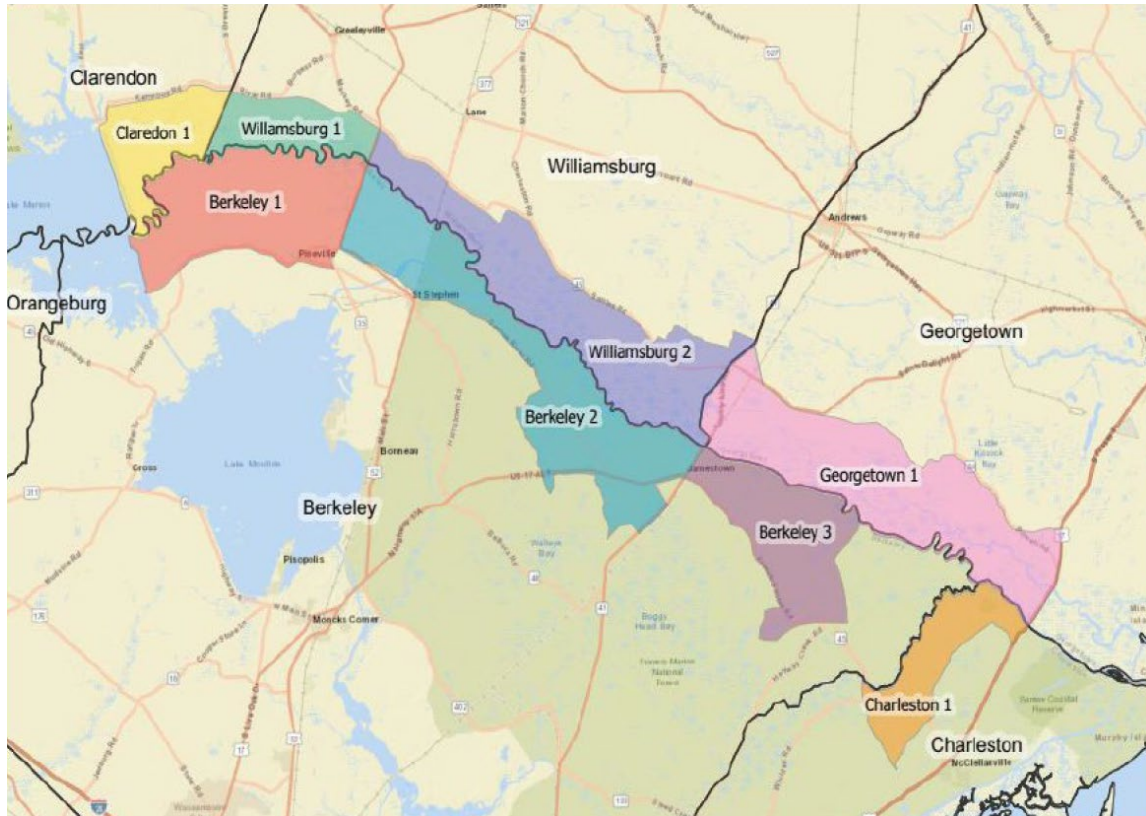


SANTEE NORTH DAM 2025 FUNCTIONAL EXERCISE

September 18, 2025



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I. INTRODUCTION

Santee Cooper is directed by the Federal Energy Regulatory Commission (FERC) to conduct annual exercises to test emergency preparedness and response in the event of a catastrophic dam breach. In compliance with the FERC directive, this year Santee Cooper will conduct a "Functional" Exercise of Santee Cooper's Emergency Action Plan for Dam Failure. The exercise will be held on September 18, 2025, from 9:00 a.m. to 2:00 p.m. at Santee Cooper's Operation Center Building in Moncks Corner, SC with a virtual Webex option to connect to the County and State Emergency Operation Center's (EOC's).

State and local governments should be prepared to test the emergency operation plans that have been developed to support Santee Cooper's Emergency Action Plan. The focus of this year's exercise will be the Santee North Dam; a 4.5 mile long hydraulic-filled earthen dam located on the eastern end of Lake Marion depicted by structure 1 in the Santee Cooper Project Map below.

