

Emergency Operations Plan

Emergency Support Function – 3

Public Works and Engineering

I. PURPOSE.

This Emergency Support Function (ESF) Annex describes expected mission execution for the preparedness and response phases and identifies the responsibilities assigned to its members. This Annex is utilized in conjunction with the Emergency Operations Plan which provides an overview of Horry County's approach to emergency operations and the emergency management organization. During a compulsory effort of saving life and property, ESF-3 agencies and representatives will utilize this plan to meet needs of the public and private entities of Horry County.

This Annex will define the role of public works and engineering agencies/representatives in providing resources related to the protection of the county's citizens and their property when the county is threatened or impacted by a major or catastrophic incident. This ESF is responsible for providing technical advice and evaluations, engineering services, construction management and inspections, emergency contracting, county facility management/maintenance, emergency road and debris clearance (in conjunction with ESF-1), flood control and emergency repair of waste and water facilities.

This Annex will also provide guidance on the facilitation and coordination process of collecting, removing and disposing of debris following a disaster. These efforts will assist in the mitigation of any potential threat to the health, safety and welfare of the impacted citizens; expedite recovery efforts in the impacted areas; and address any threat of significant damage to improved public or private property.

II. MISSION.

The Public Works and Engineering ESF-3 will ensure effective employment of all available county public works and maintenance assets, county engineering and construction assets and public water and sewer systems and debris management programs that may be used during large-scale emergencies or disasters.

III. SITUATION AND ASSUMPTION.

Horry County is susceptible to a multitude of natural and man-made disasters. These disasters, depending on their magnitude, have the ability to damage structures and lifelines that will rapidly overwhelm the capacity of Horry County to assess the disaster and respond effectively of basic and emergency human needs.

During any type of disaster or large-scale emergency, Public Works and Engineering personnel will be faced with a tremendous challenge of overwhelming demands in providing help and assistance to the county and municipal governments. Critical infrastructure will be damaged, roadways will be impassible, waste water pollution from flooding will occur and debris from natural and manmade sources will be a huge factor to contend with during response and recovery operations.

IV. PARTICIPATING COUNTY DEPARTMENTS AND SUPPORT AGENCIES.

- A. Primary:** Horry County Engineering
- B. Support:**
 - a. Horry County Public Works
 - b. Horry County Stormwater
 - c. Horry County Maintenance
 - d. Horry County Fleet Maintenance
 - e. Horry County Solid Waste Authority
 - f. Grand Strand Water and Sewer Authority
 - g. Little River Water and Sewer Authority

V. NATIONAL INCIDENT MANAGEMENT SYSTEM (N.I.M.S.) TRAINING

All ESF personnel will be trained on principals of the National Incident Management System in accordance with current guidance from the Department of Homeland Security. Refer to the website <http://training.fema.gov/IS/crslist.asp> for more information on all programs. The minimum requirements are as follows:

- A.** IS-100.a Introduction to the Incident Command System
- B.** IS-200.a ICS for Single Resource and Initial Action Incidents
- C.** IS-700.a An Introduction to NIMS
- D.** IS-800.b An Introduction to National Response Framework

VI. CONCEPT OF OPERATIONS.

- A.** When the EOC is activated, the Service Operations Branch Director will confirm that the ESF-3 Coordinator position has been staffed.
- B.** The ESF-3 Coordinator will establish and maintain lines of communication to facilitate coordination of activities and resources with all Horry County EOC ESFs, the South Carolina EOC and other agencies/representatives who may provide assistance during major response operations.
- C.** Agencies and representatives assigned to ESF-3 will be alerted according to prescribed Horry County EOP.
- D.** All ESF-3 personnel will report to their pre-designated locations unless otherwise directed by their supervisor at the time they are notified of the emergency. Pre-designation of duties and responsibilities will facilitate a reduction in response time.
- E.** State and federal support will be called upon as needed with requests channeled through the Horry County EOC to the South Carolina EOC. The ESF-3 Coordinator will make requests to the state EOC through ESF-7 for additional resources when all local assets have been exhausted.
- F.** Horry County Engineering Department personnel will serve as the ESF-3 Coordinator and verify that the Public Works and Engineering ESF-3 positions have been staffed.
- G.** Each agency and representative within ESF-3 will maintain authority within its own jurisdiction. However, during a countywide disaster, the EOC ESF-3 Coordinator is responsible for the overall synchronization of all public works and engineering service activities.

H. The ESF-3 Coordinator will assist with the collaboration and development of operational priorities for personnel based on the objectives set forth by the Executive Group and information obtained from the experts in the area of concern.

