

APPENDIX N: NORTH CAROLINA NERR SAFETY PLAN

Introduction

This safety plan was developed for the North Carolina Coastal Reserve (NCCR) and the North Carolina National Estuarine Research Reserve (NCNERR). Both organizations are managed as the North Carolina Coastal Reserve Program, which falls under the Division of Coastal Management (DCM) within the North Carolina Department of Environment and Natural Resources (DENR). There are four offices that house staff for the NC Coastal Reserve Program. The northern sites' office for Currituck Banks, Kitty Hawk Woods and Buxton Woods is located in Kitty Hawk, and the office space is leased from the Town of Kitty Hawk. The Buckridge Coastal Reserve office is located in the town of Columbia within Tyrrell County, where the office is shared with Division of Marine Fisheries and leased from a private individual. The headquarters office is located in Beaufort, and shares an office building with the NOAA's Center for Coastal Fisheries and Habitat Research and leases dock space from the Duke University Marine Laboratory. The southern sites' office is located in Wilmington at the University of North Carolina Wilmington's (UNCW) Center for Marine Science (CMS). Reserve staff are employed by both DCM and UNCW and building space is leased from several different entities, all of which have their own safety plans and policies. The UNCW staff at the Wilmington office are governed by UNCW's Center for Marine Science's safety, boating, emergency and hurricane policies. Given the centralized management of DCM/DENR and the local partnerships for office space and employee status, this document will clarify and address reserve wide and office specific safety protocols. Table 1 outlines which safety and hurricane plans the different offices follow.

Table 1. Matrix of Reserve offices, employees, and safety and hurricane plans to follow.

Office	Lease/Partner	Employees	Safety Plan	Hurricane Plan
Kitty Hawk	Town of Kitty Hawk	DCM	DENR	DCM
Beaufort	NOAA-CCFHR	DCM & UNCW	DENR & NOAA	NOAA & DCM
Wilmington	UNCW	UNCW	UNCW	UNCW
Columbia	DMF	DCM	DENR	DMF

Reserve Wide General Safety

All offices and personnel shall adhere to the DENR Workplace Safety Manual. Chapters 1 and 2 cover general safety policies (Appendix A) and chapter 6 refers specifically to the Division of Coastal Management (Appendix B). DENR has developed detailed safe operating procedures (SOPs) for many job site activities, operations, and hazards and those relevant to work on the Reserves are included in Appendix C. The DCM disaster response manual contains a contact list/matrix, staff assignments and hurricane recovery policies (Appendix D). NOAA and UNCW's safety and hurricane plans can also be found in Appendices E and F, respectively. These policies serve as framework for development of the NC Coastal Reserve Program Safety Plan.

The North Carolina Coastal Reserve/NCNERR safety plan provides guidelines and policies to ensure a safe working environment for all Reserve staff both in the office and in the field. The following safety philosophy adapted from DENR forms the basis of the safety plan:

1. Working safely is a condition of employment.
2. Occupational safety and health is part of every employee's total job performance.
3. Management/supervisors are responsible, and will be held accountable for establishing safe workplace conditions that prevent injuries and occupational illnesses.
4. By using proactive measures and actions, every employee can prevent accidents and injuries. It is the responsibility of each employee to report hazards to their supervisors so that the hazards can be addressed in a timely manner.
5. All workplace hazards can be safeguarded.
6. Training employees to work safely is essential and is the responsibility of management/supervisors.
7. Creating and maintaining a safe workplace, combined with the prevention of personal injuries and accidents, is good business.
8. An effective Safety Plan adds value to the Reserve's vision and mission.

Safety and Hurricane Plans

DENR Workplace Safety Manual

The DENR Workplace Safety Manual is a department wide plan that includes standard operating procedures for general, worksite, and equipment safety and chapters for each division, including DCM. The manual is available at <http://www.enr.state.nc.us/safety/index.html>. The manual also details the structure of department and division safety committees to standardize policies and transfer information. Specifically the committees are designed to:

1. Coordinate and guide the process and progress of the DENR written safety program within DCM;
2. Recommend modifications for specific safety procedures and policies;
3. Exchange safety information on a DCM-wide basis; and
4. Identify and review trends (both positive and negative) and make recommendations for improvement (DENR Workplace Safety Manual, Chapter 2).

