



Association of State Dam Safety Officials

February 7, 2022

The Honorable Dean Burke
Georgia Senate
421-B State Capitol
Atlanta, GA 30334

Dear Senator Burke:

The Association of State Dam Safety Officials (ASDSO) opposes Senate Bill 440 (SB440) which you co-sponsored that is under consideration in the Georgia General Assembly and before the Senate Committee on Natural Resources and the Environment. This proposal will put Georgia's citizens who live below certain dams and their property at an increased risk from the catastrophic failure of a dam. The bill changes the definition of a dam and if it is adopted, Georgia's Safe Dams Program will no longer have oversight over 15 current High-Hazard Potential (Category I) dams, and potentially many more.

SB440 will change the regulatory definition for jurisdiction from a maximum impounding capacity of greater than or equal to 100 acre-feet to greater than or equal to 150 acre-feet. Height and storage volume are factors in the potential hazard of a dam. The location of the potential downstream hazard is an equally important factor. The failure flood from smaller dams can cause devastating impacts to downstream property including homes and loss of life. Dams should not be exempted from state public safety jurisdiction on size alone. Downstream hazard potential must also be a factor.

SB440 presents the following public safety concerns that are described in more detail in the attached "Public Safety Issues" document.

- Current Category I Dams could go uninspected and unrepaired increasing the risk from catastrophic dam failure to downstream residents; there are 15 such dams currently.
- Current Category II Dams awaiting classification reevaluation with people living and working downstream will go unevaluated, uninspected and unrepaired; there is a "to be studied" list of many Category II dams.
- Current Category II Dams will not be reevaluated for a classification change to protect public safety; there are over 800 current Category II dams that will be exempted.
- Georgia's definition of a dam is already below national standards and the standards of most state dam safety regulations, and this proposed change exacerbates the situation.
- Eliminating dams from state jurisdiction will not eliminate or reduce dam owner liability; it will likely increase liability.

The failure of Georgia's Kelly Barnes Dam in 1977 killed 39 people and was the catalyst for dam safety legislation in Georgia and the National Dam Safety Program. Recent dam failures and incidents in South Carolina, Michigan, Nebraska, Hawaii, and California show that dam failures still occur with tragic consequences and result in lengthy liability litigation. SB440 would be a step back from public safety gained from Georgia's efforts over the last 45 years.

The motivation for this bill is unclear. If it is to relieve a financial burden on some dam owners, then the members of the Georgia General Assembly should consider alternatives that do not compromise public safety such as instituting a state grant or loan program to assist dam owners like many other states have done. This could provide a remedy for dam owners while still providing the needed public safety measures for citizens living and working in areas downstream of these dams.

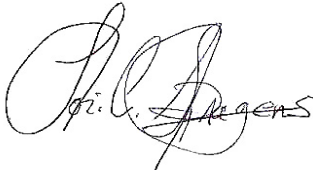
If a goal of SB440 is to assist dam owners with the ongoing issue of hazard creep (reclassification and upgrade of dams due to downstream development), we urge Georgia to explore alternatives that do not unnecessarily increase the risk to innocent people. ASDSO recently worked with other partners in Georgia to develop an alternative approach for hazard creep that you may want to consider. This proposal (the attached document "Hazard Creep Amendments") is based on a Virginia policy on downstream land use and cost sharing with developers. It will help to ensure that hazard creep either does not occur or shares the cost of necessary public safety upgrades.

ASDSO monitors and assists state dam safety programs nationwide. In recent years we have observed the consequences of failed dams where life and economic losses created a terrible aftermath. Effective dam safety regulation saves lives and averts major economic losses. Dams and reservoirs can provide benefits that are critical for public safety and well-being. The state's many dams are a significant economic asset, providing an abundant water supply, recreation and development opportunities for Georgia citizens; but benefits and risks go together. Failure to adequately inspect dams, correct deficiencies, and provide for emergency preparedness can lead to disastrous consequences and loss of the intended, vital purposes for dams.

