

APPENDIX 4
(SOUTH CAROLINA DAM FAILURE EMERGENCY RESPONSE PLAN)
TO THE SOUTH CAROLINA EMERGENCY OPERATIONS PLAN

I. INTRODUCTION

- A. A "Dam" is defined as any artificial barrier, together with interrelated works, including but not limited to dams, levees, dikes or floodwalls for the impoundment or diversion of water or other fluids where failure may cause danger to life or property.
- B. A dam failure is characterized by the sudden, rapid and uncontrolled release of impounded water or the likelihood of such an uncontrolled release.
- C. There are lesser degrees of failure but any malfunction or abnormality outside the design assumptions and parameters which adversely affects a dam's primary function of impounding water is considered a failure.
- D. These lesser degrees of failure can progressively lead to or heighten the risk of a catastrophic failure. However, these type failures may also be addressed, minimized or halted through corrective actions.

II. PURPOSE

- A. Identifies how County, State and Federal agencies will prepare, respond, recover and mitigate resulting from a failure of regulated dams in South Carolina.
- B. Provides a guideline to managing State assistance to those threatened from a dam failure.
- C. Identifies roles and responsibilities of agencies at the local, State and Federal levels are tasked with the safety and security missions for regulated dams in South Carolina and describes how agencies will coordinate with Federal, State, and local agencies.
- D. Tasks State Emergency Support Functions (ESF) to provide primary or support roles during a dam failure incident.
- E. Describes how the State will mobilize resources and conduct activities to support local emergency management efforts through preparedness, response, recovery, and mitigation planning for a dam failure impacting South Carolina.

III. SCOPE

- A. Supplements the South Carolina Emergency Operations Plan (SCEOP).
- B. Applies to all regulated dams within or affecting South Carolina including the dams regulated by Federal Energy Regulatory Commission (FERC), US Bureau of Reclamation (BOR), US Army Corps of Engineer (USACE), and the SC Department of Health and Environmental Control (SCDHEC).

- C. Provides guidance to departments and agencies involved in dam failure response activities.
- D. Identifies the actions required to respond to a dam failure incident.

IV. ASSUMPTIONS

- A. A dam failure at one or multiple larger dams could potentially destroy infrastructure and quickly exceed State and local resources.
- B. For large dam failures, South Carolina Emergency Management Division (SCEMD) will request the Governor declare a State of Emergency.
- C. The State may require external resources to respond to a dam failure event.
- D. A dam failure incident at any dam affect the ability of the State to respond to the event.
- E. In the event of a dam failure in State, local, State, Federal, and dam owner resources will be utilized.
- F. Affected primary and secondary roads may not be functional for extended periods of time.
- G. Damage to transportation, communication, and other infrastructure systems could isolate individuals and/or communities within the dam failure inundation areas.
- H. Shelters in the impacted area identified for use during other natural disasters may not be suitable for use.
- I. Reception Center and Sheltering operations may take place outside the impacted area.
- J. Significant aid from State/Federal government may not be readily available for at least 72 hours after a dam failure.
- K. The SC Logistical Plan, Statewide Mutual Aid Agreement, Emergency Management Assistance Compacts (EMAC), and other mutual aid agreements may be implemented.
- L. Established local and regional mutual aid agreements will be honored to the extent possible.

V. FACTS

- A. There are thousands of unregulated dams throughout South Carolina. Most of the smaller dams are used primarily for recreational activities such as swimming, boating and fishing.

- B. The most commonly used structural material for the dams is earth. However, there are several rock-fill, masonry and concrete dams.
- C. SCDHEC is the monitoring authority for most regulated dams in South Carolina and is responsible for providing licenses to erect new dams, as well as permits for repairing, altering, or removing existing dams.
 - 1. These directives may include emergency orders, inspection reports, non-emergent repair orders, and notice of violations, in accordance with state DHEC dam regulations.
 - 2. Approximately 2,700 South Carolina dams are regulated, and managed under State law by DHEC.
- D. Although most dams in South Carolina are not regulated, it is generally understood that the dam owner is liable should a failure occur.
- E. All dams in South Carolina fall under the purview of SCDHEC with the following exceptions:
 - 1. Less than 25 feet in height from the natural bed of the stream or watercourse measured at the downstream toe of the dam, or less than 25 feet from the lowest elevation of the outside limit of the dam, if it is not across a stream channel or watercourse, to the maximum water storage elevation and has an impounding capacity at maximum water storage elevation of less than 50-acre feet unless a situation exists where the hazard potential as determined by the department is such that dam failure or improper reservoir operation may cause loss of human life.
 - 2. Owned, operated or licensed by the FERC, the South Carolina Public Service Authority (Santee Cooper), the BOR, the USACE, or other responsible Federal licensing agencies considered appropriate by the SCDHEC.
 - a. The FERC, through licenses issued to utility companies and municipalities, regulates 36 hydroelectric dams affecting South Carolina (see Tab 1 – List of FERC, USACE, BOR Dams In or Affecting South Carolina).
 - b. The USACE regulates four dams in South Carolina; as well as several dikes and locks along the Savannah River, and one dam in the Santee River Basin (see Tab 1 – List of FERC, USACE, BOR Dams In or Affecting South Carolina).
 - c. The BOR regulates one National Park Service dam, located at Ninety-Six National Park in Ninety-Six, SC in Greenwood County (see Tab 1 – List of FERC, USACE, BOR Dams In or Affecting South Carolina).

3. Upon which the Department of Transportation, or County or municipal governments have accepted maintenance responsibility for a road or highway where that road or highway is the only danger to life or property with respect to failure of the dam.

VI. SITUATION

- A. A dam breach in South Carolina could have adverse effect on the State's infrastructure.
- B. Almost every County in South Carolina could be affected by a dam failure within its boundaries, by a dam failure in an adjacent County, or a dam failure elsewhere within the State.
- C. Metropolitan areas and municipalities could be severely impacted.
- D. Although no large FERC regulated dams have failed in South Carolina, numerous significant and destructive state and non-state regulated dam failures occurred in South Carolina during the October Floods of 2015. These incidents were primarily caused by the heavy rainfall event.
- E. The integrity of the dams may be challenged or compromised by upstream flash floods, earthquakes, neglect, bombs, civil disorder, rapid runoff, cracks, obstruction of spillways, or vandalism or any combination of the above. The resulting dam failure could result in personal injury or death, and property damage, as well as creating cascading effects including the risk of failures of downstream dams.
- F. For Dam "Structure" Classification Levels for Dams Affecting South Carolina, see Tab 2.
- G. For Dam "Failure" Classifications Affecting South Carolina, see Tab 3.