I. Situation Reports (SITREP)

A Situation Report (SITREP) will be produced for each Operational Period. The initial SITREP will be completed within the first hour after activation. The Situation Analysis Unit Leader will coordinate with Section Liaisons and Branch Directors to receive timely SITREPs to coincide with the EOC briefings and the Executive Group Planning Meetings.

1. Each EOC position will complete their part of the ESF SITREP, providing a comprehensive and accurate report, and turn it into their respective ESF Coordinator for completion by 06:00 and 16:00. The ESF Coordinator will then provide the completed ESF SITREP to the appropriate Branch Director no later than 06:30 and 16:30.
2. The Branch Directors will collaborate and complete their portion of the Section SITREP while coordinating with the Operations Section Liaison. The Operations Section Liaison gives the final Operations Section SITREP to the Situation Analysis Unit Leader at 7:30 and 17:30.
3. The Situation Analysis Unit Leader will generate the EOC SITREP and provide copies to the EOC Manager for approval at 08:30 and 18:30 in preparation of the Executive Group Planning Meetings.
4. Once the SITREP has been reviewed and approved by the EOC Manager or Assistant Manager, the Situation Unit Leader will send the SITREP to the State Emergency Operations Center (SEOC) by 09:00 and 19:00 each operational period.
5. All ESF-3 positions should use the ESF-3 Situational Report Form (Form# 2.03.1).

J. EOC Action Plan

1. When the EOC is activated the Planning Section, while coordinating with other sections (Operations, Logistics and Finance), will prepare a written action plan. The EOC Action Plan will set forth objectives, based on the Executive Groups recommendations and tasks to be completed during the next operational period.
2. Essential to the development of each operational period action plan are the section and ESF SITREPs. The future operational period objectives are derived from the previous operational period SITREPs.
3. All ESF Coordinators will attend the appropriate action planning meetings, according to the EOC Action Plan and the EOC Briefing and Meeting SOP, in support of the EOC Action planning process.
4. The successful development of the EOC Action Plan will strongly depend on how involved and effective each agency/representative is in the planning process.
5. Review the EOC Action Plan SOP for more details.

K. Information Display and Management

1. During the Horry County EOC activation, all agencies and representatives in ESF-3 will use WebEOC for systematic information sharing and documentation efforts. Reference the WebEOC User's Guide for more information on proper program operation.

2. To maintain documentation redundancy, hardcopy documents for all forms (SOPs, SITREPS, checklists, etc.) utilized in the perspective ESFs will be located in a file box or binder with each ESF Coordinator.
3. A local list of available public works and engineering resources, to include assets and personnel, should be maintained in the EOC.
4. Horry County IT will have all county assets inventoried and is available through ESF-2 in the City Works program.
5. Coordination between public works and engineering agencies/representatives is necessary to ensure emergency operational readiness. Each department, agency and/or representative responsible for infrastructure stability should develop standard operational procedures, instructions and resource listings to support this plan.

L. Evacuation

Evacuations will be coordinated with the EOC to ensure the evacuees are moved to an appropriate shelter and those with special needs receive appropriate transportation in the time of need. The Public Works and Engineering ESF-3 will assist in the evacuation process by providing public works support, vehicle maintenance aid and assist ESF-1 and ESF-16 with roadway engineering and maintenance issues; and debris clearing. Public Works will play a key role in assisting ESF-1 and ESF-16 with traffic control devices (cones, barriers, signs and diversion walls). Each member of the ESF-3 should review the Emergency Evacuation Plan (Annex 7-12) located in your EOC section file box, file folder or on the HCEMD website, <http://www.horrycounty.org/depts/humanserv/epd/index.asp>.

F. Mutual Aid and Augmentation Forces

1. Be aware that a requisition for resources may take as much as 72 hours to arrive from the first call of assistance, based on distance from incident, type of resource, condition of shipping route and contract details and delays.
2. Mutual aid can be requested from (or provided to) the state through the SCEOC once all local resources have been exhausted. These requests should be channeled through the Horry County EOC ESF-7.
3. Support may also be requested from the federal government through the SCEOC. These requests should be channeled through the Horry County EOC ESF-7.

G. Damage Assessment

An initial EOC priority is to gather as much intelligence about the extent of damage and the impact on people as soon as possible. All agencies and representatives in ESF-3 will submit an initial damage assessment report to ESF-23 when the situation allows. Information for damage assessments may be provided to or requested from ESF-23 throughout the response and recovery process of the incident or disaster. Utilize the SITREP to document all damage assessment information provided by field personnel.

VII. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES.

