

STATUS OF THE ALABAMA DAM SAFETY PROGRAM

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TTL, Inc. – Birmingham, AL

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Please keep calm...

I have good news to share...

Alabama has a Dam Safety Program!

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**Impact to Buttahatchee River
Sole Water Supply Source
City of Hamilton, AL
August 24, 2023**

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PROGRESSION OF SENATE BILL 284

- Sponsored by Senator Clyde Chambliss, P.E.
- Introduced on May 3, 2023 – replaced by a substituted version
- Unanimously passed both Senate and House
- Signed by Governor Ivey on June 7, 2023, as Act #2023-414 – Alabama Safe Dams Act



SUMMARY OF THE ALABAMA SAFE DAMS ACT

- To provide for the inspection of certain dams and reservoirs by an engineer
- To require certain dam owners to develop Emergency Action Plans; and
- To require these dam owners to notify their local emergency management agency of any new dam construction or enlargement

PARTICIPATING OWNER

- Voluntary program
- Dam owners may choose to be included
- Written affidavit delivered to the local Emergency Management Agency (EMA)

DEFINITION OF A DAM

- An artificial barrier with the ability to impound water, wastewater, or liquid-borne materials and to which either of the following apply:
 - Is 25 feet or more in height, or
 - Has an impounding capacity at maximum water storage elevation of 50 acre-feet or more.

DEFINITION OF A DAM

- This definition does not apply to a dam:
 - Six feet or less in height regardless of storage capacity
 - Has a storage capacity at maximum water storage elevation not greater than 15 acre-feet regardless of height.
 - Subject to the jurisdiction of any other state or federal agency (USACE, FERC, TVA).
 - Any obstruction in a canal used to raise or lower water.
 - Privately owned, regardless of the hazard designation, unless the owner has voluntarily elected to participate in the program in accordance with this act.

ENGINEER

- An engineer is a person who a licensed professional engineers with a background in civil engineering and:
 - Is competent in areas related to dam investigation, design, construction, and operation for the type of dam being operated.
 - Has relevant experience in areas such as dam reconstruction, maintenance, operation, breach, removal, or abandonment of dams.
 - Understands adverse dam incidents, failures, and the potential causes and consequences of failures.
 - Continues with necessary training and continuing education to keep abreast of the state of the practice in dam safety engineering.

REPORTING

- The local EMA that has jurisdiction over the area in which a dam or reservoir is located.
- The local EMA has neither inspection nor regulatory duty or responsibility.
- Records pertaining to dams and reservoirs kept by and in the possession of the local EMA shall not be public documents.

MINIMUM REQUIREMENTS FOR NEW OR MODIFIED DAMS

- Plans and specifications for the initial construction, abandonment, or removal of dams shall be prepared by an engineer.
- Supervision of the construction of dams and reservoirs shall be in the charge of an engineer and assisted by qualified geologists and other specialists as necessary.

INSPECTION REQUIREMENTS

- The inspecting engineer shall assign a hazard potential classification to dams and reservoirs.
 - High Hazard – potential loss of life
 - Significant Hazard – property/infrastructure damage
 - Low Hazard Potential – damages limited to the property
- The dam or reservoir is inspected a minimum of once every two years by an engineer.
- The engineer shall certify to the local EMA that the inspection has been completed and deliver a record of the inspection to the dam owner.

EMA NOTIFICATION

- A participating owner shall notify the local EMA in writing of the construction or the enlargement of any dam or reservoir.
- Plans and specifications shall be signed and sealed by the design engineer.

EMERGENCY ACTION PLANS (EMA)

- Participating owners of high and significant hazard potential dams and reservoirs shall develop and file with the local EMA an EAP prepared by an engineer in consultation with the highest ranking official of the local EMA.
- EAP shall be implemented in the event of an emergency involving the participating owner's dam or dams.
- The participating owners of such dams shall periodically test and update the EAP.

So, where do we go from here?

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PILOT STUDY: ALABAMA DAM SAFETY SURVEY AND EVALUATION STUDY

Pilot Study funded by the Alabama legislature:

- \$1 million
- RFP prepared by the Alabama Safe Dam Coalition Technical Committee and provided to the Alabama Department of Economic and Community Affairs (ADECA) for procurement
- Proposals were received by ADECA on October 14, 2022
- Hazen and Sawyer was selected
- Agreement signed by Governor Ivey on April 19, 2023
- 12-month contract

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PILOT STUDY: ALABAMA DAM SAFETY SURVEY AND EVALUATION STUDY

- Pilot Study Tasks Overview
 - Develop an updated inventory of dams in 3 Alabama counties using current technology
 - Develop and conduct a Dam Safety Survey and Evaluation Study
 - A select number of dams identified in the inventory will be inspected and evaluated for safety, structural integrity, hazard potential and downstream consequences
 - Develop a plan for evaluating the remaining dams in the state and provide a framework and recommendations for a cost-effective implementation of a dam safety program utilizing lessons learned from other state programs.
- Information from the pilot study will be used to help set the future framework for the Alabama Dam Safety Program
- Should be completed by Spring 2024








Dams



RECOMMENDATIONS TO RAISE THE GRADE

With a high degree of urgency, the following steps need to be completed, so dam infrastructure and infrastructure public safety risks can be enumerated and mitigated:

-  **Complete a Pilot Program** to identify and recommend consideration of best practices for the Alabama Dam Safety Program. 2 - Underway
-  **Establish a dam safety program in Alabama**, the only state without a dam safety program. 1 – New Law
-  **Establish a dam rehabilitation and repair revolving grant or loan program and/or provide access to federal grants** to ensure dam owners can affordably repair privately- and publicly-owned, non-federal, high hazard dams. 5
 - **Incorporate a risk-based, engineering-informed decision making process** for the design of new dams, rehabilitation of deficient dams, and operation of all dams.
-  **Provide educational resources** to dam owners and operators. 3
-  **Implement a public awareness campaign** in Alabama to educate individuals about the need for a Dam Safety Program by ensuring the public has a better understanding of potential risks. 4

Action Item Priority



2 - Underway

1 – New Law

5

3

4

SUMMARY

- Our current dam safety program will serve as the foundation for future dam safety regulations
- Potential for federal infrastructure money for participating owners
- Encourages dam owners think about dam safety
- Don't wait on the state!

A wide, multi-tiered waterfall cascading down a concrete structure. The water is white and frothy as it falls, creating a rhythmic pattern of white and grey. The top of the waterfall is a dark, flat concrete surface. The sky above is a clear, deep blue.

Questions?

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