

CAPE FEAR MARINE ALERT & NOTIFICATION
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I. PURPOSE AND SCOPE

- A. This Appendix to Annex G establishes the organizational responsibilities and procedures for alert and notification of boaters in the Atlantic Ocean, Intra-coastal Waterway, and the Cape Fear River, as well as other sounds, bays and tributaries within a ten-mile radius of the Brunswick Nuclear Plant. These procedures ensure that boaters will be warned that an accident has occurred, that it is necessary to evacuate the marine areas, and that radio, television and weather should be monitored for further instructions.

- B. The 10-mile emergency-planning zone (EPZ) surrounding the Brunswick Nuclear Plant includes a large area of water comprised of the Atlantic Ocean, Intra-coastal Waterway, and the Cape Fear River, as well as other sounds, bays and tributaries. This Appendix was developed to ensure the safety of persons in this area in the event of an accident at the Brunswick Nuclear Plant. It is essential to coordinate alert, notification, monitoring, resources and access control procedures between federal, state and local agencies. This Appendix provides for the coordination of response and resources to be allocated between the US Coast Guard (USCG), state and local emergency response agencies within the marine areas (the navigable water area within the 10-mile EPZ) of Brunswick and New Hanover Counties.

II. ORGANIZATION

A. MAJOR COORDINATING AGENCIES:

- 1. United States Coast Guard (USCG)
 - a. Sector North Carolina, Station Ft Macon, Atlantic Beach
 - b. Marine Safety Unit, Wilmington
- 2. Progress Energy Brunswick Nuclear Plant
- 3. NC State Emergency Response Team (SERT)
- 4. NC Marine Patrol, Enforcement Section
- 5. NC Wildlife Commission, Enforcement Division

B. SUPPORTING AGENCIES:

- 1. NC Department of Environment & Natural Resources, Radiation Protection
- 2. Brunswick County Emergency Management Agency
- 3. New Hanover County Department of Emergency Management
- 4. U.S. Army Corps of Engineers, Wilmington District
- 5. U.S. Nuclear Regulatory Commission (NRC)
- 6. U.S. Federal Emergency Management Agency (FEMA)
- 7. U.S. Department of Energy (DOE)

III. CONCEPT OF OPERATIONS

A. GENERAL

The following procedures are to ensure that boaters are alerted that an event has occurred at the Brunswick Nuclear Plant that requires evacuation of the Cape Fear River and surrounding areas, and that radio and television stations should be monitored for further instructions.

B. PLANNING

This Appendix provides for the coordination of response and resources to be allocated between the USCG, state and local emergency response agencies within the marine areas (the navigable water area within the 10-mile EPZ) of Brunswick and New Hanover Counties. The USCG and local governments concerned have developed separate operational procedures, to be coordinated into a single response effort in the event of an emergency

C. OPERATIONS

1. Protective actions within water operational areas will concentrate on evacuating people from threatened areas and then controlling access to these areas. Pilots and agents of large vessels will be notified by the USCG of the dangers and actions to be taken.
2. Alert and notification of boaters within a ten-mile radius of the Brunswick Nuclear Plant will be accomplished using a combination of fixed and rotary wing aircraft as well as boats and vessels of various sizes.
3. Warning craft should be equipped with sirens, lights and public address systems. The Sunset and Wrightsville bridges will be used to communicate warning messages to boaters.
4. The USCG will broadcast a "Notice to Mariners" and "Marine Safety Instruction Bulletin(s)" to provide all vessels information as to what actions are to be taken during the emergency.
5. When ordered to do so, boats/vessels will cover assigned areas of the river, waterways, tributaries and lakes making contact with boaters and informing them of potential dangers to health/safety.
6. North Carolina Marine Patrol will commit helicopters and fixed wing aircraft to act as observers and back up for boats patrolling the water areas. Aircraft will report any problems they observe to command and control. In addition all aircraft should be able to communicate with each other via air-to-air communication.
7. Appendix 1 to Annex G will be implemented when the decision is made to institute notification and warning activity within the Brunswick Nuclear Plant EPZ or by direction of the SERT Leader.
8. Personnel operating vessels or aircraft assigned to accomplish Cape Fear Marine Warning & Notification will be provided with personal dosimeters and TLD's. Dosimeters and TLD's will be provided by NCEM for distribution by the USCG. Exposure limits will be IAW State Plan, (Part 1, Figure 9.)