Figure III-1. Santee Cooper Project Map



II. PURPOSE AND SCOPE

While the probability of a catastrophic failure of the Santee North Dam is remote, emergency action plans must be developed, exercised and updated periodically in a realistic manner. A failure or threatened breach of the dam would impact residents, industry, transients and travelers in the potential inundation zones downstream of the dam. An actual break may cause severe damage or degradation to rail and highway bridges and other infrastructure in the flooded areas. Many state, county and municipal government agencies would be immediately involved in both response and recovery efforts.

The focus of this exercise is to ensure the participants are familiar with individual roles, procedures, and responsibilities outlined in the EAP and Santee Dam Site Specific Plan. The “Functional” exercise will be executed through discussion in a meeting format led by a facilitator from SC Emergency Management Division and Santee Cooper. Effectiveness will be determined by comments from participants and the impact this feedback has on evaluating and revising policies, plans and procedures. There will be no utilization of equipment or deployment of resources. Therefore, all activities will be simulated, and participants will interact through discussion. A scenario will set the scene for the simulated events. The scenario will describe what has happened and what is known up to the time of the exercise.

As the exercise progresses, the facilitator will advance to predefined times after the breach, allowing all parties to accomplish their objectives, regardless of how soon after a breach they will be affected.

III. PARTICIPATION

South Carolina Emergency Management Division

- *Activation:* Partial EOC - Planning to pull in ESF's involved with Santee Site Specific
- *Location:* 2779 Fish Hatchery Road, West Columbia, SC
- *Contact:* Savannah Baker (803-318-6564)
- *S/C Liaison:* TBD
- *PIO:* Tiffanie Barrett, Bridget Frame, Madeline Johnson

Santee Cooper

- *Activation:* Full EOC
- *Location:* 1 Riverwood Drive, Moncks Corner, SC
- *Contact:* Kelsey DiBiase (803-984-0375)
- *SCEMD Liaison:* Jack Gregory Regional Emergency Manager
- Dam Safety Liaison:
 - Kelsey DiBiase
 - Mikki Crocker

- Shiloah Burbage
- Michael DuPre
- Brandon Tennes
- Fleet Murphy
- Russell Bagwell
- Will Tindal
- Shea McMakin – CIMT

- PIO: Emily Tyner, Mollie Gore, Nicole Aiello

Berkeley County

- *Activation:* Partial EOC
- *Location:* 1003 Highway 52, Moncks Corner, SC
- *Contact:* Will Rochester (Will.rochester@berkeleycountysc.gov)
- *S/C Liaison:* TBD
- *PIO:* Jenna-Ley Walls, Taylor James

Clarendon County

- *Activation:* Partial EOC
- *Location:* 219 Commerce Street, Manning, SC
- *Contact:* Allen Lee (alee@clarendoncountygov.org)
- *S/C Liaison:* TBD
- *PIO:*

Charleston County

- *Activation:* Partial EOC
- *Location:* Awendaw/McClellanville Fire Department (AMFD) 1131 Guerin Creek Bridge Road, Awendaw, SC
- *Contact:* Patrick Dollason (pdollason@charlestoncounty.org)
- *S/C Liaison:* TBD
- *PIO:* Chloe Field, Peggy Rose, Kaitlyn Jordan

Williamsburg County

- *Activation:* Partial EOC
- *Location:* 2086 Thurgood Marshall Highway, Kingstree, SC
- *Contact:* Tim Hood (843-401-9715)
- *S/C Liaison:* TBD
- *PIO:*

Georgetown County

- *Activation:* Partial EOC
- *Location:* 2222-C Highmarket Street, Georgetown, SC
- *Contact:* Brandon Ellis (bellis@gtcounty.org)
- *S/C Liaison:* TBD
- *PIO:*

