

## ANNEX 3

### ESF-3 - PUBLIC WORKS AND ENGINEERING

---

PRIMARY: SC State Fiscal Accountability Authority, Office of State Engineer

SUPPORT: Clemson University Regulatory and Public Service Programs; Office of Regulatory Staff; SC Department of Agriculture; SC Department of Health and Environmental Control, Environmental Quality Control; SC Department of Labor, Licensing and Regulation, Division of Fire and Life Safety, and Building Codes Council; SC Department of Natural Resources, Land, Water, and Conservation; SC Department of Public Safety; SC Department of Transportation; SC Emergency Management Division; SC Forestry Commission; South Carolina Rural Water Association; SC Water/Wastewater Agency Response Network

#### I. INTRODUCTION

A. Public works refers to those engineering and procurement activities required to provide or restore, emergency power supplies for critical facilities; water and sewer services, including:

- Emergency supply of potable water
- Temporary restoration of water supply and sewer systems
- Providing water for firefighting
- Clearance, removal, and disposal of contaminated and uncontaminated debris from public property.

B. Engineering activities include:

- Technical expertise regarding the structural safety of damaged buildings
- Coordination of emergency repairs to public facilities
- Appropriate construction services (i.e., electrical, plumbing, soils, etc.)
- Emergency demolition or stabilization of damaged structures and facilities designated as hazards to public health.

#### II. PURPOSE

A. Establish policy, procedures, and priorities for water resources (potable, non-potable and firefighting), sewer facilities and waste disposal.

B. Provide for coordinating immediate and continued engineering resources, construction management, emergency contracting, and expertise following a disaster.

C. Provide an accurate assessment of damages, losses, and expenditures resulting from an emergency or disaster in order to determine the need for state and/or federal assistance and to conduct safety evaluations to protect the public health and welfare.

**III. CONCEPT OF OPERATIONS**

- A. The SC State Fiscal Accountability Authority, Office of State Engineer is the Lead Agency for ESF-3 and is responsible for the coordination of all ESF-3 administrative, management, planning, training, preparedness, mitigation, response, and recovery activities to include developing, coordinating, and maintaining the ESF-3 Standard Operating Procedures (SOP).
- B. ESF-3 supporting agencies must assist the SC State Fiscal Accountability Authority, Office of State Engineer in the planning and execution of the above.
- C. The SC State Fiscal Accountability Authority will coordinate with all supporting and other appropriate departments/agencies and organizations to ensure continual operational readiness.
- D. The SC Department of Health and Environmental Control (SCDHEC) will provide overall guidance concerning water supply matters and provide guidance for sewage treatment and solid waste disposal.
- E. ESF-3 personnel will be familiar with the National Response Framework and the corresponding Federal Emergency Management Agency (FEMA) Annex with Federal counterpart concepts, actions and responsibilities. This familiarization will include but not be limited to the structure, organization, functions and responsibilities of the Incident Management Assist Teams (IMAT) and the Joint Field Office (JFO).
- F. ESF-3 will coordinate with SCEMD and other ESF-3 support agencies to coordinate the provision of:
- Emergency power and the restoration of water and sewer services
  - Debris management to include; clearance, removal, and disposal of contaminated and uncontaminated debris from public property
  - Water (potable and non-potable)
  - Engineering activities as required
- G. ESF-3 will cooperate and coordinate with other ESFs to ensure State assets are deployed effectively and in response to appropriate priorities for the protection of the health, safety, and welfare of State citizens.
- H. In coordination with and in support of the Counties, ESF-3 will assess the situation (post-event), and in coordination with local Emergency Management officials, develop strategies to respond to the emergency.
- I. ESF-3 will coordinate with Federal ESF-3 to obtain Federal assistance as needed. Support agency representatives collocate with Federal ESF-3 field personnel to coordinate support, as necessary.

**IV. ESF ACTIONS****A. Preparedness**

1. Plan for the provision of water (potable and non-potable) into the disaster area if local supplies become inadequate.
2. In coordination with local Emergency Management officials, develop policy for conservation, distribution and use of potable and firefighting water.
3. In coordination with ESF-7 (Finance and Administration) develop an inventory of additional or alternative sources of potable water to augment or maintain water supplies.
4. Develop and maintain a current inventory of equipment and supplies, to include Points of Contact (POC) and telephone numbers, required to sustain emergency operations including emergency power generators.
5. Assess operational needs for restoration of public works service during the emergency.
6. In coordination with ESF-24 (Business and Industry), develop and maintain listings of commercial and industrial suppliers of services and products, to include points-of-contact and telephone numbers, associated with public works and engineering functions.
7. Coordinate engineering, contracting, and procurement assistance for clearance, removal, and disposal of contaminated and uncontaminated debris from public property, demolition, public works repair, and water supply, and sewer missions.
8. In conjunction with ESF-19 (Military Support), plan for use of State military resources to support ESF-3 operations.
9. In coordination with ESF-24 (Business and Industry), determine if the private sector has the critical details to support incident action planning and decision making during an incident.
10. Ensure procedures are in place to document costs.
11. Participate at least annually in State exercises and/or conduct an exercise to validate this Annex and supporting SOPs.