VII. CONCEPT OF OPERATIONS

- A. General
 1. SCEMD is the primary agency for this Appendix and is responsible for developing, coordinating, and maintaining procedures to support this Appendix.
 2. SCEMD plans for the consequence management response to anticipated dam failures, breaches, and overtopping of dam structures.
 3. SCEMD, SCDHEC, and affected county Emergency Management agencies coordinate for an organized response to address or resolve known or discovered issues/concerns at dams.
 4. SCEMD consults with the following agencies to monitor observed and forecasted flooding events that might lead to possible dam failures:

- National Weather Service (NWS)
 - Southeast River Forecast Center (SERFC)
 - US Geological Survey
 - SC Department of Natural Resources (SCDNR)
 - SCDHEC
5. In the event of a dam failure, state agencies (e.g., SCEMD, SEOC, and ESFs) may provide support to local governments, as required.
 6. SCEMD coordinates the Emergency Action Plan notification rosters with State and local Emergency Management organizations to ensure accuracy and consistency.
 7. The SCEMD Dam Safety Coordinator synchronizes off-site response with dam owners and impacted counties to develop a consequence management strategy, called Site-Specific Plans for FERC regulated dams.
 8. Affected governments and individuals should be prepared to meet emergency needs during the first three days following the dam failure.
 9. The SEOC and County Emergency Managers in the potentially impacted areas should identify and be prepared to designate Alternate EOCs should there be the risk of structural damage or actual damage to the primary EOCs.
- B. Federal and State Dam Planning and Exercise Regulations and Guidelines
1. On-Site Planning Coordination
 - a. Detailed Emergency Action Plans (EAP) exist for federally regulated dams. These plans include dam failure threat scenarios, EAP activation conditions, notification and warning protocol, and downstream affects (inundation maps).
 - b. Federally regulated dam owners are required to have Emergency Action Plans updated annually.
 - c. For State regulated dams, EAPs are only required for high or significant hazard dams. These EAPs mostly contain dam failure conditions and owner information, and many do not have inundation maps. (See Tab-4 for Planning and Exercise Requirements for Regulated Dams).
 2. Off-Site Planning Coordination (Site Specific Planning)
 - a. Developing Site Specific Plans is coordinated effort between all emergency organizations and the dam owner to coordinate a

consequence management strategy (off-site plan) to evacuate and shelter populations being threatened, through developing Site Specific Plan.

- b. For dam failure, South Carolina has developed a process to include the dam owner, affected counties, state emergency response teams, and all stake-holders in the development of Site Specific Plans. These plans detail impacts to infrastructure, emergency procedures for alert and notification, evacuation, mass care, and responder roles and responsibilities. Supporting appendices detail pre-scripted messages, shelter locations, evacuation routes, and more.
- c. In order to effectively respond to Dam Failures in South Carolina, the planning process has been divided into two types of Plans:
 - Detailed Site Specific Plans. Plans prepared primarily for FERC High Hazard Dams and include detailed response actions for evacuations such as: pre-identifying evacuation zones, evacuation routes and diversion routes; affected infrastructure; and areas not to be directly impacted by a dam's projected inundated area.
 - Abbreviated Site Specific Plans. These plans are developed only for FERC High Hazard Dams with reduced potential impacts regarding affected populations, infrastructure, extent of inundation, etc. These plans are smaller and address aspects of response such as planning for evacuation/diversion routes, and shelters.
- d. Dam Failure Scenarios. In order to determine the likely effects a dam breach scenario could have on infrastructure, all FERC regulated High Hazard dam owner/utilities are expected to provide Geographical Information System (GIS) maps of the anticipated inundation areas to State and local agencies in order to enable the State, Counties and municipalities to identify affected infrastructure.
- e. FERC recommends the dam owners use two dam failure planning scenarios on the inundation maps - "Sunny Day Failure" and "Hydrological Failure" conditions.
 - (1) Fair Weather (Non-Hydrologic) Failure (Sunny Day) breach is a dam failure that occurs during fair weather (i.e., non-hydrologic or non-precipitation) conditions.
 - (2) Hydrologic Failure Hydrologic (Probable Maximum Flood) breaches that occur with extreme precipitation and runoff are termed "rainy day" or hydrologic failures.

**For off-site planning (Site Specific Plans), one scenario is used, that is the larger extent of inundation (worse-case scenario).

- f. These inundation scenarios are overlaid onto the following critical infrastructure files to determine affects:
- Transportation arteries (e.g., interstates, highways, streets, roads, rail lines and airports)
 - Communications (e.g., telephones lines and stations and broadcast media)
 - Public works and engineering outlets (e.g., water treatment, sewer and waste water facilities)
 - Firefighting resources (e.g., hydrants, tanks and refill locations, fire stations)
 - Mass Care
 - Health and medical facilities (e.g., hospitals, emergency medical service stations, healthcare facilities)
 - Cemeteries and graveyards
 - Potential Hazardous material sites (e.g., above ground and underground storage units, pipelines carrying hazardous materials and landfills)
 - Energy providers (e.g., electric facilities, distribution lines and generating stations)
 - Law enforcement facilities
 - Schools
 - Animal care facilities (e.g., zoos, poultry farms and commercial livestock farms)

C. Alert and Notifications

1. Emergency Management Alert and Notification. Once an emergency is confirmed at the dam, the owner should issue a classification level, dependent on severity of dam breach, simultaneously make internal notifications, and notify the affected Counties, SCEMD, and NWS. (See Tab 5 - Dam Failure Notification Protocol when issue(s) are reported at dam)
2. Federal
 - a. Federally regulated dam owners are required to develop Notification Flowcharts to identify who is to be notified of a dam safety incident,

by whom, and in what order (FEMA-64). Specifically, the notification chart should include:

- Emergency level of the Notification Flowchart if more than one flowchart is required
 - Individuals who will notify dam owner representatives and/or emergency management authorities
 - Prioritization of notifications
 - Individuals who will be notified
- b. Dam owners shall maintain communications with the affected County EOCs and SEOC for the duration of the emergency. (See Tab 3 Dam “Failure” Classifications Affecting South Carolina)
3. State
- a. After receipt of initial notification, the State Warning Point (SWP) will execute the Dam Failure Checklist which includes procedures for verifying and confirming notification of affected Counties.
- b. Depending on the magnitude, and anticipatory effects of a dam failure, the SEOC and affected County EOCs may or may not activate for a “Failure is Imminent or Has Occurred” or a “Potentially Hazardous Situation Developing” situation.
4. County. Based on initial information received, county may:
- Send agency to scene to evaluate
 - Determine if EOC should be activated
 - Determine whether or not roads should be closed
 - Swift water rescue may be needed
 - Evacuations to higher ground
 - Shelters or reception centers be available
5. Alert and Notification of the Populace
- a. Siren Systems
- (1) Several regulated dams in South Carolina use siren systems to alert the populace and turn on radios/televisions and listen to Emergency Alert System (EAS) messages.

- (2) These dam owners should test their sirens often to ensure functionality, and according to the dam owner's regulatory procedures.
- (3) Dam owners, in coordination with the County Emergency Management and/or the SEOC/SWP, may activate their sirens to warn portions of, or all downstream residents.

b. Automated Telephonic Notification System

- (1) Several Counties have systems to conduct automated telephonic notifications. Notification will be prioritized (or phased) based on threat (such as speed flow of water).
- (2) The SWP will initiate Code Red to alert emergency responders and the threatened population of possible danger.

c. Tone Alert Radio Notifications.

Once notified by dam owner that deteriorating conditions are observed at the dam, the NWS may activate tone alert Radios and issue either Flash Flood Watch or Flash Flood Warning for the affected areas, as appropriate.

d. Emergency Alert System

- (1) The SWP or affected Counties may activate EAS to broadcast emergency action messages after verifying notification of a potential or imminent dam failure.
- (2) The SEOC and/or Counties will coordinate the activation of the sirens with the initiation of the EAS message broadcast.

e. Counties or municipalities will use door-to-door alert notifications as a backup and as appropriate.