The DCM chapter in the manual details the frequency in which the division committee and subcommittees meet (<http://www.enr.state.nc.us/safety/WSM%202003/Ch%206/Chapter%206%20Coastal%20Management.html>). Due to the small size of DCM, the six subcommittees were combined into three: Incident and Injury Investigation, and Policy and Procedures Review; Safety Audit Review and New Equipment Safety Review; and Safety Programs/Special Activities and Off-the-Job Safety. The Reserve has representatives on each of these committees.

DCM Disaster Response Plan and Procedures Manual

The DCM Disaster Response Plan and Procedures Manual is available for all Reserve staff on the DCM Intranet. The manual is reviewed every spring prior to hurricane season and contains staff roles and responsibilities and a phone tree for distributing information to DCM unit leads and staff. The Reserve also has its own phone tree to contact employees in the event of a disaster or emergency (Appendix D).

UNCW Safety and Hurricane Policies

UNCW provides safety policies and procedures at the Environmental Health and Safety's website, <http://www.uncw.edu/ba/safety/>. Hurricane preparedness and policies are located at

http://www.uncw.edu/ba/safety/emergency_management.html. UNCW personnel in the Wilmington office must adhere to all UNCW safety and hurricane policies, including safe boating operations. UNCW personnel located at the Beaufort office adhere to both DENR and NOAA safety plans (Appendix E).

NOAA Occupant Emergency Plan and Hurricane Plan

The NOAA Occupant Emergency Plan and Hurricane Plan are available in the administration building on the Pivers Island campus (Appendix F).

Standard Operating Procedures

Table 2 details the relevant standard operating procedures from DENR and UNCW for Reserve relevant categories. DENR procedures are located in the Workplace Safety Manual and UNCW procedures are located at http://www.uncw.edu/ba/safety/policies_procedures.html. Reserve specific supplemental information and forms can be found in Appendix G.

Table 2. Relevant DENR and UNCW SOPs.

	DENR	UNCW
Boat Safety	Marine Vessel-Power Boat, Working In or Around Water, Marine Vessel Painting	Guide for Safe Boating Operations
Field Work	Accident and Injury Response, Inclement Weather Conditions, Cold Weather Safety, Hot Weather Safety, Sun Exposure, First Aid, Field Surveying Activities, Natural Area Survey, Hand Removal of Vegetation, Litter Pick-up, Maintenance-Boundary line, Maintenance-Trail, Poisonous Snakes, Insects and Plants, Working Near Overhead High Voltage Lines, Abrasive and Water Blast Cleaning	
Environmental Hazards	Geographic Hazards, Domestic and Wild Animals, Poisonous Plants and Animals, Herbicides	
Tool Safety	See Ch. 27: Equipment, Tools, Accessories, Mechanic Operations	
Laboratory & Chemical Safety	Laboratory - Chemical Analysis, Laboratory - Physical Testing, Laboratory – Sample Testing	Hazardous Communication; Chemical Hygiene Plan
Automobile	Vehicle Operation, ATV,	

Safety	Vehicle-SUV, Equipment Mounting and Dismounting, Wet Weather	
Office Safety	Office Safety, Housekeeping and Sanitation, Lifting, Stapler-hand and electric, Fire Safety, First Aid, Wet Weather	
Anthropogenic Hazards	Hazardous Materials	
Hostile Interactions	Hostile and Irate Customer	
Personal Protective Equipment	PPE-Field Operations	Respiratory Protection
Ergonomics	Computer Data Entry	Office Ergonomics

Additional Reserve Procedures

Leading Group Tours on the Reserves

1. Leaders will brief the group on safety issues (i.e., no running, stay together as a group) prior to beginning the trip.
2. A DENR approved first aid kit will be carried at all times (Appendix G).
3. Leaders will have at least one form of communication (VHF radio, two-way radio or cell phone) in case of an emergency. Two forms of communication are preferable. Aerial flares are suggested but optional.
4. Appropriate footwear (close toed shoes) for wet and muddy conditions and clothing to coincide with seasonal conditions will be worn by both leaders and participants.
5. If the Reserve transports the group, the trip leader should check with participants to make sure they have water prior to leaving the dock. Bottled water is available for purchase in the Administration Building lounge.
6. Prior to any boat trip a float plan (Appendix G) must be filled out indicating the individuals on the boat (or number of trip participants), the boat destination, and the time of return. The boat captain will designate an on-shore emergency response contact prior to leaving the dock. If the boat is delayed the captain will communicate with the on-shore contact to let them know they are safe and to set another return time. If the boat captain has not returned by the time indicated and has not called to revise their float plan, the on-shore contact will attempt to initiate communication with the boat captain and if there is no response after 15 minutes the contact will personally try and locate the field staff (if nearby). After 45 minutes if the boat captain cannot be reached the on-shore emergency response contact will call 911 (which will alert the Coast Guard) and the Reserve Manager.
7. Leaders will arrive at the pick-up location on-time so as not to delay the ferry or boat captain. If the leader is delayed they will contact the boat captain to notify them of their delay. If the leader fails to show up at the pick-up location on time the boat captain will personally try and locate the field staff (if nearby). After 45 minutes if the boat captain cannot find or reach the trip leader the boat captain will call 911 (which will alert the Coast Guard) and the Reserve Manager.