IV. COMMAND AND CONTROL

Primary command and control will be the responsibility of the Marine Warning Team composed of representatives from the following organizations:

1. US Coast Guard, Marine Safety Unit, Wilmington – Team Leader
2. NC Marine Patrol, District 3 Enforcement Section
3. NC Wildlife Commission, District 2 Enforcement Division

The USCG Marine Safety Unit Planning Officer on behalf of the Captain of the Port will assign a USCG/MSU individual as the Team Leader. District 3, North Carolina Marine Patrol and District 2, NC Wildlife Commission will provide support personnel for the Warning Team. The primary function/mission of the Marine Warning Team is as follows:

- A. To direct and control alert and notification activity for mariners/boaters on the Cape Fear River, Intra-coastal Waterway and tributaries to ensure timely evacuation or to restrict access to the area, should conditions warrant.
- B. The Marine Warning Command & Control Team will operate from the USCG Marine Safety Unit office, Wilmington, NC.
- C. The Team will activate the facility for 24-hour operations when notification and warning activities are activated or directed by the SERT Leader. At this time the Team will verify individual organization resources available to conduct warning operations in their assigned zone.
- D. Execution of safety zone activity will commence when notification and warning activities are activated or by direction of the SERT Leader.
- E. All Marine Alert and Notification units will use VHF radios for radio communication for alert and notification activity
- F. The Marine Warning Team will communicate with the State, Brunswick and New Hanover EOCs via commercial telephone. They will advise the EOCs concerning the status of marine operations.

V. RESPONSIBILITIES

A. MAJOR COORDINATING ORGANIZATIONS.

1. State Emergency Response Team (SERT)
 - a. Provide State resources, if available and if requested to support water operations.
 - b. Activate the Emergency Alert System (EAS) and the National Weather Service Radio Broadcast System to support operations in the marine area.

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- c. Advise the USCG Sector North Carolina and Marine Safety Unit, Wilmington of threatened water areas and recommend the USCG establish appropriate safety zones in accordance with existing Federal regulations.
 - d. After assuming direction and control, serve as the primary point of coordination between all State, Federal and local agencies.
 - e. Provide support as needed to any Federal Teams dispatched to the Cape Fear water areas.
2. United States Coast Guard (USCG)
- a. Receive emergency response messages from the Brunswick Nuclear Plant, the State, and local governments.
 - b. Make notifications via Broadcast Notice To Mariners (BNTM) and Marine Safety Information Broadcast (MSIB).
 - c. Establish the appropriate safety zones in accordance with existing Federal regulations.
 - d. Coordinate water area alert and notifications with the State, Counties and other Federal agencies.
 - e. Assign a Team Leader for the "Marine Warning Team," and activate (Incident Command System [ICS]) the command and control (Unified Command [UC]/Incident Commander [IC] in the Incident Command Post) cell at the USCG Marine Safety Unit, Wilmington office.
 - f. Provide boats to assist in alert and notification of marine vessels within established zones.
 - g. Area of responsibility for warning operations will be detailed in Figure 1.
 - h. Ensure USCG personnel are trained for marine warning operations and radiological exposure control annually.
3. North Carolina Wildlife Resources Commission, Enforcement Division
- a. Provide a radio equipped liaison officer to the ICP at USCG Marine Safety Unit office in Wilmington to coordinate activities and resources if tasked to operate within the water area.
 - b. Provide aircraft (rotary or fixed wing) to spot marine vessels and notify appropriate authorities of their presence within the threatened water areas.
 - c. Provide boats to assist in alert and notification of marine vessels within established safety zones.
 - d. Area of responsibility for warning operations will be detailed in Figure 1.

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4. Marine Fisheries Division, N.C. Department of Environment, and Natural Resources
 - a. Provide radio equipped Liaison Officer to the ICP at USCG Marine Safety Unit office in Wilmington to coordinate activities and resources within the water area.
 - b. Provide aircraft (rotary or fixed wing) to spot marine vessels and notify appropriate authorities of their presence.
 - c. Provide boats to assist in alert and notification of marine vessels within established safety zones.
 - d. Area of responsibility for warning operations will be detailed in Figure 1.

5. Brunswick County Emergency Management Agency
 - a. Arrange for available local resources, as requested, to support water operations.
 - b. Serve as the primary point of coordination for matters concerning Brunswick County's waters and barrier islands.
 - c. In the event of a "fast breaking" event supply watercraft to assist in the notification and warning of boaters.