IV. DAY'S AGENDA

0825	Scenario: ECC received a call regarding muddy water entering the borrow pit located behind the North Dam	
0830	Registration Begins Scenario: ECC Contacts John Steed (Supervisor of Lake and Spillway Operations)	
0845	Scenario: John Steed arrived at location and confirmed a piping failure. Toe of the dam begins to slump.	
0855	Scenario: John Steed contacts ECC and made it known "Imminent Failure" has occurred.	
0900 - 1000	Imminent Failure of Santee North Dam declared + 4 Hours	
1000 – 1015	Scenario Debrief & Prep for Next Jump	
1015 – 1115	12 Hour Jump	US Hwy 52 – Flooded
		St. Stephen RR – Flooded
		Clarendon, Williamsburg, Berkeley
1115 – 1130	Scenario Debrief	
1130 - 1230	Break for Lunch	
1230 - 1245	Prep for Next Jump	
1245 – 1345	24 Hour Jump	US Hwy 52 - Flooded
		St. Stephen RR - Flooded
		US Hwy 17A & State Hwy 41 - Flooded
		Jamestown RR - Flooded
		Clarendon, Williamsburg, Berkeley, Georgetown
1345 – 1400	Scenario Debrief & Prep for Next Jump	
1400 – 1500	48 Hour Jump	St. Stephen RR - Flooded
		US Hwy 17 & 701 - Flooded
		Jamestown RR – Flooded
		Clarendon, Williamsburg, Berkeley, Georgetown, Charleston
1500 – 1530	Hot Wash & Closing Remarks & AAR Survey	

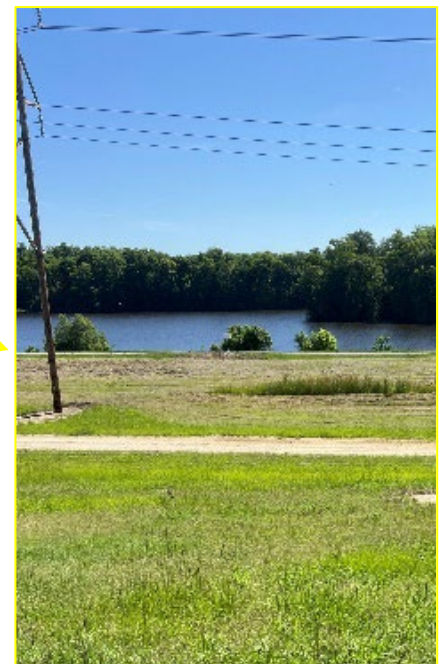
V. SCENARIO

0825 on September 18, 2025, an employee at Santee Cooper's Energy Control Center receives a call from a fisherman reporting muddy water flowing into the borrow pit just downstream of the Santee North Dam. At 0830, the system controller contacted Mr. John Steed, Supervisor of Lake and Spillway Operations, and asked him to investigate the scene and verify the report.

Mr. Steed arrived at North Dam at approximately 0845 to find a significant amount of water and material exiting the bank of the borrow pit. It was evident at this time that a piping failure of the dam was in progress, causing a large flow of water into the borrow pit and some slumping in the downstream toe area of the dam.

By 0855, it became apparent that the magnitude of deterioration and flow was increasing, making attempts to repair the dam ineffective. Mr. Steed contacted the system controller and notified him that the situation was rapidly deteriorating and that a large breach of the dam was probable. An **"Imminent Failure"** alert was declared at 0900, indicating that failure is imminent or has occurred.

Within 15 minutes (approximately 0915), the downstream embankment of the dam deteriorated to the point that the crest began to slump and water directly from Lake Marion began to exit through the developing breach. Minutes later, the embankment eroded to approximately 1,000 feet, causing downstream impacts as illustrated in the EAP.



