

ANNEX 3 (ESF-3)

PUBLIC WORKS AND ENGINEERING

PRIMARY: Budget and Control Board, Division of Procurement Services, Materials Management Office

SUPPORT: Clemson University Regulatory and Public Service Programs; Department of Agriculture; Department of Health and Environmental Control, Environmental Quality Control; Department of Labor, Licensing and Regulation, Division of Fire and Life Safety, and Building Codes Council; Department of Natural Resources, Land, Water, and Conservation; Department of Public Safety; Department of Revenue; Department of Transportation; Forestry Commission; Office of Regulatory Staff; US Army Corps of Engineers; South Carolina Warn (Mutual Aide Network)

I. INTRODUCTION

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, and providing water for firefighting. Engineering activities include emergency ice, snow and debris removal; technical expertise regarding the structural safety of damaged buildings, bridges and highways; restoration of transportation infrastructure; coordination of emergency repairs to public facilities; appropriate construction services (i.e., electrical, plumbing, soils, etc.), and emergency demolition or stabilization of damaged structures and facilities designated as hazards to public health.

II. PURPOSE

- A. To establish policy, procedures, and priorities for water resources, and sewer facilities, waste disposal and to provide for coordinating immediate and continued engineering resources, construction management, emergency contracting, and expertise following a disaster.
- B. To 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 Budget and Control Board, Division of Procurement Services, Materials Management Office, 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 SOP. All ESF-3 supporting agencies must assist the Office of Material Management, Division of Procurement Services, Budget and Control Board, in the planning and execution of the above. All ESF-3 personnel must be trained on the principles of the National Incident Management System (NIMS) and Incident Command and integrate those principles into all ESF-3 planning and response operations.

- B. Coordination with all supporting and other appropriate departments/agencies and organizations will be performed to ensure continual operational readiness.
- C. In coordination with, and in support of, the State Assessment Team (SAT), ESF-3 will assess the situation (both pre- and post-event), and in coordination with local emergency management officials, develop strategies to respond to the emergency.
- D. Public Works and Engineering Services
 - 1. The Department of Health and Environmental Control will provide overall guidance concerning water supply matters and will provide guidance for sewage treatment and solid waste disposal.
 - 2. The Department of Transportation will provide overall guidance concerning structural safety of damaged bridges and roads and will provide guidance for the restoration of the transportation infrastructure.
 - 3. ESF-3 will coordinate with SCEMD and other ESF-3 support agencies to provide emergency power and the restoration of water and sewer services, debris management, water (potable and non-potable), and engineering activities as required.
 - 4. ESF-3 will cooperate and coordinate with other ESFs to ensure that state assets are deployed effectively and in response to appropriate priorities for the protection of the health, safety, and welfare of state citizens.

IV. ESF ACTIONS

The emergency operations necessary for the performance of the Public Works and Engineering Services function include but are not limited to:

- A. Preparedness
 - 1. Participate in state exercises and conduct, at least annually, an ESF-3 exercise to validate this annex and supporting SOPs.

2. Ensure all ESF-3 personnel integrate NIMS principles in all planning. All ESF personnel must complete all required NIMS training, as outlined in the Department of Homeland Security (DHS) training guidance.
3. Determine if local authorities have a mechanism for obtaining waivers and clearances related to support ESF-3.
4. Ensure procedures are in place to document costs for any potential reimbursement.
5. ESF-3 will provide ESF representation on the Recovery Task Force.
6. Support the Emergency Management Assistance Compact (EMAC) by ensuring ESF personnel are trained on EMAC responsibilities, by pre-identifying assets, needs and resources that may be allocated to support other states, and by maintaining related information in WebEOC.
7. Plan for the provision of water (potable and non-potable) into the disaster area if local supplies become inadequate.
8. In coordination with the SAT and local emergency management officials, develop policy for conservation, distribution and use of potable and firefighting water.
9. Provide additional or alternative sources of potable water to augment or maintain water supplies.
10. Include in ESF-3 Standard Operating Procedures an alerting list, to include points-of-contact and telephone numbers, of agencies, counties, municipalities and organizations supporting public works and engineering functions.
11. Maintain a current inventory of equipment and supplies, to include points-of-contact and telephone numbers, required to sustain emergency operations, including emergency power generators.
12. Establish operational needs for restoration of public works service during the emergency.
13. In coordination with ESF 24, 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.

14. Plan engineering, contracting, and procurement assistance for emergency debris, snow or ice clearance, demolition, public works repair, and water supply, and sewer missions.
15. In conjunction with ESF-19, plan for use of state military resources to support ESF-3 operations.
16. In coordination with ESF 24, determine if the private sector has the critical details to support incident action planning and decision making during an incident.