A. Primary

Horry County Engineering

1. Serving in a primary role of the ESF-3, the Horry County Engineering representative will function as the ESF-3 Coordinator and has the following responsibilities:

- a. Exercise overall responsibility for the coordination of ESF-3 activities.
 - b. Serve as the ESF-3 Coordinator in all EOC briefings and meetings.
 - c. Coordinate and complete the ESF-3 SITREP and give to the Service Operations Branch Director.
2. Serve as the Engineering Coordinator in ESF-3 of the Horry County EOC.
 3. Provide reports on window survey damage assessments given by field personnel.
 4. Provide assistance to ESF-4 and ESF-9 with building and facility inspections after a disaster to determine stability and safety of structures during a search and rescue operation.
 5. Work closely with ESF-23 to provide assistance with engineering concerns related to roadway and structural damage assessment.
 6. Maintain a consistent flow of information and communication from ESF-3 to the EOC Service Operations Branch Director pertaining to relative activities in field operations and the Public Works and Engineering ESF.
 7. Verify that a system of redundancy is in place for documentation and information gathering.
 8. Coordinate a list of all available engineering resources and be familiar with the Horry County WebEOC Resource Manager's available assets.
 9. Specific tasks are included in the associated position SOP(s).

B. Support

1. Horry County Public Works
 - a. Serve as the Public Works Coordinator in the Horry County EOC.
 - b. Maintain an inventory of current public works resources and equipment and work closely with the Resource Unit Leader in ESF-2 and with ESF-7 to obtain any assets not available within the county's reserve.
 - c. Develop a plan for assisting ESF-9 with heavy equipment operations, building stabilization and emergency debris removal during search and rescue operations.
 - d. Identify incident sites requiring emergent and non-emergent public works services caused by the aftermath of a disaster.
 - e. Coordinate with ESF-7, the recovery and/or replacement of resources used for public works operations.
 - f. Assist Stormwater with the development of a flood control and maintenance plan.
 - g. Use public works communication links with operational personnel to provide damage assessment information for ESF-5.
 - h. Be familiar with the Horry County WebEOC Resource Manager's available assets.
 - i. Maintain communication capabilities with public works operational personnel.
 - j. Coordinate and report damage assessment of county land transportation routes (in coordination with ESF-1).
 - k. Identify alternate emergency land transportation methods on county routes (in coordination with ESF-1).
 - l. Deploy Public Works units to areas in need of debris removal or road restoration operations. Request other department units for assistance when necessary (in coordination with ESF-1).
 - m. Deploy personnel and equipment to evaluate damaged bridges and roadways serviced by the county, and to take actions to restore them to a usable condition (in coordination with ESF-1).
 - n. Specific tasks are included in the associated position SOP(s).
2. Horry County Stormwater
 - a. Serve as the Stormwater Coordinator in the Horry County EOC.

- b. Maintain an inventory of current public works resources and equipment and work closely with the Resource Unit Leader in ESF-2 and with ESF-7 to obtain any assets not available within the county's reserve.
 - c. Develop a plan for assisting ESF-9 with any stormwater drain or below ground operations in relation to search and rescue.
 - d. Identify incident sites requiring emergent and non-emergent stormwater services caused by the aftermath of a disaster.
 - e. Coordinate with ESF-7, the recovery and/or replacement of resources used for stormwater operations.
 - f. Develop a flood control and maintenance plan based on the disaster.
 - g. Use Stormwater communication links with operational personnel to provide damage assessment information for ESF-5.
 - h. Be familiar with the Horry County WebEOC Resource Manager's available assets.
 - i. Maintain communication capabilities with Stormwater operational personnel.
 - j. Coordinate and report damage assessment of county land transportation routes (in coordination with ESF-1).
 - k. Deploy Stormwater units to areas in need of debris removal or road restoration operations. Request other department units for assistance when necessary.
 - l. Specific tasks are included in the associated position SOP(s).
3. Horry County Maintenance
- a. Serve as the Facilities Maintenance Coordinator in the Horry County EOC.
 - b. Maintain an inventory of current public works resources and equipment and work closely with the Resource Unit Leader in ESF-2 and with ESF-7 to obtain any assets not available within the county's reserve.
 - c. Identify incident sites (critical infrastructures, utilities, and county facilities/buildings) requiring emergent and non-emergent maintenance services caused by the aftermath of a disaster.
 - d. Coordinate with ESF-7, the recovery and/or replacement of resources used for maintenance operations.
 - e. Provide an emergency power source to critical infrastructures during a disaster.
 - f. Use maintenance communication links with operational personnel to provide damage assessment information for ESF-5.
 - g. Be familiar with the Horry County WebEOC Resource Manager's available assets.
 - h. Maintain communication capabilities with maintenance operational personnel.
 - i. Specific tasks are included in the associated position SOP(s).
4. Horry County Fleet Maintenance
- a. Serve as the Fleet Maintenance Coordinator in the Horry County EOC.
 - b. Maintain an inventory of current public works resources and equipment and work closely with the Resource Unit Leader in ESF-2 and with ESF-7 to obtain any assets not available within the county's reserve.
 - c. Coordinate with ESF-7, the recovery and/or replacement of resources used for maintenance operations.
 - d. Be familiar with the Horry County WebEOC Resource Manager's available assets.
 - e. Maintain communication capabilities with maintenance operational personnel.
 - f. Provide vehicle maintenance plan for all critical vehicles needed for disaster and emergency operations.
 - g. Provide a systematic plan of refueling all critical vehicles needed for disaster and emergency operations.
 - h. Specific tasks are included in the associated position SOP(s).
5. Horry County Solid Waste Authority
- a. Serve as the Debris Management Representative in the Horry County EOC.