VI. OBJECTIVES

Santee Cooper

1. Reveal the strengths and weaknesses of the EAP, including specified internal actions, external notification procedures, and adequacy of other information, such as inundation maps. Discuss alert, warning and communication systems and procedures.
2. Reveal deficiencies in resources and information available to the dam owner and emergency management authorities.
3. Improve coordination efforts between the dam owner and emergency management authorities. Close coordination and cooperation among all responsible parties is vital for a successful response to an actual emergency. Discuss and verify accuracy of notification procedures and call-down lists.
4. Clarify the roles and responsibilities of key personnel and demonstrate knowledge of the EAP.
5. Improve individual performance of the people who respond to the dam failure or other emergency conditions. Discuss Santee Cooper's ability to notify key personnel to respond in a timely manner.
6. Discuss methodology for accurate and timely distribution of information to the public. Gain public recognition of the EAP.
7. Send final report to FERC about the exercise (60 days after the exercise date)

South Carolina EMD

8. Exercise the ability to respond to an imminent North Dam Failure with basis on county plans and the Santee Cooper EAP.
 - i Operational Coordination
9. Exercise the public information and warning capability by the county through available methods.
 - i Public Information & Warning
10. Exercise public response actions for citizens including evacuation, search, rescue, sheltering, and other mass care activities.
 - i Environmental Response/Health and Safety
11. Exercise infrastructure protection and restoration based on county level prioritization.
 - i Infrastructure systems

Counties (Berkeley, Clarendon, Charleston, Georgetown, Williamsburg)

12. Exercise the ability to respond to an imminent North Dam Failure with basis on county plans and the Santee Cooper EAP.
 - i Operational Coordination
13. Exercise the public information and warning capability by the county through available methods.
 - i Public Information & Warning
14. Exercise public response actions for citizens including evacuation, search, rescue, sheltering, and other mass care activities.
 - i Environmental Response/Health and Safety
15. Exercise infrastructure protection and restoration based on county level prioritization.
 - i Infrastructure systems

VII. EXERCISE PARTICIPANTS

Santee Cooper

1. Dam Safety
2. General Construction Services
3. Corporate Incident Management Team (CIMT)
4. Energy Control Center (ECC)
5. Corporate Communication
6. Jefferies Generating Station (JGS)
7. Law Enforcement and Security
8. Power Delivery
9. Legal
10. Cyber Security
11. Property Management
12. Environmental Services
13. Safety
14. Procurement
15. Generation

South Carolina Emergency Management Division (SCEMD)

1. South Carolina Emergency Management Division
2. Protective Services/ Emergency Management Unit (State Law Enforcement Division)
3. SC Emergency Response Task Force SC-TF, SC-HART, FF-MOB
4. SC Department of Public Safety (Highway Patrol)
5. South Carolina State Fire
6. SC Department of Admin (OTIS)
7. SCDOT
8. SC Office of Regulatory Staff
9. Division of Air Quality Bureau of Regional and Laboratory Services
10. SCDES Dam Safety Program
11. South Carolina Department of Natural Resources

Berkeley County

12. Berkeley County Emergency Management
13. Berkeley County Sheriff's Office
14. Berkeley County Fire Services
15. City of North Charleston

Charleston County

16. Charleston County Emergency Management Department
17. Charleston County Sheriff's Office
18. Charleston County Building Services
19. Charleston County Planning Department
20. City of Charleston

Clarendon County

21. Clarendon County Emergency Management
22. Clarendon County Sheriff's Office

Georgetown County

23. Georgetown County Emergency Management
24. Georgetown Police Department

Williamsburg County

25. Williamsburg County Emergency Management
26. Williamsburg County Sheriff Department

Federal Agencies

27. Federal Energy Regulatory Commission (FERC)
28. United States Army Corps of Engineers (USACE) Charleston & Savannah District
29. United States Army Corps of Engineers (USACE) Charleston District St. Stephen Hydro
30. United States Coast Guard (USCG) Sector Charleston
31. United States Navy – NIWC Atlantic
32. National Weather Service (NWS)
33. National Weather Service (NWS) Charleston
34. USGS – South Atlantic Water Science Center
35. Naval Nuclear Power Training Unit
36. National Weather Service Wilmington NC
37. Joint Base Charleston

Private Agencies

38. South Carolina Dominion Energy
39. Duke Energy

VIII. ATTACHMENTS

1. Invitation
2. Map of Santee Cooper Moncks Corner Main Complex
3. Santee Cooper's Emergency Action Plan for Dam Failure
4. SCEMD's Santee Dam Site Specific Plan