B. Response

1. General. ESF-3 will provide assistance to SCEMD including personnel, equipment, and technical expertise necessary to assess damage resulting from an emergency or disaster to state and/or local facilities and property.
2. Identify water and sewer service restoration, potable water supply, solid waste disposal, and engineering requirements as soon as possible.
3. Evaluate status of current resources to support ESF-3 operations.
4. 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.
5. Procure equipment, specialized labor, and transportation to repair or restore public works systems.
6. Coordinate with ESF-19 for use of state military assets.
7. Coordinate with ESF-6 for shelter support requirements.
8. Coordinate with ESF-17 for advice and assistance regarding disposal of debris containing or consisting of animal carcasses.
9. Coordinate with ESF-10 for advice and assistance regarding disposal of hazardous materials.

10. Coordinate with ESF-4 for advice and assistance regarding firefighting water supply.
11. Coordinate with ESF-24 to ensure mutual aid and assistance networks facilitate the sharing of resources to support response.
12. Coordinate with Air Operations branch (ESF-1) for aviation requests.
13. Provide damage assessment personnel and support for joint state/federal teams into affected areas, as required
14. Coordinate for the possible deployment of engineering assets and personnel into affected areas in the state. Including the South Carolina Society of Professional Engineers Volunteer Engineer Corps (VEC), whose purpose is to provide professional support to the emergency management operations before, during, and after a disaster. VEC assets include a volunteer team of multi-disciplinary engineers specializing in civil, mechanical, electrical, and structural engineering.
15. Identify and provide a liaison officer for each EMAC request, to facilitate arrival and onward movement of EMAC support at appropriate EMAC Mobilization Units and staging areas.

C. Recovery

1. Anticipate and plan for arrival of and coordination with FEMA and US Army Corps of Engineers ESF-3 personnel in the SEOC and the Joint Field Office (JFO).
2. Ensure that ESF-3 team members, their agencies, or other tasked organizations, maintain appropriate records of time and costs incurred during the event.
3. Coordinate with ESF-24 to ensure business and industry networks facilitate the sharing of resources to support recovery.
4. Participate in post-incident assessments of public works and infrastructure to help determine critical needs and potential workloads.
5. Provide coordination and technical 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.

6. Maintain coordination with all supporting agencies and organizations on operational priorities for emergency repair and restoration.
7. In coordination with ESF-1 Transportation, assist in the restoration of the transportation infrastructure.
8. Continue to monitor restoration operations when and where needed as long as necessary and until all services have been restored.

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. Implement structural and non-structural mitigation measures, including deployment of protective measures, to minimize adverse effects and fully protect resources prior to an incident.

V. **RESPONSIBILITIES**

A. General:

1. All ESF-3 primary and support agencies must maintain inventories and procedures to deploy their agency's public works and engineering assets.
2. Train personnel on EMAC procedures to include; identifying agency resources to sustain emergency operations, pre-scripting anticipated needs on specific EMAC messages, and listing agency resources available for interstate and intrastate mutual aid missions.

B. Budget and Control Board, Division of Procurement Services, Materials Management Office

1. The coordination of all ESF-3 administrative, management, planning, training, preparedness/mitigation, response and recovery

activities.

2. Identify, train, and assign personnel to staff ESF-3 in the SEOC.
3. Notify all ESF-3 supporting agencies upon activation.
4. Provide all available public works and engineering assets.
5. Establish operational needs for restoration of public works service during the emergency.
6. Provide coordination with ESF-3 support agencies to identify water and sewer service restoration, debris management, potable water supply, and engineering requirements as soon as possible.
7. 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.
8. Provide coordination and technical 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.
9. As needed, recommend priorities for water and other resource allocations.
10. In coordination with the State Assessment Team (SAT) and local emergency management officials, develop policy for conservation, distribution and use of potable and firefighting water.
11. In conjunction with ESF-19, plan for use of state military resources to support ESF-3 operations.
12. 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.
13. Provide legal assistance to assist with eminent domain and emergency demolition or stabilization of damaged structures and facilities.

D. Department of Agriculture

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.

2. Coordinate with the Farm Service Agency and other agencies to provide inspectors and advise on agricultural debris removal.
- E. Department of Health and Environmental Control, Office of Environmental Quality Control
1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
 2. 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.
 3. Provide technical assistance concerning the disposal of waste materials, including household hazardous waste, agricultural waste, and debris containing or consisting of animal carcasses.
 4. Identify and locate additional or alternative sources of potable water to augment or maintain water supplies.
 5. In coordination with the SAT and local emergency management officials, develop policy for conservation, distribution and use of potable and firefighting water.
 6. Identify water and sewer service restoration, debris management, potable water supply, and engineering requirements as soon as possible.
 7. Coordinate with ESF-17 for advice and assistance regarding disposal of debris containing or consisting of animal carcasses.
 8. Coordinate with ESF-10 for advice and assistance regarding disposal of hazardous materials to include chemical, biological, and radiological weapons of mass destruction incidents.
- F. Department of Labor, Licensing and Regulation
1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
 2. Provide building assessment technical assistance; and building inspectors.