D. Security Requirements

1. At Dam

- a. Dam owner security personnel will control entrance to the dam(s) and their Emergency Operations Facilities (EOF).
- b. Smaller dams may have to rely on local law enforcement resources.

2. Downstream and Upstream Areas

- a. Upon declaration of "A Failure is Imminent or Has Occurred" classification:

- (1) The SC Department of Public Safety (SCDPS) in coordination with ESF-16 (Emergency Traffic Management) will coordinate with local law enforcement authorities to assist in sealing off the inundation areas to include coordinating ingress and egress points, and controlling access points based on evacuation and traffic management plans.
 - (2) The South Carolina Law Enforcement Division (SLED)/ESF-13, will coordinate with local law enforcement authorities to assist in general law enforcement and security operations.
 - (3) DNR, in coordination with ESF-16 (Emergency Traffic Management) and ESF-13 (Law Enforcement), will coordinate the clearance of waterways/boat landings and preventing unauthorized waterway access to areas downstream (in the floodplain) and upstream from the dam or the secure area.
 - (4) As required, ESF-1 (Transportation) will coordinate air space management.
- b. Use of South Carolina National Guard (SCNG) assets and implementation of the State Law Enforcement Mutual Aid Plan (SLEMAP) may be required.
 - c. Some or all of the above actions may be required during “A Potentially Hazardous Situation Developing” classification level, as well.
 - d. A credible terrorist threat may also require increased security during either a “Failure is Imminent or Has Occurred” classification or “Potentially Hazardous Situation Developing” classification declaration.

E. Evacuation

1. Counties and municipal governments are responsible for evacuations and support operations. Considerations should include transportation, sheltering, health and medical, emergency traffic management, animal and agricultural emergency response, and military support,
2. Immediately after receiving notification of a “potential” or “actual” dam failure SCEMD, County EOCs and the dam owner should coordinate requirements for a precautionary, limited evacuation of areas closest to, or downstream from of the dam.

- a. If water from the affected dam is discharging slowly, the County Director may coordinate with SCEMD to make a recommendation to the Governor to evacuate specified areas.
- b. If conditions are deteriorating rapidly, SCEMD may recommend The Governor evacuate selected areas, or the County Directors may coordinate a local evacuations.

3. Evacuation Zones

- a. The purpose for identifying evacuation zones is to inform potentially affected residents that their homes may be inundated; establish what transportation nodes that may be impacted; and direct affected populations to evacuate in an organized manner, moving in one direction, to avoid confusion.
- b. These zones must be:
 - Describable over radio/TV media to public
 - Based upon easily identifiable roadways or natural features for boundary identification
 - Generally based on the inundation areas
- c. Evacuation zone information can be found in the following dam Site Specific Plans:
 - Lake Murray (Attachment C)
 - Santee (Attachment C)
 - Lake Wateree (Attachment A)
 - Pinopolis (Attachment C)
 - Cherokee Falls (Attachment A)
 - Lake Secession (Attachment A)
 - Lake Greenwood (Attachment A)

4. Traffic Management

- a. The County Sheriffs, in coordination with the SCDPS/ESF-16 (Emergency Traffic Management) and other law enforcement agencies, will coordinate traffic evacuation activities.
- b. For pre-established evacuations zones, the Counties have established evacuation routes, and destination shelter or Reception Center locations for residents in each zone.

- c. For pre-established evacuations zones, the SCDPS has pre-selected Traffic Control Points (TCP) along evacuation routes and at selected points to restrict movement into the inundation area.
- d. SCDOT/ESF-1 (Transportation) will determine routes around the inundation area and coordinate with SCDPS/ESF-16 (Emergency Traffic Management) to establish roadblocks and TCPs or Diversion Points to facilitate the flow of traffic and ensure traffic is routed correctly with a minimum of delay.
- e. In most cases, diversion routing will be set-up and begun in Counties outside of inundation areas and will be maintained for the duration of the inundation, and the resulting response and recovery.

5. Special Evacuation Requirements

- a. The affected Counties are responsible for identifying the need and providing transportation to evacuees lacking personal transportation or who require functional needs and special needs transportation. State assistance may be available, upon request, during “Potentially Hazardous Situation Developing” events.
- b. Priority of evacuation assistance will be given to facilities and populations located nearest the inundation areas.
- c. Consideration will be given to evacuating schools in advance of a general population evacuation.
- d. Evacuation considerations may also be given to functional need and special need populations.
- e. Licensed medical/health care facilities are required to develop and coordinate evacuation plans with local government.
- f. State and County corrections organizations will develop and coordinate plans with local government to relocate prisoners.

6. Re-Entry. See Section VI (Concept of Operations) of the SCEOP.

F. Sheltering

- 1. Considerations for emergency sheltering and evacuations will include additional populations (such as tourists, vacationers, and transients) in the State for the emergency response effort.
- 2. In the event of an evacuation for a dam failure, SCDSS and/or the American Red Cross (ARC) will open shelters in the affected County, outside of the inundation area, or in a neighboring (receiving) County if necessary.

3. The County, SCDSS, and ESF-6 (Mass Care) partners manages general population shelter operations in coordination with the Counties and ESF-6 (Mass Care).
4. DHEC manages Special Medical Needs Shelter (SMNS) operations in coordination with the affected or neighboring Counties and ESF-6 (Mass Care).
5. Sheltering procedures.
 - a. ARC/SCDSS will identify the sheltering requirement, the location, and scale upward if necessary to meet the demand for evacuees, outside of the impact zone, as needed.
 - b. DHEC will open SMNSs in the affected area or in designated host neighboring County(ies) as required.
 - c. The Governor, or appropriate local authority may order County schools located in the impacted or neighboring counties to be closed, and then designated and utilized as shelters.
 - d. SCDSS, ARC, and other ESF-6 (Mass Care) partners will manage feeding support to the sheltering operations.
6. Sheltering
 - a. Based on the evacuation zones and associated evacuation routes, neighboring counties may need to shelter some of the affected county evacuating public.
 - b. While specific dam failure shelters may have not been identified, any current designated shelters may be available for use.

G. Public Information

1. See Annex 15 (Pubic Information) to the SCEOP for information on Public Affairs operations.
2. At a minimum; SCEMD, the affected Counties, and the larger federally regulated dam owners will provide public information personnel to staff the Joint Information Center (JIC).
3. Public Education
 - a. Federally regulated dam owners should develop a public information program to address potential hazards resulting from a dam failure, appropriate actions, self-protection, and reference State and local dam failure emergency response programs.

- b. Also, federally regulated dam owners should provide this information via pamphlets, brochures, Company websites and social media. This information may include the following:
 - (1) Possible causes of dam failures and potential threats to the persons and property in the affected areas.
 - (2) Public alert and notification mechanisms.
 - (3) Means to keeping informed about dam failure.
 - (4) Appropriate actions for self-protection.
 - (5) Sources of additional information prior to, during, and following an emergency.
 - (6) If available, evacuation sectors, routes, sheltering, and life-saving precautions.
 - (7) Information specifically relating to special needs and functional needs segments of the population.
 - c. Dam owners may disseminate preparedness information primarily through: print media, company website, and or social media.
 - d. The dam owner should continue to provide additional public education information throughout entire incident.
4. For examples of EAS Messages and News Releases, see Annex 1 (Lake Murray Dam Site Specific Plan), Annex 2 (Santee Dam Site Specific Plan) and Annex 4 (Pinopolis Dam Site Specific Plan).

