

Beaufort County, South Carolina Disaster Debris Management Plan

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ABBREVIATIONS

44 CFR	Title 44 of the Code of Federal Regulations
ADMS	Automated Debris Monitoring System
BCSD	Beaufort County School District
C&D Debris	Construction and Demolition Debris
Chamber	Chamber of Commerce
County Administrator	County Administrator
DDIR	Detailed Damage Inspection Report
DMS	Debris Management Site
DPW	Department of Public Works
DRRD	Disaster Response Recovery Department
DSG	Disaster Specific Guidance
ECU	Environmental Crimes Unit
EMD	Emergency Management Department
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
FEMA 325	Debris Management Guide – FEMA Publication 325
FEMA 327	Public Assistance Debris Monitoring Guide
FHWA-ER	Federal Highway Administration Emergency Relief
GIS	Geographic Information Systems(Mapping&Applications)
GPS	Global Positioning System
Handbook	Applicant Handbook
HHW	Household Hazardous Waste
ICP	Integrated Communications Plan
MOU	Memorandum of Understanding
NOAA	National Oceanic Atmospheric Administration
NRCS	National Resource Conservation Service
OSHA	Occupational Safety and Health Administration
PA	Public Assistance
P&R	Parks and Recreation
PAO	Public Assistance Officer
PLAN	Disaster Debris Management Plan
PPE	Personal Protective Equipment
PIO/C&A Dept	Public Information Officer/ Communications & Accountability Department

PO	Purchase Orders
PW	Project Worksheets
PWCC	Public Works Coordination Center
QA/QC	Quality Assurance/Quality Control
RFB	Request for Bids
RFP	Request for Proposals
ROE	Right-of-Entry
ROW	Right-of-Way
SCDHEC	South Carolina Department of Health and Environmental Control
SCDNR	South Carolina Department of Natural Resources
SCDOT	South Carolina Department of Transportation
SRIA	Sandy Recovery Improvement Act
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
Stations	Residential Debris Drop-off Stations

EXECUTIVE SUMMARY

Introduction

On the evening of October 7th and through the early morning of October 8th, 2016, Hurricane Matthew struck the coast of South Carolina including Beaufort County. As a result, the County experienced severe high winds, flooding and storm surge. The end damage was extensive including construction and demolition debris, downed trees, broken, damaged or sunk docks and vessels. Since 2016, Beaufort County has faced Hurricane, Irma, Florence, and Michael, none of these storms have results to the extent as Hurricane Matthew, which was only a CAT 1. A major event could result in millions of cubic yards of debris – including vegetative material, construction and demolition debris, and beach sand – littered throughout the County.

Many lessons learned have resulted from each of these unique events and each events presents areas of improvement for the county to only become progressively more prepared. Since these storms, extensive debris management planning has been performed to ensure the County is able to respond to any emergency. Recovering from any disaster is a priority of Beaufort County government. The County has strived to learn from other communities' experiences by pre-planning and adopting many valuable lessons in right-of-way, parks, stormwater, marine, and private property debris removal operations.

Plan Organization

The remainder of this Plan is detailed in six primary sections as outlined below.

Section 1: Background and Purpose – Section 1 provides general background information, key assumptions, and the methodology that was used to develop the Plan.

Section 2: Debris Management Cycle – The debris management cycle, described in Section 2, provides the basis for the Plan and provides a general understanding of the times throughout the year, when the County will need to either prepare or respond to a disaster. The County should maintain a current list of disposal sites to include contact information and airspace remaining each year. The County should also maintain a current list of regional hauling companies for alternate debris disposal.

Section 3: Roles and Responsibilities – This section outlines the County Departments and outside agencies that may have a role in the debris removal process. Each description provides guidance on the areas of responsibility (in the realm of debris removal) that each department or outside agency is responsible for.