8. During inclement weather, the boat captain has the final decision making authority as to whether or not the field trip proceeds. Field trips are not to be held in steady rain, strong winds, cold temperatures (< 40 degrees Fahrenheit), and during lightening storms. If inclement weather approaches during a field trip, the leader is to cut short the field trip and return to the pick-up location immediately.

Leading Group Boat Tours

1. Boat captain will brief the group on safety issues (i.e. staying seated for duration of trip, where PFDs are located, keeping limbs inside boat, etc.) prior to beginning the trip. Staff must wear a PFD when using the kayaks or when instructed to do so by the boat captain.
2. A DENR approved first aid kit will be carried at all times (Appendix G).
3. Boat captain will have two forms of communication (preferably a VHF radio and either a two-way radio or cell phone) in case of an emergency. In addition, the following equipment is required: PFDs, oars, flares, anchor and line, manual bilge pump, list of emergency contacts, and appropriate weather gear (*e.g.*, foul weather gear, float coats). Approved float coats will be worn when air temperatures are below 40 degrees Fahrenheit.
4. Trip Leader/Boat Captain should check with participants to make sure they have water prior to leaving the dock. Bottled water is available for purchase in the Administration Building lounge.
5. Children under 13 years of age must wear a life vest (WRC law).
6. Prior to any boat trip a float plan (Appendix G) must be filled out indicating the individuals on the boat (or number of trip participants), the boat destination, and the time of return. The boat captain will designate an on-shore emergency response contact prior to leaving the dock. If the boat is delayed the captain will communicate with the on-shore contact to let them know they are safe and to set another return time. If the boat captain has not returned by the time indicated and has not called to revise their float plan, the on-shore contact will attempt to initiate communication with the boat captain and if there is no response after 15 minutes the contact will personally try and locate the field staff (if nearby). After 45 minutes if the boat captain cannot be reached the on-shore emergency response contact will call 911 (which will alert the Coast Guard) and the Reserve Manager.
7. During inclement weather, the boat captain has the final decision making authority as to whether or not the field trip proceeds. Field trips are not to be held in steady rain, strong winds, cold temperatures (< 40 degrees Fahrenheit), and during lightening storms. If inclement weather approaches during a field trip, the leader is to cut short the field trip and return to the pick-up location immediately.

Boat Activities

1. Prior to any boat trip a float plan (Appendix G) must be filled out indicating the individuals on the boat (or number of trip participants), the boat destination, and the time of return. The boat captain will designate an on-shore emergency response contact prior to leaving the dock. If the boat is delayed the captain will communicate with the on-shore contact to let them know they are safe and to set another return time. If the boat captain has not returned by the time indicated and has not called to revise their float plan, the on-shore contact will attempt to initiate communication with the boat captain and if

there is no response after 15 minutes the contact will personally try and locate the field staff (if nearby). After 45 minutes if the boat captain cannot be reached the on-shore emergency response contact will call 911 (which will alert the Coast Guard) and the Reserve Manager.