I urge the State of Georgia to take a proactive approach to dam safety to protect the welfare of downstream populations and to ensure the continuation of economic and life-sustaining benefits provided by dams. ASDSO would welcome the opportunity to work with you to further public safety goals regarding dams.

Thank you for your consideration and please contact me or Mark Ogden of my staff if you have questions or if I can be of assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori C. Spragens". The signature is stylized with a large, looping "L" and "S".

Lori C. Spragens
Executive Director

**Public Safety Issues with Georgia Senate Bill 440
(Senator Frank Ginn Sponsor)**

**Association of State Dam Safety Officials (ASDSO)
February 4, 2022**

Summary of the Bill and Public Safety Concerns

Senate Bill 440 (SB440) will put Georgia's citizens who live below certain dams and their property at an increased risk from the catastrophic failure of a dam. The bill changes the definition of a dam and if it is adopted, Georgia's Safe Dams Program will no longer have oversight over 15 High-Hazard Potential dams.

The failure of Georgia's Kelly Barnes Dam in 1977 killed 39 people and was the catalyst for dam safety legislation in Georgia and the National Dam Safety Program. Recent dam failures and incidents in South Carolina, Michigan, Nebraska, Hawaii and California show that dam failures still occur with tragic consequences and result in lengthy liability litigation. This proposed bill would be a step back from public safety gained from Georgia's efforts over the last 45 years.

SB440 will change the regulatory definition for jurisdiction from a maximum impounding capacity of greater than or equal to 100 acre-feet to greater than or equal to 150 acre-feet. Height and storage volume are factors in the potential hazard of a dam. The location of the potential downstream hazard is an equally important factor. The failure flood from smaller dams can cause devastating impacts to downstream property including homes and loss of life. Dams should not be exempted from state public safety jurisdiction on size alone. Downstream hazard potential must also be a factor.

Current Category I Dams could go uninspected and unrepaired increasing the risk from catastrophic dam failure to downstream residents.

According to 2021 National Inventory of Dams (NID) data, the change will eliminate over 800 dams (close to 25% of the current Category II dams) that fall under the current definition including 15 that are currently High-Hazard Potential, Category I dams where improper operation or failure would result in probable loss of human life. These dams would no longer be required to be inspected by qualified engineers or be required to be operated and maintained to accepted safety standards. Proper inspection and operation and maintenance helps to ensure the safety of dams. Without this oversight, crucial safety concerns that could lead to failure can go unaddressed placing Georgia citizens and their property downstream of these dams at an elevated and unnecessary level of risk.

Current Category II Dams awaiting classification reevaluation with people living and working downstream will go unevaluated, uninspected and unrepaired.

There are likely dams that are currently classified Category II that with Georgia's population growth and development should be reclassified to Category I (Georgia's Safe Dams Program has a "To Be Studied" list of these dams). Changing the definition of a dam would most certainly eliminate some of these potential Category I dams. Unlike most states where Significant- and Low-Hazard Potential dams (Category II in Georgia)

must be built and maintained to at least some minimum standard, Category II dams in Georgia have no minimum design requirement. A majority of these dams have not been inspected by qualified engineers and do not have an Emergency Action Plan. This puts downstream residents at an extremely high level of risk from a catastrophic dam failure.

Current Category II Dams will not be reevaluated for a classification change to protect public safety.

The over 800 Category II dams (dams that meet the statutory definition, but whose failure or improper operation are not expected to result in loss of life) that would be eliminated from the definition of a dam would no longer be evaluated by the state to determine if the downstream hazard potential had changed. As development continues in the state, the hazard potential of the dam can change resulting in reclassification of the dam to Category I for public safety. The dam would then be required to be regularly inspected and upgraded to meet public safety standards. Since Category II dams are not regulated for public safety purposes by the state, these dams likely were not constructed or maintained to accepted safety standards. Therefore, people living and working downstream of these dams will be at an unnecessary and unacceptable level of risk. There is no doubt there are some of these Category II dams that have or will have development below them and thus should be evaluated and treated as Category I dams.

Georgia's definition of a dam is already below national standards and the standards of most state dam safety regulations, and this proposed change exacerbates the situation.

