
Emergency Operations Plan

Functional Annex: Public Works and Engineering

Public Works and Engineering Annex Responders	
Agency Role	Agencies
Primary Agencies	<ul style="list-style-type: none">Public WorksPublic Utilities
Supporting Agencies	<ul style="list-style-type: none">US Army Corps of EngineersPrivate Utility Contractors
Private Resources	<ul style="list-style-type: none">Duke EnergyPrivate Water & Sewer CompaniesUtility Construction CompaniesDebris and Tree Removal Companies

Internal Plan Alignment to Public Works and Engineering Annex:

- *Damage Assessment Annex*
- *Debris Management Annex*

External Plan Alignment to Public Works and Engineering Annex:

- *New Hanover County Public Works and Engineering Annex*
- *New Hanover County Debris Management Plan*

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Introduction

Purpose

The purpose of *Functional Annex: Public Works and Engineering* to coordinate public works resources during an emergency or disaster. Public Works and Engineering may include emergency clearance of debris; cleaning, repairing or construction of damaged emergency access routes; emergency restoration of critical public services and facilities; emergency demolition of damaged structures and facilities; technical assistance and damage assessment for private utility operations. Coordination of resources includes technical advice, technical evaluations, engineering services, construction management, inspections, and emergency contracting for repairs.

This annex is a functional component of the Town of Carolina Beach's Emergency Operations Plan (EOP). This plan is not intended to take the place of any emergency plans and procedures that the agencies tasked in this document with responsibilities may have. Rather it is designed to complement such plans and fortify positive operational interactions among the agencies noted.

Scope

This annex identifies the key policies, concepts of operations, roles and responsibilities, and capabilities associated with Public Works and Engineering response in the Town of Carolina Beach. This annex is focused solely on the municipal response and recovery operations, as applicable.

Coordination activities may include:

- Coordination of debris removal operations.
- Coordination of assessments of damaged structures and infrastructure.
- Coordination of private assistance for repair of damages infrastructure and facilities.

Situation

- Engineering services are provided by Public Works and Public Utilities.
- The Town of Carolina Beach provide water and sewer service for their residents.
- Duke Energy provides electrical service throughout the Town.
- A major disaster will cause unprecedented property damage, blocked roadways, and tremendous debris removal/disposal problems.

Planning Assumptions

- Following a catastrophic event, many roads may be impassable due to debris.
- Interruption of some or all essential services is an expected consequence of an emergency or disaster, resulting in large numbers of people without essential services.
- A catastrophic event affecting the Town of Carolina Beach may result in the following consequences:
 - Loss of some or all essential services for an extended period of time.
 - A shortage of available outside assistance.
 - A shortage of materials for repairs resulting in a delay in restoration of essential services.
 - Rapid exhaustion of local resources.
 - Attempted price gouging for repair/restoration of essential services.
- Private industrial equipment may be utilized for debris removal, if necessary.
- Critical facilities will receive priority in the restoration of essential services.
- Environmental waivers and legal clearances will be needed for the disposal of materials from debris clearance and demolition sites.
- Large numbers of skilled personnel, engineers, construction workers, utility personnel, and laborers will be needed from outside the disaster area. Support service for the personnel and

equipment will have to be provided from outside the disaster area until repairs can be made. Crews will be encouraged to arrive fully self-contained so as not to tax the already drained local resources.

Concept of Operations

General

- The Primary Agencies listed in this annex for Public Works and Engineering in the Incident Command Post (ICP) will receive requests for emergency debris removal, prioritize tasks, and deploy available public and private resources.
- Priority for emergency debris removal (removal from roadways for the purposes of emergency ingress and egress) will be determined by the Town/ICP. Primary roadways will be given priority.
- Temporary debris storage, sorting, and chipping sites will be established throughout the affected area to facilitate management of debris. Sites will be located in areas where burning of debris can be done within applicable regulations. These sites are designated in the County's *Debris Management Plan*.
- Fire & Ocean Rescue can open and inspect roads in and near their station only to the extent to provide emergency life safety or rescue access when needed.
- Road inspections for re-entry into impacted areas will be done by the Town of Carolina Beach, in coordination with the County and State, as applicable.
- Debris is a consequence of certain disasters. The emergency removal of debris by public works forces is critical to restoration of vital and essential services.

Specific

Municipal Response

- The Town of Carolina Beach Public Works Department consists of water, sewage, and storm sewer. The Town of Carolina Beach provides garbage pickup for its residents. The Town of Carolina Beach operates an elevated water storage tank and also operates a sewage treatment plant.

Organization and Assignment of Responsibilities

All agencies charged with a response in this annex are expected to collaborate and coordinate with emergency partners to respond to and recover from emergencies in the Town of Carolina Beach. This annex is not a substitute for local/departamental response plans and does not usurp local policies and procedures. This annex may be activated to support any response in the Town of Carolina Beach for which the EOP is activated.