6. New Hanover County Department of Emergency Management
 - a. Arrange for available local resources, as requested, to support water operations.
 - b. Serve as the primary point of coordination for matters concerning New Hanover County's waters and barrier islands.
 - c. In the event of a "fast breaking" event supply watercraft to assist in the notification and warning of boaters.

7. Brunswick Nuclear Plant
 - a. Provide warning, notification, recommendations, and other assistance as needed.
 - b. Insure that the USCG is warned and advised in the same manner that the State and County EOCs are notified and advised.

B. SUPPORTING ORGANIZATIONS

1. N.C. Department of Environment and Natural Resources, Radiation Protection

Make recommendations concerning radiation protection measures to be taken as a result of an accident at the Brunswick Nuclear Plant.

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2. U.S. Army Corps of Engineers

Provide boats, if available, with VHF radio frequencies common to the USCG to assist in water area operations.

3. U.S. Department of Energy (DOE)

- a. Provide assistance through the Radiological Assistance Program (RAP). RAP is usually the first responding DOE resource to assist in assessing a radiological emergency, and advise on further actions to minimize hazards. RAP teams arrive at the scene within four to six hours after notification of an emergency to conduct the initial radiological assessment of an affected area.
- b. Provide Aerial Measuring System (AMS) using fixed-wing aircraft, helicopters to assess the radiation accident.
- c. Provide Atmospheric Release Advisory Capability (ARAC) to predict the probable spread of contamination into the atmosphere.
- d. Deploy the Federal Radiological and Assessment Center (FRMAC) to provide radiological monitoring, assessment, and evaluation of data. Can be fully operational within 24-36 hours after assistance is requested. FRMAC gathers information on plume and deposition predictions, air and ground concentrations, exposure rates and dose projections. FRMAC will continue monitoring until all potentially contaminated areas are fully evaluated.
- e. Establish a Radiation Emergency Assistance Center (REAC) to provide prognosis of radiation induced injuries, conduct medical and radiological triage, perform decontamination procedures and therapies for external and internal contamination, and calculate internal radiation doses from medically induced procedures.

4. U.S. Nuclear Regulatory Commission (NRC)

Provide expert advice to SERT and all agencies involved with protective actions to the public.

VI. COORDINATING INSTRUCTIONS

- A. In the event that inclement weather prevents the use of aircraft in the alert and notification procedures in the Cape Fear Marine Warning Area, boats only will be used to conduct warning.
- B. If the weather prohibits the use of boats or aircraft, alert and notification procedures will be conducted if and when the weather permits timely action.
- C. The USCG Marine Safety Unit act as the Team Leader for command and control of all on-site operations for the Cape Fear Marine Warning Area.

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- D. The State EOC will ensure Brunswick and New Hanover Counties are advised when the alert and notification procedures are initiated on the Warning Area. The Sunset and Wrightsville bridges will be used to communicate warning messages to boaters.

VII. ALERT AND NOTIFICATION

- A. **EMERGENCY CLASSIFICATION SYSTEM** - See Part 1, Figure 8.

B. **ALERT AND NOTIFICATION METHODS AND PROCEDURES**

1. The Brunswick Nuclear Plant will notify the USCG Sector North Carolina (located at Atlantic Beach) via facsimile until such time that the State and County EOCs are activated. Upon EOC activation, Selective Signaling System (SSS) Telephone lines will be utilized for notification purposes. The warning message and follow-up messages from the plant will be in accordance with the procedures and format stipulated in Annex F of this plan. These messages will include a recommendation for the protective actions to be taken.
2. If necessary, the Marine Warning Team will warn and control marine traffic in the threatened area using resources best suited to existing conditions and requirements.

VIII. EXECUTION

A. **INITIATING PROCEDURES**

1. The fixed siren system will be the primary system for Alert and notification of individuals in the marine area around the Brunswick Nuclear Plant.
2. Boats equipped with public address systems, lights and sirens will be used in the marine area as supplemental alert and notification for boaters. Fixed or rotary wing aircraft (if available and weather permitting) will be used to assist with verification of clearing activity.
3. If the weather prohibits the use of boats and aircraft, alert and notification procedures outlined in this appendix will be conducted using boats only if and when the weather permits timely action. (NOTE: The fixed-siren system will be activated regardless of weather conditions.)
4. When ordered to do so, the boats will cover pre-assigned areas sounding their sirens continuously and displaying their warning lights.
5. The primary concern is to initiate an immediate course of action that starts at the Brunswick Nuclear Plant and works outward. In addition all boating traffic will be stopped at the northern and southern ten-mile EPZ boundary where it intersects the Intercoastal Waterway.
6. Boats from N.C. Wildlife Resources Commission, N.C. Marine Patrol will conduct the Alert and Notification in pairs or as individual units to complete mission objective.
7. All assigned boats will patrol assigned areas covering all navigable creeks, coves, and river areas at an appropriate speed for current weather and safety conditions.