The national Model State Dam Safety Program calls for states to regulate all high-hazard potential dams (Category I in Georgia) and all other dams greater than or equal to 25 feet in height or greater than or equal to 50 acre-feet of total storage volume. The original version of the Georgia Safe Dams Act utilized this definition but was changed in 1984 to be 100 acre-feet. Georgia's current definition already allows many dams that could cause downstream damage to go uninspected and unrepaired. Dams should not be exempted from state public safety jurisdiction on size alone. Downstream hazard potential must also be a factor.

Eliminating dams from state jurisdiction will not eliminate or reduce dam owner liability; it will likely increase liability.

While SB440 will keep some dams from being reclassified to Category I, it will not eliminate the liability and could actually increase it due to increased probability of failure for dams that go uninspected and unrepaired. Potential additional development in areas downstream of these exempted dams only increases the liability.

Alternative Remedies

The motivation for this bill is unclear. If it is to relieve a financial burden on some dam owners, then the members of the Georgia General Assembly should consider alternatives that do not compromise public safety such as instituting a state grant or loan program to assist dam owners like many other states have done. This could provide a remedy for dam owners while still providing the needed public safety measures for citizens living and working in areas downstream of these dams.

2019 Georgia Code

Title 12 - Conservation and Natural Resources

Chapter 5 - Water Resources

Article 5 - Rivers and River Basins

Part 3 - Dam Safety

- § 12-5-370. Short title
- § 12-5-371. Declaration of purpose
- § 12-5-372. Definitions
- § 12-5-373. Powers and duties of director generally
- § 12-5-374. Powers and duties of board as to dams and artificial barriers
- § 12-5-375. Inventory and classification of dams; investigations; technical assistance to local government; artificial barriers; notice requirements; provision of information regarding dams to clerks of superior courts
- § 12-5-376. Permits to construct and operate dams; annual dam registration fee
- § 12-5-376.1. Subclassification of category I dams by director; minimum spillway design requirements
- § 12-5-377. Mapping of the dam breach inundation zones
- § 12-5-377.1. Requirements for developing in the dam breach inundation zone
- § ~~12-5-377~~. 12-5-378. Dam removal
- § ~~12-5-378~~. 12-5-379. Inspection of dams and other barriers; administrative orders to enforce compliance; emergency action by director
- § ~~12-5-379~~. 12-5-380. Investigations; right of access by division; right to require statements and reports regarding construction and operation of dams; refusal of access or interference
- § ~~12-5-380~~. 12-5-381. Administrative and judicial review
- § ~~12-5-380.1~~. 12-5-381.1. Orders of director or administrative law judge filed in superior court; effect of filing
- § ~~12-5-381~~. 12-5-382. Injunctive relief
- § ~~12-5-382~~. 12-5-383. Power of commissioner of transportation as to contracts relating to part
- § ~~12-5-383~~. 12-5-384. Liability for damages
- § ~~12-5-384~~. 12-5-385. Conformance to and compliance with part required
- § ~~12-5-385~~. 12-5-386. Criminal and civil penalties

§ 12-5-372. Definitions

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(4) (A) Except as otherwise provided in subparagraph (B) of this paragraph, "dam" means any artificial barrier, including appurtenant works, which impounds or diverts water and which:

- (i) Is 25 feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier, or from the lowest elevation of the outside limit of the barrier, if the barrier is not across a stream channel or watercourse, to the maximum water storage elevation; or
- (ii) Has an impounding capacity at maximum water storage elevation of 100 acre-feet or more.