Key actions which should be implemented by all those responding under this annex are as follows:

- All responders should maintain professional relationships with partner agencies.
- All responders should participate in training and exercises as appropriate.
- Agencies will maintain current rosters with points of contact and resources.
- Organizations responsible are expected to maintain the capability to provide services for which they are charged. Contingency plans should be in place for continuing operations if needed.
- All individuals/organizations involved in disaster response should collect and record information on the utilization of labor, materials, equipment, and disaster related costs.

- Appropriate representation will be sent to the ICP, as needed.

The following pages are checklists of actions to be coordinated by those listed in this annex as primary and support agencies. The primary agencies will coordinate the overall response under the functions covered by this annex and supporting agencies will assist in the response as needed. The primary agencies will collaborate to identify and activate supporting agencies as appropriate.

Preparedness Actions Checklist

These actions may be taken during normal operations in preparation for an event. All primary and support agencies should consider these actions.

Preparedness Actions	Notes	Responsible Party	Status
Review, update and revise mutual aid agreements, memorandums of understanding, standard operating guidelines, etc. annually.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Continually evaluate capabilities required to accomplish operations under this annex, identify any gaps, and leverage resources to address them.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Address after-action items and lessons learned regarding this annex from exercises and real-world events, whether through planning, operations, exercises, training, or equipment.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Develop and/or participate in relevant related planning, training, and exercise activities at the local, regional, state, and/or federal level.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Ensure necessary supplements to the annex are developed and maintained including contact lists, internal procedures, etc.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Ensure staff are fully trained and prepared to respond to the Incident Command Post, as needed.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Maintain a list of municipal officials and key County and state agency's contact phone numbers, unlisted numbers, pager number, cell phone and fax numbers, etc.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Develop and update contact lists with phone numbers (home, cellular, fax, etc.), radio call signs, etc.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Preparedness Actions	Notes	Responsible Party	Status
Plan for alternate means of communicating with field units if normal communications channels are disrupted.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Monitoring/ Initial Incident Actions Checklist

The following actions may be taken during the initial phases of incident response, including during a “Monitoring” phase activation. Not all actions will be necessary during every event. Complete those actions necessary for the incident.

Monitoring/Initial Incident Actions	Notes	Responsible Party	Status
Identify and notify the supporting agencies that their resources and personnel may be required to respond.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Ensure communications have been/will be established with field units, command posts, etc.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Assist the PIO in developing advisories and media releases.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Prepare staffing plan to adequately support operations over the required number of operational periods.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Develop plans to overcome resource shortages			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Report to the ICP, when requested.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Develop prioritization repair plan for damaged facilities.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Identify critical public works facilities that will require generator backup. Identify generator size needed and if facility has quick-connect capability. Identify generator transportation/delivery contacts.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Monitoring/Initial Incident Actions	Notes	Responsible Party	Status
Identify roadways that will require priority debris clearance.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Maintain a vendor contact list.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Review and update priorities for removal of debris from roadways.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Determine what resources need to be procured under emergency purchase orders. Maintain a log of those purchases. Coordinate this with the Financial Management Annex.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Establish communication with support agencies (radio, telephone, cellular) and ensure that they are ready to respond.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Provide list of available personnel and resources to the ICP.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Report rumors to the PIO, if detected.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Response Actions Checklist

The following actions may be taken during the response, including during partial or full phase activations. Not all actions will be necessary during every event. Complete those actions necessary for the incident.

Response Actions	Notes	Responsible Party	Status
Instruct supporting agencies and field units to report their status, area situation, personnel needs, equipment needs, activation of mutual aid agreements, location of field command posts, etc.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Reassess the priorities to be addressed for the most critical needs and develop strategies to address these needs.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Response Actions	Notes	Responsible Party	Status
Ensure full coordination of activities with other groups within the ICP to assist in the development and maintenance of a common operating picture.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Receive, review and contribute to situational reports from the ICP on a regular basis.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Fill all ICS roles as assigned by ICP.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Track all incident related activities through appropriate ICS forms.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Advise the PIO of the situation and need for media response and protective action recommendations.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Notify local contractors of emergency work and the process to assist.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Coordinate response actions with the other functions as necessary (fire/rescue, transportation, shelter/mass care, etc.).			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Emergency clearance and/or restoration of major streets and critical public facilities in support of emergency response operations.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Maintenance and operation of all Town roads, municipal and public buildings, beach accesses, public restroom facilities, and storm water services.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Coordinate and implement debris management and removal activities.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Response Actions	Notes	Responsible Party	Status
Coordinate with NCDOT on emergency repairs and restoration of roads. Performs or identifies resources to assist with emergency repair and restoration of roads, vital facilities, and utilities as necessary.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Assist with support services for field emergency response units including potable water, food, lights, and tents.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Continuity of emergency services with respect to water and sewer.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Compile a list of facilities that may require emergency demolition to protect life and safety of citizens.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Respond to requests for assistance from other agencies responding to an event.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Ensure that all supporting agencies have maintained accurate logs of personnel and equipment resources utilized for response.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Instruct responders to document mileage and time.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Provide information to the PIO for release to media representatives.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Track disaster related costs according to guidance from the Town.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Prioritize resource requests to ensure that the most critical are met first.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Track the resources that have been committed to specific missions and plan for re-deployment upon release, when necessary.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Response Actions	Notes	Responsible Party	Status
Maintain list of available resources and personnel (volunteer from private or business sector) that have been called activated.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Identify staging areas for resources that may be sent into the affected area for support.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Compile report of any damaged assets.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Recovery Actions Checklist