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8. All boats not assigned a specific patrol zone will report by radio to the command and control center for instructions and/or assignment.
9. See Figure 1 for Zone Patrol Areas and Emergency Planning Zone map.
10. The Sunset and Wrightsville bridges will be used to communicate warning messages to boaters.
11. While patrolling the assigned area all boats will sound sirens and will display emergency lights. In addition all boats with a PA system will broadcast the following message when appropriate:

ATTENTION BOATERS!
AN EMERGENCY CONDITION HAS OCCURRED THAT CAN AFFECT
YOUR SAFETY. PLEASE EVACUATE THE AREA AS SOON AS
POSSIBLE.

B. ACCIDENT ASSESSMENT

1. The Marine Warning Team will depend on the Brunswick Nuclear Plant and State and local governments for event assessment.
2. After the initial notification and prior to the establishment of either the County EOCs or SERT, the USCG will rely on the recommendations from the Brunswick Nuclear Plant.
3. Once the county EOCs and/or SERT are established, they will coordinate with the Marine Warning Team and advise them of threatened water areas and recommend that the Team establish the appropriate safety zones in accordance with existing Federal regulations.

C. PROTECTIVE RESPONSE

The protective response in the water area will be to evacuate people from the threatened area and thereafter control access to it.

D. RADIOLOGICAL EXPOSURE CONTROL

1. See Parts 1 and 2, Paragraph IV.G. for general guidance concerning State and local Emergency workers who might be employed in the water area.
2. USCG personnel will not enter threatened or contaminated areas.

IX. RECOVERY, REENTRY, AND POST- ACCIDENT OPERATIONS

See Part 1, Paragraph IV.H.

X. SUPPORT

- A. Additional Federal agency support and resources for notification, warning and decontamination may be obtained using local USCG unit contingency plans.

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- B. State and local resources required to assist with operations in the water area, the USCG will request such assistance from the level of government currently having direction and control responsibilities.
- C. State resources assisting in the water area will remain under the direction and control of the appropriate State authorities. State agencies tasked to assist in the water area will establish direct coordination with the Marine Warning Team at the USCG Marine Safety Unit in Wilmington.

XI. EMERGENCY COMMUNICATIONS

- A. Initial notification to USCG Sector North Carolina will be made by facsimile from the plant. Notifications via Selective Signaling will be accomplished upon activation of State and County EOCs and the 24-hour activation of the USCG Marine Safety Unit, Wilmington. Communication directed to the USCG Marine Safety Unit in Wilmington will be made by commercial telephone with messenger back-up.
- B. The primary means of communication between the Marine Warning Team and the counties will be through Selective Signaling System (SSS), and commercial telephone with messenger back-up.
- C. Other State agencies tasked to provide assistance to the Marine Warning Team will also assign a liaison officer to the ICP at USCG Marine Safety Unit. Liaisons will provide radio or satellite communications to assist with coordination of their respective agencies.

XII. PLANS AND TRAINING

- A. The NC Marine Fisheries, NC Wildlife Commission, Brunswick and New Hanover Sheriff Departments, SERT and the USCG will be requested to take part in all Brunswick Nuclear Plant exercises and in those drills that affect their operational areas.
- B. The USCG, NC Marine Fisheries, NC Wildlife Commission, Brunswick and New Hanover Sheriff Department personnel involved with Marine Warning will be invited to attend radiation protection training courses conducted by the State of North Carolina, Brunswick or New Hanover Counties.