(B) The word "dam" shall not include:

- (i) Any dam owned and operated by any department or agency of the United States government;
- (ii) (ii) Any dam constructed or financially assisted by the United States Soil Conservation Service or any other department or agency of the United States government when such department or agency designed or approved plans and supervised construction and maintains a regular program of inspection of the dam; provided, however, that this exemption shall cease on November 1, 2000, only if funds are specifically appropriated on or before November 1, 1995, for purposes of inspection, reconstruction, and financial assistance with respect to such dams in an appropriations Act making specific reference to this division; otherwise this exemption shall cease on November 1, 1995, for all such dams over which the supervising federal agency has relinquished authority for the operation and maintenance of such a dam to a person unless the supervising federal agency certifies by said date and at least biannually thereafter to the director that such dams are in compliance with requirements of this part, including minimum spillway design, and with the maintenance standards of the supervising federal agency;
- (iii) (iii) Any dam licensed by the Federal Energy Regulatory Commission, or for which a license application is pending with the Federal Energy Regulatory Commission;
- (iv) (iv) Any dam classified by the director as a category II dam pursuant to Code Section 12-5-375, except that such category II dams shall be subject to the provisions of this part for the purposes of said Code Section 12-5-375, Code Section 12-5-377, Code Section 12-5-377.1, and for the purposes of subsection (b) and (l) of Code Section 12-5-376; or
- (v) (v) Any artificial barrier which is not in excess of six feet in height regardless of storage capacity, or which has a storage capacity at maximum water storage elevation not in excess of 15 acre-feet regardless of height.

(5) "Dam Breach Inundation Zone" means any area downstream of a dam that would be affected by flooding from releases from a dam's reservoir in the event of a failure, breach, or uncontrolled release of water.

(6) “Development” means any structure that causes a change in a dam’s hazard category. Development includes the construction of any occupied structures or facilities, including, but not limited to, residences, commercial and manufacturing facilities, schools, and churches.

...

§ 12-5-375. Inventory and classification of dams; investigations; technical assistance to local government; artificial barriers; notice requirements; provision of information regarding dams to clerks of superior courts

...

~~(g) Before a permit to construct a structure or facility is issued by the governing authority of a local unit of government which would result in changing a category II dam to a category I dam, the local unit of government shall notify the owner of said dam by certified mail or statutory overnight delivery of the proposed permit. The owner of the dam may within ten days of the notice request the director to inspect said dam and determine whether or not said dam is in compliance. If the director determines the dam is not in compliance with category I, both the owner and the local unit of government shall be notified in writing.~~

§ 12-5-376. Permits to construct and operate dams; creation of an annual dam registration fee

...

(k) Earthen embankments serving as dams shall be protected from surface erosion by appropriate vegetation or some other type protective surface such as riprap or paving and shall be maintained in a safe condition. Examples of appropriate vegetation include, but are not limited to, Bermuda grass, Tall Fescue, and Lespedeza sericea. Inappropriate vegetation such as trees shall be removed from dams only after consultation with the division on the proper procedures for removal. Hedges and small shrubs may be allowed if they do not obscure inspection or interfere with the operation and maintenance of the dam.

(l) (1) Annual registration fees for category I and category II dams shall be payable to the division each year.

(2) The board shall promulgate rules in accordance with all provisions of this section, § 12-5-376, to establish a schedule of annual registration fees for dam owners. The schedule of annual registration fees shall be designed to establish categories of annual registration fees, including, but not limited to, the size of the dam and its category.

(3) Any dam owner who fails to pay the annual registration fees required by this section shall be assessed a penalty of ten per cent of the annual fee plus interest at the rate of one-half per cent per month from the due date until the date of payment.

(4) Revenues collected from the annual registration fees shall be placed in a dam assistance fund overseen by the division which shall be used either:

- (i) By the director in mapping dam breach inundation zones as required in § 12-5-377; or
- (ii) To financially assist dam owners in dam removal. To qualify for dam removal assistance, the removal shall restore natural flow to the previously obstructed river.

§ 12-5-377. Mapping of the dam breach inundation zones

(a)(1) The director shall ensure a map of the dam breach inundation zone for all category I and category II dams is developed in accordance with criteria established by the division. The director may use the dam assistance fund established in § 12-5-376 (1)(4) to defray the cost of mapping the dam breach inundation zones.

(2) Existing maps prepared by the division, local unit of government, dam owners, or developers in accordance with the standards established by the division may be used for this purpose.

(3) After preparing a map of the dam breach inundation zone, the director is authorized to recover 50 percent of the costs of such mapping from the owner of the dam.

(4) The director shall complete all dam breach inundation zone maps within 10 years of the enactment of this amendment.