Recovery Actions	Notes	Responsible Party	Status
Ensure all responders to this annex and/or their agencies provide appropriate records of costs incurred for purposes of reimbursement when available.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Create and implement a plan for deactivation of all assets.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Compile reports of damages to facilities, equipment, injuries, etc.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Continue to assess the environmental impact in coordination with other agencies.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Emergency restoration of critical public facilities, including the temporary restoration of water supplies and wastewater treatment systems.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Designate staging areas for clean-up contractors and equipment, if needed.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Coordinate with law enforcement to keep area closed.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Recovery Actions	Notes	Responsible Party	Status
Coordinate with the PIO to provide updates to media representatives.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Ensure that the costs of the response have been tabulated for billing of the responsible party.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Return units to base when no longer required.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Participate in after-action review.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Support damage assessment activities.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Make temporary repairs to damaged public works facilities.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Procure portable toilets and safety lighting for work sites, if needed.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Ensure resources are demobilized and returned to places of origin according to agreements in place.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Develop a plan for the priority replacement of any damaged or destroyed assets.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>
Develop plan of action to improve response during future events.			Complete <input type="checkbox"/> Ongoing <input type="checkbox"/> Incomplete <input type="checkbox"/>

Direction, Control, and Coordination

Annex Activation

This annex will be activated in the event of a disaster or emergency impacting the Town of Carolina Beach in coordination with the Town of Carolina Beach's EOP, as outlined in the Base Plan. These procedures consist of processes and systems to communicate timely, accurate, and accessible information to the public, responders and stakeholders- the whole community. Any event requiring activation of the EOP may necessitate the activation of this annex.

Annex Development and Maintenance

This annex is developed by the Town of Carolina Beach in conjunction with emergency partners charged with a role in this annex. It is a functional annex supporting the Town of Carolina Beach's EOP. This document will be reviewed, maintained, and updated annually by the Town of Carolina Beach and any changes necessary will be made and forwarded to emergency partners. This annex may also be updated following exercises or real-world activations of this annex to modify policies, procedures, and incorporate lessons learned.

Acronyms

AFN	Access and Functional Needs
APIO	Assistant Public Information Officer
ARC	American Red Cross
ARES	Amateur Radio Emergency Services
ASU	Animal Services Unit
BNP	Brunswick Nuclear Plan
CDC	Centers for Disease Control
CISM	Critical Incident Stress Management
EAS	Emergency Alert System
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPCRA	Emergency Planning and Community Right to Know Act
EPIC	Emergency Public Information Center
ERG	Emergency Response Guidebook
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
GIS	Geographic Information Systems

IC	Incident Command
IC-3	Individual Care Coordination Center
ICP	Incident Command Post
ICS	Incident Command System
IPAWS	Integrated Public Alert and Warning System
JIC	Joint Information Center
JIS	Joint Information System
LEPC	Local Emergency Planning Commission
NAWAS	National Warning System
NC OEMS	North Carolina Office of Emergency Medical Services
NC	North Carolina
NFPA	National Fire Protection Administration
NHC EM	New Hanover County Emergency Management
NHC EOC	New Hanover County Emergency Operations Center
NHC EOP	New Hanover County Emergency Operations Plan
NHC HHS	New Hanover County Health and Human Services
NHC	New Hanover County
NHCFR	New Hanover County Fire Rescue
NHCHD	New Hanover County Health Department
NNHRMC	Novant New Hanover Regional Medical Center
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
OSC	On-Scene Coordinator
PETS	Pets Evacuation and Transportation Standards Act
PIO	Public Information Officer
PSAP	Public Safety Answering Point
RRT	Regional Response Team
SAR	Search and Rescue
SARA	Superfund Amendments and Reauthorization Act
SERC	State Emergency Response Commission
SMAT	State Medical Assistance Team
SMORT	State Mortuary Operations Team
SNS	Strategic National Stockpile
SPCA	Society for the Prevention of Cruelty to Animals
TTY	Teletypewriter
USAR	Urban Search and Rescue
USCG	United States Coast Guard

UWCFA	United Way of the Cape Fear Area
VIPR	Volunteer Intervention Prevention Response
WEA	Wireless Emergency Alerts