VIII. RESPONSIBILITIES

A. General

- 1. As required, State agencies assigned specific missions as outlined in this Plan will develop specific procedures and checklists necessary to accomplish their assigned tasks.
- 2. Although, localized disasters seldom qualify for federal funding, a dam failure may evolve into a federally declared disaster, and State, County and local governments and agencies should track and document costs for possible future re-imburement.

A. Regulated Dam Owners

- 1. Ensure compliance with FERC, BOR, USACE or DHEC guidance.

2. Develop, coordinate, test, and implement dam failure EAPs.
3. Provide EAPs to State and affected County Emergency Management agencies.
4. Participate in the development and update of Site Specific Plans for effected dams.
5. Ensure dam security.
6. Inspect dams as required by FERC, BOR, USACE or DHEC guidance.
7. Participate in periodic drills and exercises of appropriate EAPs to ensure plans are accurate and feasible.
8. Conduct dam failure response training in accordance with State and Federal emergency regulations and response requirements.
9. Maintain personnel and equipment in a state of readiness.
10. If applicable, install, operate, maintain, and periodically test siren system.
11. For federally regulated dams, coordinate with Counties and ESF-15 (Public Information), develop a public information program (i.e. pre-scripted news releases, public information materials).
12. Provide timely information and recommendations to the SWP/SEOC and affected Counties during both a “Failure is Imminent or Has Occurred” and “Potentially Hazardous Situation Developing” classification level events.
13. Ensure State and affected Counties are immediately notified if deteriorating conditions are detected or likely.
14. Initiate failure classification levels as detailed in respective EAP.
15. Provide timely situation updates to threatened jurisdictions and SWP/SEOC.
16. For federally regulated dams, provide authorized spokesperson to support public information activities at the JIC.
17. Prepare and disseminate public information through appropriate news media and in coordination with ESF-15 (Public Information).
18. Secure dam during either a “Failure is Imminent or Has Occurred” classification level or a “Potentially Hazardous Situation Developing” classification level event.

19. Continue to monitor dam and related flood emergency and as conditions at dam improves, or returns to “non-failure” conditions and report status to County and State Emergency Management or SEOC (if activated).
20. For federally regulated dams, notify affected NWS office.
21. Conduct evaluations of dam failure related damage and determine ways to mitigate future failure.

B. County Emergency Management

1. Preparedness

- a. In coordination with the regulatory agencies, dam owners and ESF-15 (Public Information), develop a public information dissemination program (i.e., pre-scripted news releases, public information materials).
- b. Determine most efficient means to notify functional needs and special needs facilities.
- c. Ensure functional need facilities such as schools, daycare centers, and related institutions located in the inundation area can be promptly notified.
- d. Coordinate evacuation traffic management and if necessary develop evacuation zones.
- e. Identify special need and functional need who may have special transportation requirements. Develop corresponding plans to ensure timely evacuation.
- f. Develop a mass care plan to identify shelter locations to support anticipated displaced populations.
- g. Identify special medical need populations with special sheltering needs.
- h. Identify and anticipate the need to use water distribution resources to support the population without water service.
- i. Determine a means to repair or restore water service.
- j. Develop acquisition and distribution plans for obtaining portable toilets to support the population without water/waste service.
- k. Determine mass care and feeding requirements.
- l. Develop debris removal and deposit plans.

- m. Participate in dam failure training and exercises.
2. Response
- a. Support public information and if available, provide an authorized spokesperson to support public information activities at the JIC.
 - b. Ensure functional needs and special needs facilities are notified.
 - c. Activate traffic management and evacuation plans (including health care facilities/nursing homes).
 - d. Coordinate execution of shelter plans to include support for populations with special needs.
 - e. Assist with mass care, feeding, and water distribution.
 - f. Assist with transportation needs.
 - g. Support plans for portable toilets to support evacuated populations.
 - h. Coordinate recovery of un-interred human remains and determine which cemeteries have been affected.
 - i. Coordinate swift water rescue operations.
 - j. Provide the SEOC with reports to include status of dam, evacuation, support services, deaths, injuries, and damages.
 - k. Coordinate with SEOC for resources not available or needs beyond the County's capabilities.
3. Recovery
- a. Coordinate traffic management re-entry plans for evacuees to include re-entry of populations with transportation needs.
 - b. Support displaced populations.
 - c. Assist water distribution to populations without water service.
 - d. Assist with portable toilets to support the population without water/waste service.
 - e. Identify long-term effects to human life, critical infrastructure, personal property, and the affected tributary or river basin and accordingly, develop plan to saves lives and protect property.

4. Mitigation
 - a. Support mitigation actions as required.
 - b. Establish and conduct dam failure mitigation and awareness public education programs.

C. South Carolina Emergency Management Division

1. Monitor potentially threatening conditions affecting South Carolina that may cause deteriorating conditions to dams, and coordinate appropriate warning and response actions.
2. Use Geographic Information System (GIS) and other mapping systems to display maps to assess, and present emergency information about the dam failure.
3. Assist affected Counties and dam owners in developing Site Specific Plans.
4. Analyze FERC, USACE, BOR, and SCDHEC dam owner prepared inundation maps to determine and respond to the threat to infrastructure both downstream and upstream.
5. In coordination with the affected Counties, SCDPS and DOT, develop evacuation zones based on the inundation maps provided by the dam owner.
6. Determine means to produce dam failure inundation maps for regulated dams where no maps exist.
7. Assist dam owners with dam safety training, public information and education.
8. Participate in exercises to test State and local consequence management plans are valid.
9. Support County emergency operations during dam failures.
10. Advise the Governor, State agencies, local government officials, and, if necessary, Federal agencies of severity and magnitude of the dam failure emergency/disaster situation.
11. Coordinate with County, dam owner, and NWS to release consistent emergency information through ESF-15 (Public Information).
12. Coordinate, response for, and resource deployment to areas which have been isolated by damaged infrastructure as a result of a dam failure.
13. As required/requested, assist with obtaining/distributing water to support populations without water service.

14. Maintain and review copies of available Dam EAPs and ensure consistency with State and local protocol.
15. Maintain, update, and distribute this plan on an annual basis.