- b. The representative from the HCSWA will fill the EOC position of Debris Manager. Responsibilities are as follows but are not limited to:
 - i. Coordinate debris management issues from the EOC
 - ii. Coordinate debris management issues with the municipalities, other government and private agencies involved with the debris cleanup operation.
 - iii. Coordinate the dissemination of public information with the EOC Public Information Officer (PIO).
 - iv. Monitor the field operations based on the Horry County Solid Waste Authority Debris Clearing and Removal Plan.
 - c. Activate the Horry County Solid Waste Authority Debris Clearing and Removal Plan
 - i. Provide debris clearing and management services.
 - ii. Recommend disposal sites for debris.
 - iii. Support debris removal operations in areas affected by emergencies or disasters.
 - d. Maintain an inventory of current public works resources and equipment and work closely with the Resource Unit Leader in ESF-2 and with ESF-7 to obtain any assets not available within the county's reserve.
 - e. Work closely with ESF-10 in the event of a Hazardous Materials concern that is recognized during the debris removal process.
 - f. Specific tasks are included in the representatives SOP(s).
6. Grand Strand Water and Sewer Authority
- a. Maintain all water and sewer works under the control and responsibility of Grand Strand Water and Sewer Authority.
 - b. Specific tasks are included in the representatives SOP(s).
7. Little River Water and Sewer Authority
- a. Maintain all water and sewer works under the control and responsibility of Little River Water and Sewer Authority.
 - b. Specific tasks are included in the representatives SOP(s).

VIII. ANNEX MAINTENANCE.

The Operations Section Liaison has the responsibility of coordinating, developing and maintaining the Public Works and Engineering Annex in association with the Service Operations Branch Director and the designated Public Works and Engineering ESF Lead Agency. The Public Works and Engineering Annex will be updated in conjunction with the EOP as stated in Section 6, Plan Development and Maintenance.

Emergency Support Function (ESF-3) Public Works and Engineering

General ESF Actions

Horry County Emergency Management takes a comprehensive approach to emergency planning; therefore, ESF actions for recovery and mitigation are included in those specific plans.

Primary: Horry County Engineering

Support:

- Horry County Public Works
- Horry County Stormwater
- Horry County Maintenance
- Horry County Fleet Maintenance
- Horry County Solid Waste Authority
- Grand Strand Water and Sewer Authority
- Little River Water and Sewer Authority

***Please refer to the EOP, IV, B, 8 for general preparedness and response actions.**

Preparedness

- Assist with the coordination, development and maintenance of the Public Works and Engineering Annex
- Participate in county exercises and conduct annual ESF-3 training to validate the Public Works and Engineering Annex and supporting documents
- Ensure all personnel train on and integrate NIMS principals in all planning as outlined in the Annex.
- Ensure procedures are in place to document costs for any potential reimbursement.
- Maintain a list of resources, assets and personnel that are crucial for the functionality of the Public Works and Engineering Annex.
- Periodically verify that all mitigation efforts performed on critical infrastructures are functioning appropriately.

Response

- Monitor and coordinate the restoration of public utilities in Horry County, to include water distribution and sewer service.
- Coordinate procedures for the supply of emergency power in critical facilities throughout Horry County.
- Provide engineering, construction, maintenance and repair support in the event of a disaster.
- Ensure protection of Horry County's fuel infrastructure and other vital supplies.
- Assist ESF 4, ESF 9 and ESF 10 with search and rescue and hazardous materials operations.
- Activate and coordinate the Disaster Debris Management Plan from the Horry County Solid Waste Authority.
- Assist ESF 23 with damage assessment.
- Maintain a current inventory and resource list of Horry County Public Works and Engineering assets that very well could be utilized during a disaster while working closely with the Resource Unit Leader in ESF-2.
- Provide logistical support for demolition operations.
- Assist all operational ESFs with equipment, vehicle and facilities maintenance based on the critical status of need.