3. Division of Fire and Life Safety

Provide inspectors (engineering and fire).

G. Department of Natural Resources; Land, Water, and Conservation

1. Identify, train, and assign personnel to maintain contact with and execute missions in support of ESF-3 during periods of activation.

2. Provide engineering inspectors and water testing capability.

H. Department of Public Safety

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.

2. Provide disaster intelligence information from deployed assets as noted to ESF-5/14.

J. Department of Revenue

Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.

K. Department of Transportation

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.

2. Provide available public works and engineering assets.

L. Forestry Commission

1. Identify and assign personnel to maintain contact with ESF-3 during periods of activation.

2. Provide assets to support public works and engineering missions.

3. Provide damage assessment for forested areas.

M. Office of Regulatory Staff

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.

2. Provide public utility restoration support.

N. US Army Corps of Engineers

1. Identify, train, and assign personnel to staff ESF-3 (Public Works and Engineering) during periods of activation.
2. Execute Mission Assignments (MA) issued by Federal Emergency Management Agency (FEMA). Typical MAs are supplying potable water, temporary roofing, emergency power, temporary housing, debris removal, engineering services and other assistance as requested by the State of South Carolina and authorized by FEMA.
3. Provide available public works and engineering assets.

O. Clemson University Regulatory and Public Service Programs

1. Identify, train, and assign personnel to maintain contact with and prepare to conduct operations in support of ESF-3 during periods of activation.
2. Provide laboratory analysis for pesticide contamination.

P. South Carolina Warn (Mutual Aide Network)

1. Identify and assign personnel to maintain contact with ESF-3 during periods of activation.
2. Provide assets to support public works and engineering missions.

VI. FEDERAL ASSISTANCE

A. This annex is supported by the National Response Framework, ESF-3, Public Works and Engineering. ESF-3, Public Works and Engineering assists the Department of Homeland Security (DHS) 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. Activities within the scope of Federal ESF-3 include:

1. Coordination and support of infrastructure risk and vulnerability assessments.

2. Participation in pre-incident activities, such as pre-positioning assessment teams and contractors, and deployment of other advance teams.
3. Participation in post-incident assessments of public works and infrastructure to help determine critical needs and potential workloads.
4. Implementation of structural and nonstructural mitigation measures to minimize adverse effects or fully protect resources prior to and after an event.
5. Execution of 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. Management, 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. Implementation and management of 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.
11. ESF-3 provides 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. During large-scale events, all levels of government and the private sector will take proactive actions to respond, anticipating resources that may be required. Resources and capabilities can also be provided when other departments or agencies within the Federal Government require assistance.

12. Federal agencies are responsible for complying with appropriate environmental and historic preservation statutes.
- B. A Federal ESF-3 representative will normally deploy to the SEOC as a part of the Incident Management Assist Teams (IMATs), and a supplemental ESF-3 cell will also deploy which will evolve into the ESF-3 cell after the Joint Field Office (JFO) is established.
- C. All State ESF-3 personnel will be familiar with the National Response Framework and the corresponding annex with federal counterpart concepts, actions and responsibilities. This familiarization will include but not be limited to the make up, functions and responsibilities of the Incident Management Assist Teams (IMATs), Interagency Incident Management Groups (IIMG) and the Joint Field Office (JFO).
- D. State ESF-3 will coordinate with Federal ESF-3 to obtain federal assistance as needed.
- E. The Department of Defense (DOD)/U.S. Army Corps of Engineers (USACE) is the primary agency for providing ESF-3 technical assistance, engineering, and construction management resources and support during response activities.
- F. DHS/FEMA is the primary agency for providing ESF-3 recovery resources and support, to include assistance under the DHS/FEMA Stafford Act Public Assistance Program. The Public Assistance Program provides supplemental Federal disaster grant assistance for debris removal and disposal; emergency protective measures; and the repair, replacement, or restoration of disaster-damaged public facilities and the facilities of certain qualified private nonprofit organizations.
- G. Close coordination is maintained with Federal, State, tribal, and local officials to determine potential needs for support and to track the status of response and recovery activities.
- H. Priorities are determined jointly among State, tribal, and/or local officials. Federal ESF-3 support is integrated into the overall Federal, State, tribal, local, nongovernmental organization (NGO), and private-sector efforts.
- I. Support agency representatives collocate with ESF-3 field personnel to coordinate support, as necessary.