D. Department of Health and Environmental Control

1. Bureau of Water (Dam Safety)
 - a. Regulate South Carolina state DHEC dams under DHECs regulatory purview.
 - b. Mandate (per DHEC guidelines) owners of “High Hazard” and “Significant Hazard” dams develop EAPs, and review and update annually.
 - c. Ensure County Emergency Managers and have easy access to state regulated dam Emergency Action Plans within their respective counties.
 - d. Inspect DHEC regulated dams on the following schedule:
 - “High Hazard” dams - Bi-annually
 - “Significant Hazard” dams - Every three (3) years
 - Although “Low Hazard” dams are not required to submit an EAP, DHEC will survey the dams every five (5) years to determine any change in their hazard level.
 - e. Conduct statewide dam safety public information and education.
 - f. Coordinate with Federal, State and local agencies to assist in supporting dam safety training.
 - g. Monitor precipitation forecasts that may contribute to dam failures.
 - h. Observe river and stream conditions and forecasts.
 - i. Monitor statewide dam related activities, occurrences, losses, and cause factors. Send dam safety inspectors, if necessary.
 - j. During failure(s), provide DHEC Dam Safety representative during SEOC operations.
 - k. Following a dam failure:
 - Assess damage and determine mitigation methods to improve dam

- Provide licenses to repair existing dams
 - Provide licenses to erect new dams
 - Provide permits for repairing, altering or removing existing dams
1. Initiate directives, including emergency orders, non-emergent repair orders, and notice of violations, in accordance with state DHEC dam regulations.
 2. Office of Public Health Preparedness
 - a. Plan for, establish and operate SMNS as needed.
 - b. Identify impacted health care facilities and nursing homes, review effected health care facilities and nursing home evacuation plans and verify notification mechanisms.
 - c. Assist in developing plans to recover deceased victims of the dam failure.
 3. Division of Emergency Response Bureau of Environmental Health Services
 - a. Identify hazardous waste facilities in the inundation area.
 - b. Develop system to notify affected regulated hazardous materials treatment, storage and disposal facilities in the effected inundation area.
- F. SC Department of Transportation
1. Coordinate with SCDPS/ESF-16 (Emergency Traffic Management) to support evacuation operations.
 2. Coordinate with SLED/ESF-13 (Law Enforcement) to support security for the inundation area.
 3. Coordinate procedures to evaluate road structure integrity.
- G. SC Department of Public Safety
1. Coordinate with local law enforcement authorities to develop, coordinate and implement evacuation and traffic management plans, and plans for routing traffic around inundation area and larger metropolitan areas.
 2. Coordinate with DNR to develop plans to clear upstream lakes and downstream waterways in inundation area.

3. Coordinate with Air Branch for aviation support for evacuation (including public address system, rescue, and security operations).

H. SC Law Enforcement Division

1. In coordination with ESF-13 (Law Enforcement), develop plans to assist local law enforcement authorities with security in the inundation area.
2. Provide or coordinate specialized support assets to include:
 - Forensic support
 - Investigative and crime scene services should the breach be determined to be by intentional means (terrorist acts)
 - Coordination of additional assets through activation of the State Law Enforcement Mutual Aid Plan (SLEMAP)

I. SC Department of Natural Resources

1. In conjunction with ESF-13 (Law Enforcement) and ESF-16 (Emergency Traffic Management), develop plans to clear the upstream areas and downstream waterways affected by the inundation area.
2. Patrol the lake and recreational areas to prevent access downstream from the dam.
3. Provide DNR Hydrologists to support the Plans Section in the SEOC.

J. SC Department of Corrections

1. Develop procedures to relocate prisoners if they are located within inundation areas.
2. Assist local governments with prisoner transport.

K. South Carolina National Guard (pending a Governor's State of Emergency Declaration)

1. Provide aviation support for Search and Rescue, reconnaissance, and security operations in coordination with SCDOT, ESF-1/Air Branch etc., as requested.
2. Provide assistance to SC DPS/ESF-16 for traffic management as requested.
3. Provide assistance to SLED/ESF-13 for establishing security operations as requested.

L. SC Department of Social Services

In conjunction with affected Counties, ARC and The Salvation Army, identify shelters and develop plans to support shelter and mass feeding operations.

M. State Fiscal Accountability Authority, Division of Procurement Services, Materials Management Office

Develop contracts to obtain bulk and bottled water to support the population without water service.

N. Office of Regulatory Staff

1. Coordinate with Counties to develop plans for supporting populations without electrical service.
2. Coordinate with Counties to develop plans for supporting populations without water service.

O. Department of Labor, Licensing, and Regulation

Support Search and Rescue operations to include Swift Water Rescue operations.

P. The American Red Cross

Support Mass Care operations.

Q. The Salvation Army

Support Mass Care operations.

R. Federal

1. Federal Emergency Management Agency (FEMA)

a. Depending on the magnitude of the dam failure, deploy Incident Management Assist Teams (IMAT) and the Federal Incident Response Support Teams (FIRST).

(1) "FIRST" is a forward component of the ERT-A Team that provides on-scene support to the local Incident Command or Area Command structure in order to facilitate an integrated interjurisdictional response.

(2) The FIRST is designed to be a quick and readily deployable resource to support the Federal response to Incidents of National Significance.

- b. During a federal disaster declaration, coordinate Temporary and Long-term Housing for displaced persons needing shelter beyond 30 days. Temporary housing locations will be coordinated between SERT and FEMA or Joint Field Office (JFO), if activated, and the local Emergency Managers.
- 2. Federal Energy Regulatory Commission
 - a. Regulates dams (usually Hydro-Electric) under their purview.
 - b. In accordance with FERC guidelines, ensure dam owners develop EAPs and conduct drills and exercises on a scheduled or as warranted basis.
 - c. Ensure EAPs are reviewed and updated per FERC guidelines.
- 3. US Army Corps of Engineers
 - Regulates dams, dikes, and locks under their purview.
- 4. US Bureau of Reclamation
 - Regulates one National Park Service Dam (Starr Fort Dam) at Ninety-Six National Park and provide technical advice and offsite recommendations.
- 5. National Oceanic Atmospheric Administration (NOAA)
 - a. National Weather Service
 - Provide technical advice and weather forecasts
 - b. Southeast River Forecast Center
 - Provide daily River Gauge Summaries and Forecasts
- 6. US Geological Survey (USGS)
 - Deploy rapid deployment gauges
- 7. US Coast Guard (USCG)
 - Assists with port security

IX. ADMINISTRATION, FINANCE AND LOGISTICS

- A. Administration and Finance
 - 1. See the SCEOP Basic Plan.

2. Dam Owner
 - a. Dam owners are ultimately liable for damages resulting from a failure at one of their dams.
 - b. During a Federally declared disaster, dams may be eligible for reimbursement for some types of repairs through the FEMA Public Assistance program under Category D - Water Control Facilities.
- B. Logistics. See Attachment A (South Carolina Logistics Plan) to the SCEOP Basic Plan.

X. GOVERNING FEDERAL AND STATE REGULATIONS AND REFERENCES:

- A. **AUTHORITIES AND REFERENCES.** See Attachment C (Authorities and References) to the SCEOP Basic Plan.
- B. **ACRONYMS AND GLOSSARY.** See Attachment B (Acronyms and Glossary) to the SCEOP Basic Plan.
- C. **SUPPORTING PLANS AND DOCUMENTS.**

Tab 1 - List of FERC, USACE, BOR Dams In or Affecting South Carolina

Tab 2 – Dam “Structure” Classification Levels for Dams Affecting South Carolina

Tab 3 – Dam “Failure” Classifications Affecting South Carolina

Tab 4 – Planning Exercise Requirements from Regulatory Agencies.

Tab 5 – Dam Failure Notification Protocol

Tab 6 – FERC and USACE Dam Emergency Notification Numbers

XI. SITE SPECIFIC PLAN LISTING (Under Separate Cover)

- A. Lake Murray Site Specific Plan December - 2004 (Revised) - Tab A (Lake Murray Site Specific Plan) to Appendix 4 (South Carolina Dam Failure Emergency Response Plan) to the SCEOP.
- B. Santee Dam Site Specific Plan, December - 2007 - Tab B (Santee Dam Site Specific Plan) to Appendix 4 (South Carolina Dam Failure Preparedness Emergency Plan) to the SCEOP.
- C. Wateree Dam Abbreviated Site Specific Plan - 2008 - Tab C (Wateree Dam Abbreviated Site Specific Plan) to Appendix 4 (South Carolina Dam Failure Emergency Response Plan) to the SCEOP.

