

South Carolina Department of Transportation

Engineering Directive

Directive Number: ED-85 **Effective:** August 18, 2026

Subject: State Roads over Privately Owned Dams

References: Dams and Reservoirs Safety Act, S.C. Code of Laws, § 49-11-110, *et seq.*

Primary Department: Preconstruction and Maintenance

Since 2015, a series of historic rainfall events caused the failure of 97 state-regulated dams along with many unregulated dams across the state. Most of the failures were a result of the 2015 historic flood and Hurricane Matthew in 2016. The vast number of failed private dams presented unique challenges for the Department in not only repairing the State Highway System after these events but in the approach to future maintenance and improvements of state-owned roads crossing over private dams.

State roads traversing private dams are located within right of way easements.ⁱ The South Carolina Department of Transportation (SCDOT) has no statutory authority to own or maintain dams.ⁱⁱ It is the responsibility of the landowner of the underlying dam to maintain the dam in accordance with appropriate engineering standards to safely uphold its primary function (impoundment of water). If an underlying dam is not properly maintained or sustains damage in some manner that, in the opinion of SCDOT, affects the safe use of the road, the Department may need to act, including but not limited to, imposing traffic restrictions (imposing weight limits and/or speed limits, etc.) or place barricades to close the road to traffic.

Pursuant to the Dams and Reservoirs Safety Act (S.C. Code Sections 49-11-110, *et seq.*), dams may be classified as regulated and unregulated.

Further provisions of the Dams and Reservoirs Safety Act provide that:

1. “[t]he owner of a dam or reservoir constructed in this State solely is responsible for maintaining the dam or reservoir in a safe condition throughout the life of the structure.” (S.C. Code § 49-11-150)
2. [SCDES] may issue an order directing the owner of a dam or reservoir to make at his expense the necessary maintenance, alteration, repair, or removal upon a finding that the dam or reservoir:
 - (a) is or has become unsafe and is dangerous to life or property;
 - (b) is not maintained in good repair or operating condition; or
 - (c) is not maintained or operated in accordance with the terms and conditions of the certificate of completion and operation issued by the department.(S.C. Code § 49-11-160)
3. Anyone can submit a complaint in writing to SCDES about the “existence of a dam which is not maintained in good repair or operating condition or may be unsafe and a danger to life or property . . .” (S.C. Code § 49-11-170(A))

This directive provides procedures for state-owned roads that traverse dams when:

- Maintenance activities are conducted;
- An improvement project is initiated; and
- Full or partial closure of the roadway or bridge is necessary due to the condition of the underlying dam.

Regulated Dams

Dams that meet the definition set forth in the Dams and Reservoirs Safety Act, S.C. Code of Laws §49-11-110, *et seq.*, are classified as regulated and under the authority of the South Carolina Department of Environmental Services (SCDES). This Act assigns the authority for the safe maintenance and powers of inspection and certification for dams (as defined) of this State to SCDES.

There are more than 2,200 state-regulated dams across South Carolina. Detailed information (including ownership, inspection status, condition assessment, etc.) can be found on the following websites: [SCDES](#) and [US Army Corps](#).

Unregulated Dams

For dams to be exempt from state regulation, they must meet at least one of the following criteria:

- They do not meet the regulated size and hazard criteria.
- They are owned or operated by a department or agency of the federal government.
- They are owned or licensed by an appropriate federal licensing agency in the department's judgment, including the Federal Energy Regulatory Commission or the United States Army Corps of Engineers.
- Where SCDOT or local government has accepted maintenance responsibility for a road or highway and that road or highway is the only danger to life or property if the dam were to fail (S.C. Code of laws § 49-11-120(4)(d)).
- In SCDES's judgment and because of the dam's size and location, there is no significant threat or danger to downstream life or property.

The exact number of unregulated dams across South Carolina is not known, but current estimates approximate the number to be around 20,000. Roads over unregulated dams are not inventoried or regulated by SCDES or US Army Corps of Engineers. With changing property owners and parcel lines over time, ascertaining ownership of an unregulated dam may be difficult. When ownership of an unregulated dam must be established, staff should coordinate with the Right of Way Office and Legal.