XIII. FIGURES

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PATROL ZONE IDENTIFICATION

ZONE ID	BOAT NO. AND ORGANIZATION	ZONE DESCRIPTION and PATROL AREA
	No. 1 USCG	Stationed at Campbell Island to stop all boats moving south on Cape Fear River. See Note below.
A-1	No. 2 NC Wildlife Resources Commission	Launch from best location to patrol from Snow Marsh north along west side of Cape Fear River to Campbell Island.
A-2	No. 3 NC Wildlife Resources Commission	Launch from best location to patrol from Ft Fisher Ferry Terminal north along east side of Cape Fear River to Campbell Island.
A-3	No. 4 NC Marine Patrol	Launch from best location to patrol Inter-Coastal Waterway from entrance to Cape Fear River to Sea Breeze (Snows Cut Area). Once area is cleared station one boat at Sea Breeze to stop boats moving south on Inter-Coastal Waterway.
B-1	No. 5 NC Wildlife Resources Commission	Launch from best location to patrol from Snow Marsh south to Baptist Assembly Grounds (Caswell Beach) along west side of Cape Fear River.
B-2	No. 6 NC Wildlife Resources Commission	Launch from best location to patrol from Ft Fisher Ferry Terminal south along east side of Cape Fear River to Bald Head Island Ferry Landing.
C-1	No. 7 NC Marine Patrol	Launch from best location to patrol Inter-Coastal Waterway from Striking Island to Sheep Island. Once area is cleared station a boat at Sheep Island to stop boats moving north on Inter-Coastal Waterway.

NOTE: All ships requesting river pilots or permission to enter the Cape Fear River will proceed as directed by the Port Captain until such time as the Marine Warning Area has been declared safe for navigation.

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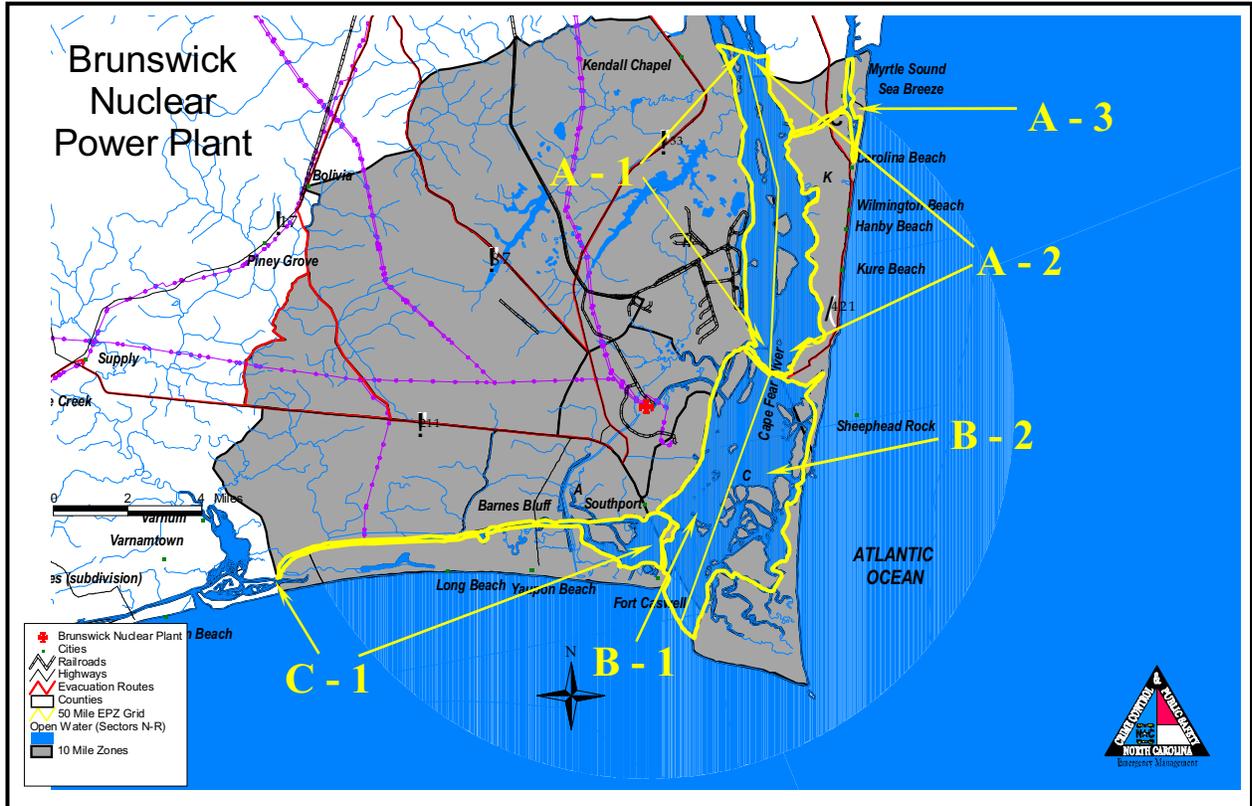


Figure 1
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