**B. Response**

1. Coordinate assistance to include personnel, equipment, and technical expertise necessary to assess damage resulting from an emergency or disaster to State and/or local facilities and property.
2. Assess water and sewer service restoration, potable water supply, solid waste disposal, and engineering requirements as soon as possible.
3. In coordination with local entities, establish priorities to repair damaged water/sewer systems and coordinate the provision of temporary, alternate or interim sources of emergency power and water/sewer services.
4. Coordinate equipment, specialized labor, and transportation to repair or restore public works systems.
5. Coordinate with ESF-4 (Firefighting) for advice and assistance regarding firefighting water supply.
6. Coordinate with ESF-6 (Mass Care) for shelter support requirements.
7. Coordinate with ESF-10 (Hazardous Materials) for advice and assistance regarding disposal of hazardous materials.
8. Coordinate with ESF-17 (Animal/Agriculture Emergency Response) for advice and assistance regarding disposal of debris containing or consisting of animal carcasses.
9. Coordinate with ESF-19 (Military Support) for use of State military assets.
10. Coordinate with ESF-24 (Business and Industry) to ensure mutual aid and assistance networks facilitate the sharing of resources to support response.
11. Coordinate for the possible deployment of engineering assets and personnel into affected areas in the State.
12. Coordinate damage assessment personnel and support for joint State/Federal teams into affected areas, as required.
13. Coordinate with SCEMD to train building inspectors, local government engineers, and other interested persons required to make rapid evaluations and decisions regarding continued use and occupancy of damaged buildings.
14. Designate ESF-3 representation on the Recovery Task Force.

**C. Recovery**

1. Anticipate and plan for arrival of and coordination with FEMA and US Army Corps of Engineers (USACE), ESF-3 personnel in the SEOC and the JFO.
2. Coordinate with ESF-24 (Business and Industry) to ensure business and industry networks facilitate the sharing of resources to support recovery.
3. Coordinate in post-incident assessments of public works and infrastructure to help determine critical needs and potential workloads.
4. Coordinate assistance (to include vessel removal, significant marine debris removal, and hydrographic survey) to effect the rapid recovery and reconstitution of critical waterways, channels, and ports.
5. Maintain coordination with all supporting agencies and organizations on operational priorities for emergency repair and restoration.
6. Continue to monitor restoration operations when and where needed as long as necessary and until all services have been restored.
7. Ensure ESF-3 team members, their agencies or other tasked organizations maintain appropriate records of time and costs incurred during the event.

**D. Mitigation**

1. Support and plan for mitigation measures including monitoring and updating mitigation actions in the State Hazard Mitigation Plan.
2. Review, evaluate and comment on proposed State Hazard Mitigation Plan amendments, upon initiation and within review period.
3. Support requests and directives from the Governor and/or FEMA concerning mitigation and/or re-development activities.
4. Document matters that may be needed for inclusion in agency or state/federal briefings, situation reports and action plans.
5. Coordinate structural and non-structural mitigation measures.

**V. RESPONSIBILITIES****A. General**

1. ESF-3 agencies and support agencies will identify, train, and assign personnel to maintain contact with, staff the SEOC as needed, and prepare to execute missions in support of ESF-3 in the SEOC and in the field during periods of activation.

2. ESF-3 primary and support agencies must maintain inventories and procedures to deploy their agency's public works and engineering assets.

B. SC State Fiscal Accountability Authority

1. Identify, train, and assign personnel to staff ESF-3 in the SEOC.
2. Identify available public works and engineering assets.
3. Establish operational needs for restoration of public works service during the emergency.
4. Coordinate with ESF-3 support agencies to identify water and sewer service restoration, debris management, clearance, removal including disposal of contaminated and uncontaminated debris from public property, potable water supply, and engineering requirements as soon as possible.
5. Recommend priorities to repair damaged water/sewer systems and coordinate the provision of temporary, alternate or interim sources of emergency power and water/sewer services.
6. Coordinate assistance (to include vessel removal, significant marine debris removal, and hydrographic survey) to effect the rapid recovery and reconstitution of critical waterways, channels, and ports.
7. In coordination with local emergency management officials, develop policy for conservation, distribution and use of potable and firefighting water.
8. In conjunction with ESF-19 (Military Support), plan for use of State military resources to support ESF-3 operations.
9. Develop and maintain listings of design professionals and construction contractors to include points-of-contact and telephone numbers, associated with public works and engineering functions.

C. Clemson University Regulatory and Public Service Programs

Provide laboratory analysis for pesticide contamination.

D. Office of Regulatory Staff

Provide private/investor owned utility restoration support.