Note: An unregulated dam becomes a regulated dam if “a situation exists where the hazard potential as determined by [SCDES] is such that dam failure or improper reservoir operation may cause loss of human life;” (S.C. Code § 49-11-120(4)(a))

Procedures for Routine Maintenance and Project Development (Visual Examination)

Routine Maintenance: As part of conducting road inspections, per Engineering Directive 8, SCDOT maintenance personnel should visually inspect the condition of the road and its underlying subsurface, including the dam, for open and obvious deficiencies, such as cracks in the surface, potholes, or roadside hazards affecting public safety. This inspection requires the same diligence SCDOT exercises over State roads, however it is not an assumption of the dam owner's responsibilities.

Project Development: During preliminary project development activities, the Program Manager or member of the Project Development Team should initiate communication with the dam owner (if known) and SCDES regarding the status of the dam and the proposed road improvement project. The Project Development Team should review all available information regarding the underlying dam, as part of the initial scoping meeting. This review includes any SCDES file material regarding

the dam. Any information about the dam should be requested from the dam owner or SCDES. All requests for information and subsequent communication should be documented.

Maintenance staff and the Project Development Team should use the attached Dam Safety Inspection Checklist to document the visual examination of the underlying dam.ⁱⁱⁱ

Initiating Detailed Inspection of Underlying Dam*

Should SCDOT's visual examination raise any concern, it should be documented (with photographs) and brought to the attention of the District Engineering Administrator (DEA). The DEA should then notify the Chief Engineer for Operations and Deputy Secretary for Engineering (DSE), providing the following information:

- Summary of concerns as shown in photographs.
- Installation of any traffic control devices, posting of any restrictions (lane/weight, speed limit, etc.) or temporary closure/detour.
- Status in identifying the dam owner.

The DSE will initiate written communication with the dam owner regarding staff observations. The dam owner will be requested to respond with a plan to address the observations. If the dam is unregulated, the owner will be requested to provide a detailed inspection conducted by a qualified professional engineer. If the dam is unregulated but "a situation exists where the hazard potential as determined by [SCDES] is such that dam failure or improper reservoir operation may cause loss of human life;" (S.C. Code § 49-11-120(4)(a)), SCDES will be notified. If the dam is regulated, the owner will be advised that SCDOT observations have been forwarded to SCDES for further action.

The DSE will provide SCDES with a copy of SCDOT's letter to the dam owner (for both regulated and unregulated dams). In addition, further SCDES assistance will be requested based on the dam classification -

- Regulated Dams: Based on SCDOT's visual examination observing deficiencies, SCDOT will file a written complaint with SCDES and request that SCDES conduct a preliminary inspection pursuant to S.C. Code § 49-11-170. SCDES will be asked to provide SCDOT with any findings, further orders or actions initiated against the dam owner.
- Unregulated Dams: SCDES will be requested to assist SCDOT based on the significance of concerns raised during the visual examination. This request is important particularly if an owner has not been identified or the owner fails to supply a detailed inspection report.

*For road improvement projects over dams, beyond routine and preventive maintenance activities, a detailed dam inspection must be performed early in project development regardless of the visual examination findings. It is expected that this inspection will be done by others (i.e., SCDES or dam owner's engineer) with a copy provided to SCDOT. However, under limited circumstances SCDOT will need to retain engineering services to carry out this inspection to avoid unnecessary delays in advancing the road improvement project.

SCDOT's Retainage of Engineering Services

Unregulated Dams: Under state law, SCDES does not have authority or oversight over unregulated dams. The responsibility for conducting proper maintenance, performing repairs, and inspections are fully dependent on the will and financial means of the dam owner. Whether or not SCDES is able to assist SCDOT when concerns arise on unregulated dams, it may be necessary for the DSE to direct staff to retain the services of an engineering firm knowledgeable in the

inspection and repair of dams. Situations where this may be necessary include, but are not limited to:

- When the dam owner cannot be verified and an inspection is necessary to assess (1) SCDOT's visual concerns, (2) SCDES's preliminary inspection (if conducted), or (3) the condition of the underlying dam as an early task in the development of a proposed road improvement project.
- When the dam owner is known but fails to secure a professional engineer to assess (1) SCDOT's visual concerns, (2) SCDES's preliminary inspection findings (if conducted), or (3) the condition of the underlying dam as an early task in the development of a proposed road improvement project.
- In unique situations where SCDOT staff are directed to restore the road requiring either repair or removal of the dam.