Accident and Injury Response Guidelines for Visitors

1. Generally a person is under no duty to aid or render assistance to another who is in danger or in need of help. However, because we invite the public to come on our field trips, we have a duty to aid. A duty to aid is also imposed if the injury or danger is created by our negligence or by an instrumentality under our control. The general rule for Reserve staff is to aid in all circumstances. When rendering aid, reasonable care under the circumstances is the standard that is required. Because of our legal status as an “invitor”, a duty is also imposed on us to protect others against risks created by third parties.
2. In the event of any injury or accident follow the procedures outlined in the Tort Claims General Process Flow Chart (Appendix G). Always call 911 in the event of severe injury and/or accident and render aid until emergency personnel arrive. No drugs of any kind (even aspirin or Tylenol) are to be dispensed, by Reserve staff, to visitors. Topical treatments are ok, as long as they are used reasonably as part of first aid.
3. When an accident or injury has occurred and staff members render aid, discuss only the injury and details of the aid being rendered. Do not admit fault or say anything that could be considered an admission of liability or negligence.
4. After the accident has been handled, all staff members involved should immediately fill out the Non-Employee Injury Report Form (Appendix G) with as much detail as possible. Complete this form even if the individual tells you they are not hurt or do not think the injury is serious. This form is for the protection of the staff member, the Reserve and the State of North Carolina. This form should not be filled out in front of the visitor. Use other paper to take notes at the scene of the accident or injury and then complete this form after the visitor has departed. Staff should not volunteer a copy of this form to visitors. This is, however, a public document, so do not deny a copy if one is requested. The Non-Employee Injury Report Form will be kept on file for at least three years.

Field Work Guidelines (Kitty Hawk, Beaufort & Wilmington)

1. Staff will have two forms of communication (preferably a VHF radio and either a two-way radio or cell phone) in case of an emergency. They will also carry a DENR approved first aid kit and plenty of water.
2. Prior to conducting field work, staff will review all appropriate SOPs and will ascertain what safety equipment is needed to complete the task.
3. Staff will designate an emergency response contact prior to conducting field work. The contact must know where the staff is going, why, and how long they plan to be in the field. Staff in the field will communicate with the contact if they will be out longer than anticipated. If the staff in the field has not returned by the time indicated the contact will initiate communication with the staff in the field and if there is no response after 15 minutes the contact will personally try and locate the field staff (if nearby). After 45 minutes if the staff cannot be reached the emergency response contact will call 911,

which will alert the appropriate responder (either the Coast Guard or the Sheriff's office), and the Reserve Manager.

4. At least two people should be involved for most field work activities. Two people should be aboard the boats at all times, except when ferrying people to and from the components and returning a boat to its trailer. Some field activities do not impose safety concerns and therefore, two people are not required for these activities. These include site monitoring, interpretive field trips, and kayak expeditions. Field work policy #3 above is critical when staff are in the field by themselves. Under no circumstances should visitors be confronted about rule violations when staff are by themselves.
5. The following equipment is required for work involving the boat: float plan, PFDs, oars, flares, anchor and line, manual bilge pump, list of emergency contacts, and appropriate weather gear (*e.g.*, foul weather gear, float coats). Approved float coats will be worn when temperatures are below 40 degrees Fahrenheit.
6. Staff must wear a PFD when using the kayaks.

Field Work Guidelines (Buckridge)

1. Buckridge staff will have an appropriate form of communication when conducting field work. Some forms of communication work better than others at this remote site and staff are often incommunicado. Staff will also carry a DENR approved first aid kit and plenty of water.
2. Prior to conducting field work, staff will review all appropriate SOPs and will ascertain what safety equipment is needed to complete the task.
3. When doing work involving the boat, a float plan will be given to DMF staff at the Columbia office. Estimated time of return should be followed as closely as possible so as to not delay DMF staff unnecessarily. Staff will do their best to return to shore before DMF office hours expire and to keep in contact with DMF staff if they are going to be delayed. In addition, the following equipment is required on the boat: PFDs, oars, flares, anchor and line, manual bilge pump, list of emergency contacts, and appropriate weather gear (*e.g.*, foul weather gear, float coats). Approved float coats will be worn when air temperatures are below 40 degrees Fahrenheit.
4. If work is required after normal office hours, a family member and/or a local volunteer will be notified of planned work area(s), expected time of return, and how the long contact should wait before investigating the delay. Some work can cause longer delays than others, so time frames after missed check-ins need to be flexible. As soon as possible after returning from the field, staff should notify their safety contact.
5. Buckridge is a remote site and therefore by nature rarely has two people available for fieldwork. While extra emphasis is placed on finding volunteers whenever boat work is involved, staff are expected to stay as safe as possible and always bear in mind their location and distance from assistance should an accident occur.
6. Staff must wear a PFD when using the kayaks.

Plan Review and Updates

NC Coastal Reserve/NCNERR staff will review the plan on an annual basis to determine its effectiveness and identify areas that need strengthening. Each office will have updated copies of the plan and printed copies of the manuals and standard operating procedures referenced here for easy access.