E. SC Department of Agriculture

Identify, train, and assign personnel to support ESF-3 during periods of activation.

- F. SC Department of Health and Environmental Control, Office of Environmental Quality Control
1. Provide emergency survey, surveillance, sampling, testing, and monitoring of water and sewage pumping, treatment, distribution, and collection systems to ensure public health and safety integrity of such systems.
  2. Provide technical assistance concerning the disposal of waste materials, including household hazardous waste, agricultural waste, and debris containing or consisting of animal carcasses.
  3. Assist affected utilities to identify and locate additional or alternative sources of potable water to augment or maintain water supplies.
  4. Coordinate with local municipalities for water and sewer service restoration, debris management, potable water supply, and engineering requirements as soon as possible.
  5. Coordinate with ESF-17 (Animal/Agriculture Emergency Response) for advice and assistance regarding disposal of debris containing or consisting of animal carcasses.
  6. Coordinate with ESF-10 (Hazardous Material) for advice and assistance regarding disposal of hazardous materials to include chemical, biological, and radiological Weapons of Mass Destruction incidents.
- G. SC Department of Labor, Licensing and Regulation
- Provide building assessment technical assistance; and building inspectors.
- H. SC Department of Labor, Licensing and Regulation, Division of Fire and Life Safety
- Provide inspectors (engineering and fire).
- I. SC Department of Natural Resources; Land, Water, and Conservation
- Provide engineering inspectors and water testing capability.
- J. SC Department of Public Safety
- Provide disaster intelligence information from deployed assets as needed.
- K. SC Department of Transportation
- Provide available public works and engineering assets.

- L. SC Emergency Management Division
  - Provide training for tagging damaged buildings.
- M. SC Forestry Commission
  - 1. Provide assets to support public works and engineering missions.
  - 2. Provide damage assessment for forested areas.
- N. South Carolina Rural Water Association
  - Provide assets to support public works and water/wastewater.
- O. SC Water/Wastewater Agency Response Network (SCWARN)
  - Provide database of assets to support public works.

## **VI. FEDERAL ASSISTANCE**

- A. This Annex is supported by the National Response Framework, ESF-3 (Public Works and Engineering).
- B. Federal ESF-3 assists FEMA by: coordinating and organizing the capabilities and resources of the Federal Government to facilitate the delivery of services, technical assistance, engineering expertise, construction management, and other support to prepare for, respond to, and/or recover from a disaster or an incident requiring a coordinated Federal response.
- C. Activities within the scope of Federal ESF-3 include:
  - 1. Coordinating and supporting infrastructure risk and vulnerability assessments.
  - 2. Participating in pre-incident activities, such as pre-positioning assessment teams and contractors, and deployment of other advance teams.
  - 3. Participating in post-incident assessments of public works and infrastructure to help determine critical needs and potential workloads.
  - 4. Implementing structural and nonstructural mitigation measures to minimize adverse effects or fully protect resources prior to and after an event.
  - 5. Executing emergency contracting support for life-saving and life-sustaining services, to include providing emergency power, and other emergency commodities and services.
  - 6. Providing assistance in the monitoring and stabilization of damaged structures designed as immediate hazards to public health and safety; and

- 
- structural specialist expertise to support inspection of mass care facilities and urban search and rescue operations.
7. Providing emergency repair of damaged infrastructure and critical public facilities (temporary power, emergency water, sanitation systems, etc); and supporting the restoration of critical navigation, flood control, and water infrastructure systems.
  8. Managing, monitoring, and/or providing technical advice in the clearance, removal, and disposal of contaminated and uncontaminated debris from public property and the reestablishment of ground and water routes into impacted areas.
  9. Providing technical assistance to include engineering expertise, construction management, contracting, inspection of private/commercial structures and real estate services.
  10. Implementing and managing the Federal Public Assistance program and other recovery and mitigation programs to include efforts to permanently repair, replace, or relocate damaged or destroyed public facilities and infrastructure.
- D. Providing Federal public works and engineering support when there is a need for additional resources or capabilities to support and sustain the response and initial recovery.
  - E. A Federal ESF-3 representative will normally deploy to the SEOC as a part of the IMAT, and a supplemental ESF-3 cell will also deploy which will evolve into the ESF-3 cell after the JFO is established.
  - F. The Department of Defense (DoD)/USACE is the primary agency for providing ESF-3 technical assistance, engineering, and construction management resources and support during response activities.
  - G. FEMA is the primary agency for providing ESF-3 recovery resources and support, to include assistance under the FEMA Stafford Act Public Assistance Program.
  - H. Federal ESF-3 maintains close coordination with Federal, State, tribal, and local officials to determine potential needs for support and to track the status of response and recovery activities.
  - I. Priorities are determined jointly among State, tribal, and/or local officials. Federal ESF-3 support is integrated into the overall Federal, State, tribal, local, Non-Governmental Organization (NGO), and private-sector efforts.