Regulated Dams: Since SCDES has authority to conduct engineering inspections and/or order the dam owner to do the same, there should only be limited situations where SCDOT would need to secure engineering services. These limited situations may include:

- When the owner of a regulated dam fails to comply with SCDES's orders and a decision is needed on the continued safe use of the road or an inspection is necessary as an early task in the development of a proposed road improvement project.
- In unique situations where SCDOT staff are directed to restore the road requiring either repair or removal of the dam.

If engineering services are needed, the scope of work should include some or all the following tasks:

- A detailed inspection of the underlying dam.
- A professional judgment on whether the condition of the dam is unsafe or a danger to life or property.
- Recommendations for further investigation or repair.

Actions Following Detailed Inspection of the Underlying Dam

Based on the results of the inspection carried out under the direction of SCDES, by the dam owner's engineer, or by SCDOT's engineering firm, the DSE will determine if new or further restrictions on the continuing use of the road are necessary for the safety of the public.

As long as the road remains open, District Maintenance Staff should continue with routine maintenance activities and periodically monitor the underlying dam. Staff should notify the DSE immediately if the dam's condition worsens.

For roads programmed for improvements, the DSE will advise the Office of Project Delivery on whether to pause or move forward with project development activities. This decision will be based on the inspection findings and needed repairs. The Program Manager is to provide updates on the project and dam status during monthly Primary Meetings.

The DSE will initiate a follow up letter to the dam owner outlining the steps SCDOT will need to take based on the inspection findings along with possible additional actions if the findings go unresolved or conditions worsen. The owner will be requested to provide a schedule for

completing the repairs. The DSE will provide SCDES with a copy of this letter (for all dams) and will request SCDES to copy SCDOT on further correspondence related to regulated dams.

The District Engineering Administrator is responsible for monitoring the status of repair efforts or lack thereof and brief the Chief Engineer for Operations and DSE periodically for both regulated and unregulated dams.

SCDOT Options when Dam Conditions Force Road Closure

If the condition of the underlying dam requires SCDOT to close the road, the procedures described in Engineering Directive 14 are to be followed.

The DSE will initiate written communication with the dam owner specifying the reasons necessitating the road closure and the remaining options to resolve the matter. Continued coordination with SCDES is essential when the conditions reach this point, especially for regulated dams. At the direction of the DSE, potential options in addressing the road closure include:

1. The owner can repair the dam to acceptable engineering standards suitable to support the road. In reliance on an engineer's certification that the dam has been properly repaired, SCDOT would then reopen the road and resume its operation and maintenance responsibilities.
2. The owner can remove the dam and SCDOT may reconstruct the road by installing a pipe, culvert, or bridge allowing water to pass underneath the roadway. Since the lake/pond would be drained, responsibilities of each party for engineering services and all other costs need to be clearly identified.
3. The owner can decide not to repair the dam. In this option, SCDOT would need to decide on the necessity of the road. If it is determined that the road is not an essential part of the State Highway System, SCDOT could remove the road from the State Highway System in accordance with Engineering Directive 41. If SCDOT determines that the road is essential, a detour would remain in place while a solution is determined that is in the best interest of the public. One possible solution would have SCDOT exercise its rights under the easement and through its power of eminent domain to restore the road for public use. In this situation, as SCDOT has no statutory to own or maintain dams, the dam would not be repaired but rather breached and replaced with a pipe, culvert, or bridge structure in order to reopen the road.
4. In rare circumstances, SCDOT may enter into a participation agreement with the dam owner to assist with the repairs. Legal will lead the development of an agreement to ensure SCDOT's liability and future responsibilities are clearly documented.

Recommended by: Tad Kitowicz
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History: Issued on August 18, 2026

ⁱ With the exception of the Bluff Road dam at Adams Pond.

ⁱⁱ A court order vested ownership in SCDOT of the Bluff Road dam at Adams Pond.

ⁱⁱⁱ See attached Dam Safety Inspection Checklist.