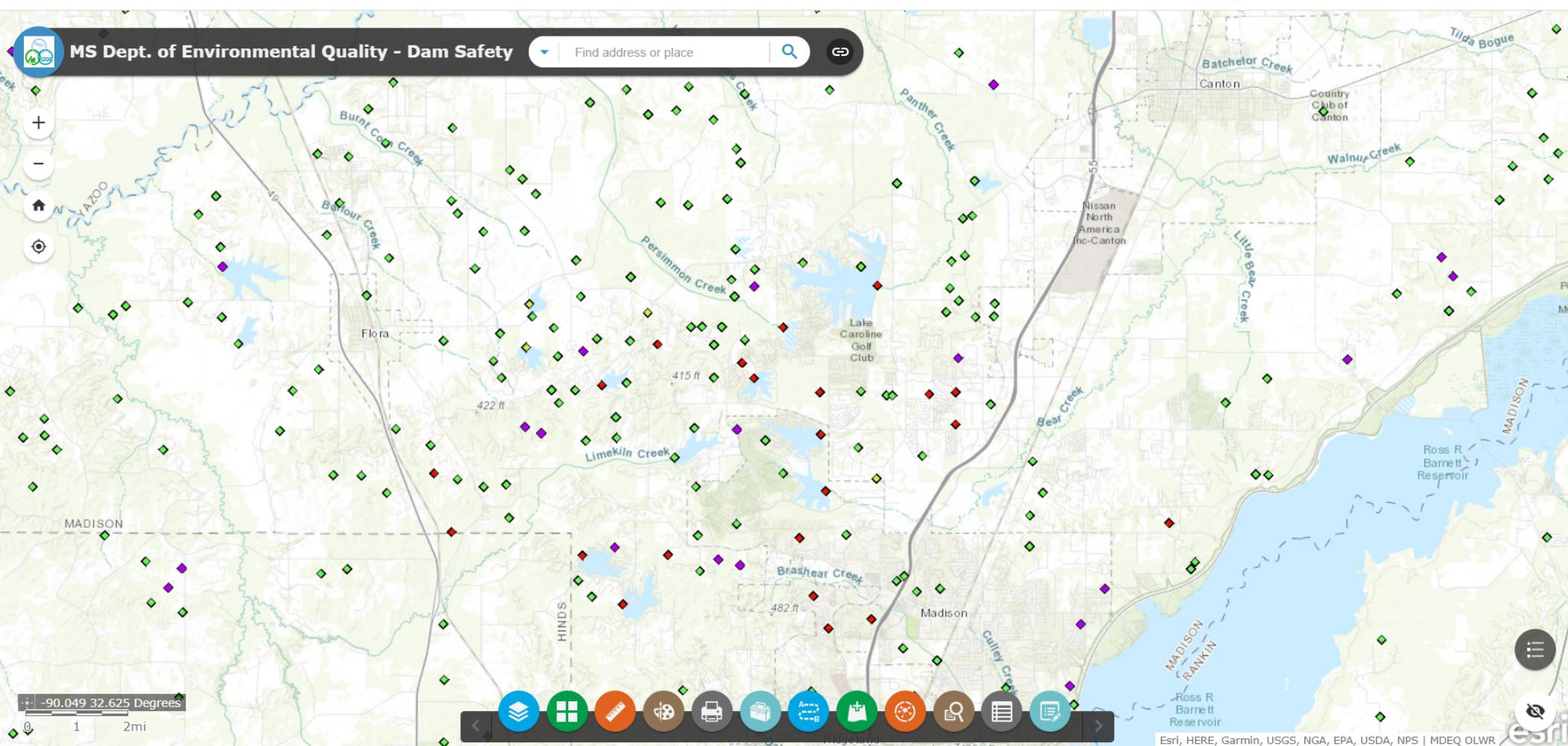
Forecast for Mississippi Gulf Coast: Jun 11
Good (Green), Jun 12 Moderate (Yellow)



8j

MS Dept. of Environmental Quality - Dam Safety

Find address or place





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