(5) After completing the dam breach inundation zone maps, the director may update the maps as necessary.

(b) All maps of dam breach inundation zones shall be filed with the division and the local unit of government responsible for plat or plan approval in which the dam breach inundation zone resides.

(c) All properties within the dam breach inundation zone of category I dams shall be incorporated by the dam owner into their Emergency Action Plans (EAP) in accordance with Ga. Comp. R. & Regs. 391-3-8-.11.

§ 12-5-377.1. Requirements for developing in the dam breach inundation zone

(a)

(1) For any development proposed that falls wholly or partially within the boundaries of a dam breach inundation zone, the local unit of government responsible for plat or plan approval or zoning responsibilities shall:

- i. review the dam breach inundation zone map for the affected dam to confirm the development is within the dam breach inundation zone and to what extent;
- ii. notify the dam owner by certified mail or statutory overnight delivery of the proposed development within their dam breach inundation zone; and
- iii. within 10 days forward the development request and confirmation that the development is within the dam breach inundation zone to the division to make a determination of whether the proposed development would result in changing a category II dam to a category I dam.

(2) If the division determines that the plan of development would result in changing a category II dam to a category I dam, the local unit of government shall not permit development or redevelopment in the dam breach inundation zone unless:

- i. the developer or subdivider agrees to alter the plan of development so that it does not result in changing the category II dam to a category I dam; or
- ii. the developer or subdivider contributes payment to the necessary upgrades or removal of the dam pursuant to the cost-splitting requirements outlined in provision (b) of this section.

(3) The developer or subdivider shall provide the division and the relevant local units of government be with information necessary for the division to update the dam breach inundation zone map to reflect any new development within the dam breach inundation zone following completion of the development.

(b)

(1) If the division determines that a plan of development proposed by a developer or subdivider is wholly or partially within a dam breach inundation zone and would result in changing a category II dam to a category I dam, then the following shall be satisfied before approval of the subdivision or development occurs:

- (i) The developer or subdivider shall submit an engineering study in conformance with the standards under the Georgia Dam Safety Act (§ 12-5-370 et seq.) and Georgia's Rules for Dam Safety (Ga. Comp. R. & Regs. 391-3-8-.01 et seq.). The study shall provide a contract-ready cost estimate for both removing the dam and conducting the upgrades necessary to bring the dam into compliance as a category I dam. The division shall verify that the study conforms to state standards. After the division confirms the study is complete and in conformance, the division shall notify the dam owner of the study's completeness and conformance with 45 days;
- (ii) The dam owner shall choose whether to remove the dam or conduct the upgrades necessary to bring the dam into compliance as a category I dam;
- (iii) Following the completion of the engineering studies in accordance with subsection (i), the developer or subdivider of the land shall pay 50 percent of the contract-ready costs necessary for removal or upgrades to the dam attributable to the development or subdivision. Necessary upgrades shall not include costs associated with routine operation, maintenance, and repair, nor shall necessary upgrades include repairs or upgrades to the dam not made necessary by the proposed development or subdivision. The dam owner shall be responsible for the remaining costs of the dam removal or upgrade, including, but not limited to, any overruns; and
- (iv) The dam shall either be removed or be upgraded to be in compliance with the safety provisions of Georgia Dam Safety Act (§ 12-5-370 et seq.) required of a category I dam.

(2) The payments of the contract-ready costs by the developer or subdivider required in (b)(1)(ii) of this section shall be held by the division until such time as they are expended for the project. Any funds not committed by the dam owner within six years of the time of deposit shall be refunded to the developer or subdivider. Should the division be unable to locate the developer or subdivider following a period of 12 months and the exercise of due diligence, the funds shall be deposited in dam assistance fund established in § 12-5-376 (1)(4).

(i) The division maintaining an account in accordance with this section may charge an administrative fee, not to exceed one percent of the total amount of payment received or \$1,000, whichever is less.

(ii) The division shall not have any liability for the completion of any project associated with the moneys they manage for the purposes of this section.

(3) The owner of the dam shall retain all liability associated with removal or upgrades.