- D. Pinopolis Dam Site Specific Plan, April, 2008 - Tab D (Pinopolis Dam Site Specific Plan) to Appendix 4 (South Carolina Dam Failure Emergency Response Plan) to the SCEOP.
- E. Cherokee Falls Abbreviated Site Specific Plan – April 2009 - Tab E (Cherokee Falls Abbreviated Site Specific Plan) to Appendix 4 (South Carolina Dam Failure Emergency Response Plan) to the SCEOP.
- F. Lake Secession Abbreviated Site Specific Plan – March 2010 - Tab F (Lake Secession Abbreviated Site Specific Plan) to Appendix 4 (South Carolina Dam Failure Emergency Response Plan) to the SCEOP.
- G. Buzzards Roost (Lake Greenwood) Abbreviated Site Specific Plan - April 2010 - Tab F (Buzzards Roost (Lake Greenwood) Abbreviated Site Specific Plan) to Appendix 4 (South Carolina Dam Failure Emergency Response Plan) to the SCEOP.

Tab 1 – List of FERC, USACE, BOR Dams In or Affecting South Carolina

OWNER	DAM NAME	LOCATION
Duke Energy (some dams were formerly under Progress Energy)	Blewett Hydroelectric Plant	Pee Dee, NC
	Tillery Hydroelectric Plant	Mt. Gilead, NC
	Bad Creek Hydroelectric Station	Salem, SC
	Cowans Ford Hydroelectric Station	Huntersville, NC
	Fishing Creek Hydroelectric Station	Great Falls, SC
	Great Falls/Dearborn Hydroelectric Station	Great Falls, SC
	Jocassee Hydroelectric Station	Salem, SC
	Keowee Hydroelectric Station	Seneca, SC
	Mountain Island Hydroelectric Station	Mount Holly, NC
	Bridgewater Hydroelectric Station	Morganton, N)
	Ninety-Nine Islands Hydroelectric Station	Blacksburg, SC
	Oxford Hydroelectric Station	Hickory, NC
	Rocky Creek/Cedar Creek Hydroelectric Station	Great Falls, SC
	Wateree Hydroelectric Station	Camden, SC
Wylie Hydroelectric Station	Rock Hill, SC	
SC Electric & Gas	Fairfield Pumped Storage Facility	Jenkinsville, SC
	Parr Hydroelectric Plant	Jenkinsville, SC
	Saluda Hydroelectric Project (aka Lake Murray Dam, Dreher Shoals Dam)	Irmo and Lexington, SC
	Stevens Creek Hydroelectric Project	Martinez, GA
	Neal Shoals	Union, SC
City of Augusta	Augusta Canal	Augusta, GA
City of Greenwood	Lake Greenwood Hydroelectric (aka Buzzards Roost)	Dyson, SC

OWNER	DAM NAME	LOCATION
ALCOA	Falls Dam	Badin, NC
	High Rock Dam	Badin, NC
	Narrows Dam	Badin, NC
	Tuckertown Dam	Badin, NC
	Yadkin Hydroelectric Project	Salisbury, NC to Badin NC (Yadkin River)
City of Abbeville	Lake Secession Dam	Abbeville, SC
Lockhart Power	Lockhart Hydroelectric Station	Lockhart, SC
Enel Green Power, North America	Upper Pelzer Hydroelectric	Pelzer, SC
	Cherokee Falls Hydroelectric Project	Blacksburg, SC
Georgia Power Company (North Georgia Hydro Project)	Tallulah Falls Dam	Tallulah Falls, GA
	Tugalo Dam	Toccoa, GA
	Yonah Dam	Toccoa, GA
Santee Cooper (SC Public Service Authority)	Santee Dam	Eadytown, SC
	Pinopolis Dam (West Dam)	Moncks Corner, SC
US National Park Service (BOR)	Star Fort Dam (Ninety-Six National Park)	Ninety-Six, SC
US Army Corps of Engineers - Savannah District	J. Strom Thurmond Dam	Clark Hill, SC
	Richard B. Russell Dam	Mt. Carmel, SC
	Hartwell Dam	Starr, SC
US Army Corps of Engineers - Charleston District	St. Stephen Dam	St. Stephen, SC

Tab 2 – Dam “Structure” Classification Levels for Dams Affecting South Carolina

I. FERC

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
Low	None Expected	Low and generally Limited to owner
Significant	None Expected	Yes
High	Probable. One or more expected	Yes (but not necessary for this classification)

II. USACE

- A. DSAC Class I (Very High Urgency) – Dams where progression toward failure is confirmed to be taking place under normal operations and the dam is almost certain to fail under normal operations within a time frame from immediately to within a few years without intervention; or, the combination of life or economic consequences with probability of failure is extremely high.
- B. DSAC Class II (High Urgency) – Dams where failure could begin during normal operations or be initiated as the consequence of an event. The likelihood of failure from one of these occurrences, prior to remediation, is too high to assure public safety; or, the combination of life or economic consequences with probability of failure is very high.
- C. DSAC Class III (Moderate Urgency) – Dams that have issues where the dam is significantly inadequate or the combination of life, economic, or environmental consequences with probability of failure is moderate to high.
- D. DSAC Class IV (Low Urgency) – Dams are inadequate with low risk such that the combination of life, economic, or environmental consequences with a probability of failure is low and the dam may not meet all essential USACE engineering guidelines.
- E. DSAC Class V (Normal) – Dams considered adequately safe, meeting all essential agency guidelines and the residual risk is considered tolerable

III. BUREAU OF RECLAMATION

Classification	Lives in Jeopardy	Economic Loss
Low	0	Minimal (Undeveloped agriculture, occasional uninhabited structures, or minimal outstanding natural resources)
Significant	1-6	Appreciable (rural area with notable agriculture, industry, or worksites, or outstanding natural resources)
High	More than 6	Excessive (urban area including extensive community, industry, agriculture, or outstanding natural resources.

IV. SCDHEC

- A. High Hazard – Dams whose failure or mis-operation will threaten human life or serious damage to home(s), industrial and commercial facilities, important public utilities, major roads or railroads.
- B. Significant Hazard – Dams whose failure or mis-operation results in no known threat to human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. These dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.
- C. Low Hazard - Dams whose failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner’s property.

Tab 3 – Dam “Failure” Classifications Affecting South Carolina

- I.** Revision to FEMA-64 (2013) recommends that simpler terms be used when reporting dam failures, to be easier to recognition and synchronization with the federal National Incident Management System guidelines.

- II.** Current different “Failure Classifications” used the different regulating agencies:
 - A. “Failure is Imminent or Has Occurred” (also known as Class I, Conditions A, Red, or Rapidly Developing Situation).

 - B. Definition: Imminent Failure: Dam has failed, is failing, or about to fail.

 - C. “Potentially Hazardous Situation Developing” (also known as Class II, Conditions B, Yellow, or Slowly Developing Situation).

 - D. Definition: Potential Failure: Conditions are developing at the dam that could lead to a dam failure.

 - E. “Non-Failure Emergency “Condition”
 - 1. There is no danger of dam failure, but flow conditions may cause flooding downstream of the dam.

 - 2. This classification is for monitoring purposes and would most likely not necessitate activation of the dam owner’s Emergency Action Plan (EAP), County Emergency Operations Centers (EOC), and the State Emergency Operations Center (SEOC).(Definition: Non-Failure: An event at the dam has occurred that will not, by itself, lead to a failure, but requires investigation and notification of internal and external staff)

 - F. “High Flow” Emergency: Flooding occurring on the river system. There is no apparent threat to the integrity of the dam. Owner would be reviewing inflow data and lake level to evaluate when to open spillway gates. This would be communicated with SCEMD and County Emergency Management.

- III.** No standard dam failure classification exists for private or non-regulated dams within the State.

Tab4 - Planning and Exercise Requirements from Regulatory Agencies

- I. All Federally regulated dams require an Emergency Action Plan (EAP).
- II. The primary federal guideline for Emergency Action Plan development for Dams is FEMA-64. FEMA-64 provides guidance for dam owners to coordinate with emergency management authorities to effectively develop and exercise on-site EAPs for dams. FEMA-64 can be found at the following website:

http://www.damsafety.org/media/Documents/FEMA/508_FEMA_P-64_Fed_Guidelines_for_Dams.pdf

- III. FERC, USACE, BOR, and SCDHEC each have different regulatory requirements.
 - A. Federal Energy Regulatory Commission (FERC) Guidelines for EAPs can be found at the following website:
<http://www.ferc.gov/industries/hydropower/safety/guidelines/eng-guide/chap6.pdf>
 - B. The US Army Corps of Engineer Guidelines for EAPs and exercise and training guidance can be found in Chapter 16 of the following website:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-1156.pdf
 - C. The Bureau of Reclamation Dam regulatory planning and exercise and training guidance can be found at this temporary website (to be relocated next year):
http://www.usbr.gov/recman/temporary_releases/factrmr-60.pdf
 - D. The SC Department of Health and Environmental Control Dam does NOT mandate an exercise or training program however, dam owners having a hazard potential rating of “High” and “Significant” are required to maintain EAPs. Dam owners with a hazard potential rating of “Low” are not required to submit EAPs, however DHEC conducts an investigation every five years to determine if their hazard levels necessitates a classification change. Details on SC DHEC Regulated Dams for planning can be found at the following websites:

<https://www.scdhec.gov/environment/WaterQuality/DamsReservoirs/LawsRegulations/>

<http://www.scstatehouse.gov/code/t49C011.php>

<https://www.scdhec.gov/Environment/docs/r72-1.pdf>

Tab 5 - Dam Failure Notification Protocol

- I.** For both federal and state regulated dams, initial dam related issues can be discovered by the general public, dam safety engineers, law enforcement, etc. Once information is obtained, notification and verification should be made with affected County, State Warning Point (SWP), Dam Owner (**if Federally regulated**), and DHEC (**if State regulated**), and National Weather Service (NWS). The following Notification protocol should be followed when an issue at a dam is discovered:

Situation 1: Dam Situation reported to DHEC Dam Safety Engineer:

- DHEC Dam Safety Engineer notifies County Emergency Manager.
- DHEC Dam Safety Engineer notifies Regional DHEC Dams Engineer.
- DHEC Dam Safety Engineer notifies SWP.
- SWP notifies SCEMD Regional Emergency Manager.
- SWP notifies SCEMD Dam Safety Coordinator.

Situation 2: Dam Situation reported to SWP:

- SWP notifies County Emergency Manager.
- SWP notifies SCEMD Regional Emergency Manager.
- SWP notifies DHEC Dam Safety Engineer.
- State DHEC Dam Safety Engineer notifies SC DHEC Regional Dam Engineer.
- SWP notifies SCEMD Dam Safety Coordinator.

Situation 3: Dam Situation reported to County Emergency Manager:

- County Emergency Manager notifies State Warning Point.
- SWP notifies SCEMD Regional Emergency Manager.
- SWP notifies State DHEC Dam Safety Engineer.
- State DHEC Dam Safety Engineer notifies DHEC Regional Dam Safety Engineer.
- State Warning Point notify SCEMD Dam Safety Coordinator.

Situation 4: Dam Situation reported to DHEC Regional Dam:

- DHEC Regional Dam Engineer notifies County Emergency Manager.
- DHEC Regional Dam Engineer notifies State DHEC Dam Safety Engineer.
- State DHEC Dam Safety Engineer notifies SWP.

- SWP notifies SCEMD Regional Emergency Manager.
- SWP notifies SCEMD Dam Safety Coordinator.

II. Information needed from caller

For federal and state regulated dams, the following information is essential and should be obtained from caller:

- Incident has, or have the potential of harming humans or damaging critical infrastructure
- Time reported
- Currently happening (failure/Overtopped/Seeping)
- Reporter name, affiliation (agency), and contact information
- Dam's name, address
- Nearest cross-section location (county/river/nearest town)
- Type of dam
- Dam owner name

Caller should be ask if they thing failure is a potentiality, imminent, or has already occurred.

Tab-6 – FERC and USACE Dam Emergency Numbers

Federal Regulated Dams with Hazard Potential Ratings of High

<u>Project Utility</u>	<u>Verification Phone No.</u>	<u>County Warning Points/ National Weather Service Office</u> (Notify in Order Listed)
Augusta Canal	(706) 842-3060	Edgefield County Aiken County <i>Columbia NWS</i>
Bad Creek Hydro Station (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Oconee County <i>Greenville-Spartanburg NWS</i>
Blewett Hydro Plant (Duke Energy) (Located in North Carolina)	704-382-6836 704-382-6837 704-382-6838	Marlboro County Chesterfield County <i>Wilmington NWS</i> <i>Columbia NWS</i>
Lake Greenwood Dam (aka, Buzzard Roost Hydro Station) (Greenwood County)	Primary: 864-995-3624 Alternate: 864-942-8632	Newberry County** Saluda County** Greenwood County** Lexington County Richland County Columbia NWS <i>Greenville-Spartanburg NWS</i>
Cherokee Falls Hydro Project (Enel Green Power)	Benji Peterson 864-425-9624 Jeff Shaffner 276-233-4268 Beth Harris 864-979-4077 beth.harris@enel.com	Cherokee County <i>Greenville-Spartanburg NWS</i>
Cowans Ford Hydro Station (Duke Energy) (located in North Carolina)	704-382-6836 704-382-6837 704-382-6838	York County** Lancaster County Chester County Fairfield County Kershaw County Richland County Sumter County Calhoun County Clarendon County Orangeburg County <i>Columbia NWS</i> <i>Greenville-Spartanburg NWS</i>

<u>Project Utility</u>	<u>Verification Phone No.</u>	<u>County Warning Points/ National Weather Service Office</u> (Notify in Order Listed)
Fairfield Pumped Storage Facility (SCE&G)	803-217-6666 800-768-0226	Newberry County Fairfield County Lexington County Richland County <i>Columbia NWS</i>
Falls Dam (Yadkin, Inc.) (Located in North Carolina)	800-748-1850 (24/7) 877- 306-2744 (24/7) 704- 422-5300 x204	Chesterfield County Marlboro County Darlington County <i>Columbia NWS</i> <i>Raleigh NWS</i>
Fishing Creek Hydro Station (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Lancaster County Chester County Fairfield County Kershaw County <i>Columbia NWS</i> <i>Greenville-Spartanburg NWS</i>
Gaston Shoals Hydro Station (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Cherokee County York County Union County <i>Greenville-Spartanburg NWS</i> <i>Columbia NWS</i>
Great Falls/Dearborn Hydro Station (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Lancaster County Chester County Fairfield County Kershaw County <i>Columbia NWS</i> <i>Greenville-Spartanburg NWS</i>
High Rock Dam (Yadkin, Inc.) (Located in North Carolina)	800-748-1850 (24/7) 877-306-2744 (24/7) 704 422-5300 x204	Chesterfield County** Marlboro County** Darlington County** <i>Columbia NWS</i> <i>Greenville-Spartanburg NWS</i>

<u>Project Utility</u>	<u>Verification Phone No.</u>	<u>County Warning Points/ National Weather Service Office</u> (Notify in Order Listed)
Jocassee Hydro Station (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Pickens County** Oconee County** Anderson County** Abbeville county McCormick County Edgefield County Aiken County <i>Greenville-Spartanburg NWS</i> <i>Columbia NWS</i>
Keowee Hydro Station (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Pickens County** Oconee County** Anderson County** Abbeville county McCormick County Edgefield County Aiken County Barnwell County Allendale County <i>Greenville-Spartanburg NWS</i> <i>Columbia NWS</i>
Lake Secession (City of Abbeville)	864-446-2685 864-391-6580 (cell) 864-391-6034 (cell) 864-366-4518	Abbeville County Greenville-Spartanburg NWS
Lockhart Hydro Station (Lockhart Power Company)	1-800-368-1289 864-545-2211 864-426-6417 (cell)	Union County <i>Greenville-Spartanburg NWS</i>
Mountain Island Hydro Station (Duke Power) (Located in North Carolina)	704-382-6836 704-382-6837 704-382-6838	York County** Lancaster County** Chester County Fairfield County Kershaw County <i>Columbia NWS</i> <i>Greenville-Spartanburg NWS</i>
Narrows Dam (Yadkin, Inc.) (Located in North Carolina)	800-748-1850 (24-hour) (877) 306-2744 (24 hour) (704) 422-5300 x204	Chesterfield County** Marlboro County** Darlington County** <i>Columbia NWS</i> <i>Wilmington NWS</i> <i>Raleigh NWS</i>

<u>Project Utility</u>	<u>Verification Phone No.</u>	<u>County Warning Points/ National Weather Service Office</u> (Notify in Order Listed)
Ninety-Nine Islands Hydro Station (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Cherokee County York County Union County <i>Greenville-Spartanburg NWS</i> <i>Columbia NWS</i>
North Dam (Santee) (Santee Cooper Project)	843-761-4033 (24-hour)	Berkeley County** Clarendon County** Williamsburg County** Georgetown County Charleston County <i>Charleston NWS</i> <i>Columbia NWS</i> <i>Wilmington NWS</i>
North Georgia Hydro Project Tallulah Falls Control Room (GA) (Southern Energy/Georgia Power) Control Center in Atlanta	706-754-0474 (Emergency Number) 706-754-7915 404-506-6968	Oconee <i>Greenville-Spartanburg NWS</i>
Oxford Hydro Station (Duke Energy) (Located in North Carolina)	704-382-6836 704-382-6837 704-382-6838	York County Lancaster County Chester County <i>Columbia NWS</i> <i>Greenville-Spartanburg NWS</i>
Parr Hydroelectric Plant (SCE&G)	803-217-6666 800-768-0226	Newberry County Fairfield County Lexington County Richland County <i>Columbia NWS</i>
Pinopolis Dam, Santee (Santee Cooper Project)	843-761-4033 (24/7)	Berkeley County** Charleston County <i>Charleston NWS</i>
Rocky Creek/Cedar Creek Hydro (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Lancaster County Fairfield County Kershaw County <i>Columbia NWS</i> <i>Greenville-Spartanburg NWS</i>

<u>Project Utility</u>	<u>Verification Phone No.</u>	<u>County Warning Points/ National Weather Service Office</u> (Notify in Order Listed)
Saluda Hydroelectric Project (SCE&G)	803-217-6666 803-217-8699	Lexington County Richland County Calhoun County Fairfield County Newberry County <i>Columbia NWS</i>
Stevens Creek Hydro Plant (SCE&G)	803-217-6666 803-217-8699	Edgefield County Aiken County Columbia NWS
Tillery Hydro Plant Duke Energy (Located in North Carolina)	704-382-6836 704-382-6837 704-382-6838	Marlboro County Chesterfield County Wilmington NWS Columbia NWS
Tuckertown Dam (Yadkin, Inc.) (Located in North Carolina)	800-748-1850 (24/7) 877 306-2744 (24/7) 704 422-5300 x204	Chesterfield County** Marlboro County** Darlington County** Columbia NWS Wilmington NWS
Upper Pelzer (Enel Green Power)	Beth Harris 864-979-4077 (Cell) beth.harris@enel.com Chris Mahaffey 864-884-9769 (Cell)	Anderson County Greenville County <i>Greenville-Spartanburg NWS</i>
Wateree Hydro Station (Duke Energy)	704-382-6836 704-382-6837 704-382-6838	Kershaw County** Richland County Sumter County Columbia NWS
Wylie Hydro Station (Duke Energy) (Located in both Carolinas)	704-382-6836 704-382-6837 704-382-6838	York County** Lancaster County** Chester County** Fairfield County Kershaw County Richland County Sumter County Calhoun County Clarendon County Orangeburg County <i>Columbia NWS</i>

<u>Project Utility</u>	<u>Verification Phone No.</u>	<u>County Warning Points/ National Weather Service Office</u> (Notify in Order Listed)
Yadkin Hydro Station (Yadkin Inc.) (Located in NC)	704-422-3010 800-748-1850	Chesterfield County Marlboro County Darlington County <i>Columbia NWS</i> <i>Wilmington NWS</i>

U.S. ARMY CORPS OF ENGINEERS DAMS (Savannah District)

<u>Project Utility</u>	<u>Verification Phone No.</u>	<u>County Warning Points/ National Weather Service Office</u> (Notify in Order Listed)
J. Strom Thurmond (aka Clarks Hill)	864-333-1165 (Control Room)	McCormick County** Edgefield County** Aiken County** Barnwell County Allendale County Hampton County Jasper County <i>Columbia NWS</i>
Richard B. Russell	706-213-3465 (Control Room)	Abbeville County McCormick County <i>Greenville-Spartanburg NWS</i> <i>Columbia NWS</i>
Hartwell	706-856-0365 or 706-376-2110 (Control Room)	Anderson County Abbeville County <i>Greenville-Spartanburg NWS</i>
Clemson Diversion Dams & Pumping Station	706-856-0365 or 706-376-2110 (Hartwell Control Room)	Pickens County <i>Greenville-Spartanburg NWS</i>

U.S. ARMY CORPS OF ENGINEERS DAMS (Charleston District)

<u>Project Utility</u>	<u>Verification Phone No.</u>	<u>County Warning Points/ National Weather Service Office</u> (Notify in Order Listed)
St. Stephen Powerhouse	843-567-2706 (Main Plant Line) 843-567-5700 (Office) 843-749-0644 (Cell)	Berkeley Williamsburg Georgetown <i>Charleston</i> <i>Charleston NWS</i>