Section 4: Overview of Rules and Regulations – Section 4 summarizes various Federal reference documents and laws that govern the debris removal process. These documents also may orient the County with the proper procedures to maximize Federal reimbursement for debris removal activities.

Section 5: Action Plan – This section provides a detailed checklist of activities that would potentially need to be addressed by the County for preparation and recovery from a hurricane or other disaster. Each checkpoint includes a description of the activities and the recommended steps that the County will coordinate to accomplish each task.

SECTION 1 - BACKGROUND AND PURPOSE

Purpose of the Plan

This Disaster Debris Management Plan (Plan) was developed by the County for a number of key reasons, including:

1. To provide a centralized repository of information critical to initiating and operating a disaster debris management program including location of DMS, zone maps, road lists, etc.;
2. To list the various County, City, and other stakeholders involved in the debris management process and the key areas of responsibility for each;
3. To educate County staff and other stakeholders on the general scope of activities;
4. To identify, define and reference important rules, regulations, and guidelines enacted by FEMA and other agencies governing the disaster debris removal process; and
5. To identify key steps (in the form of checklist and an operational plan) that the County will need to take prior to a threat of disaster and during a disaster debris management effort.

The Plan appendices – including zone maps, road lists, DMS list and maps, etc. – provide the essential working documents to augment the plan and rapidly initiate and implement a successful disaster debris removal program.

Key Assumptions

The debris management action plan was developed based on two key assumptions.

1. The recovery and response is to a National Oceanic Atmospheric Administration (NOAA) classified major hurricane (Category 3 or greater—see Table 1.1 below) affecting Beaufort County. However it should be noted that, if a less significant hurricane should affect the County, the debris management action plan would still be applicable.

**Table 1-1
Saffir-Simpson Scale**

Category	Winds (MPH)	Storm Surge	Damage
1	74 - 95	4'-5'	Minimal – Signs, tree branches, and power lines down
2	96 - 110	6'-8'	Moderate – Larger signs, tree branches blown down
3	111 - 129	9'-12'	Extensive – Minor damage to buildings, trees uprooted or broken
4	130 - 156	13'-18'	Extreme – Nearly total destruction of doors, windows, heavy vegetative loss
5	>157	>18'	Catastrophic – Buildings, roofs, and most structures destroyed

TROPICAL STORM 39-73 (MPH)

TROPICAL DEPRESSION < 17 (MPH)

2. The County will be operating under the current Public Assistance (PA) guidelines for reimbursement as described in the Stafford Act. The County should re-evaluate its debris management action plan should significant changes to the PA program occur.

SECTION 2 - DEBRIS MANAGEMENT CYCLE

This section provides the guidance required to deal with all phases of a disaster event. These phases include, Normal Operations, Increased Readiness, Response and Recovery. Each phase is unique and necessary to properly plan for and respond to a disaster. A summary of each phase has been provided below. Greater details on various key activities and milestones are described in subsequent chapters that define the specific operations that need to take place during each of these phases and the responsible entities that will implement the necessary measures.

Normal Operations (Details 5.1 – 5.10) OPCON 5

Normal Operations is the period of time when the County is not in any serious threat of a disaster event. For Beaufort County, that is typically the non-hurricane season, currently defined as December 1st through May 31st.

The Normal Operations phase is the ideal time for the County to establish/review pre-positioned contracts with a monitoring contractor, a debris removal contractor(s), identify and secure locations to serve as DMS, and review current local ordinances and their impact on debris removal operations. The Normal Operations period is also the ideal time for the Disaster Response Recovery Section of the Public Works Department (DRRD), the lead county section in debris recovery efforts, to re-evaluate the roles and responsibilities of each county department and other involved outside agencies. The purpose of this evaluation is to ensure that all impacted departments, municipalities, and agencies maintain the capacity to fulfill their obligation in a timely and effective manner should a disaster strike the County. (Review and update of the Plan should be conducted annually, prior to the hurricane season.)

Normal Operations Checklist

- Establish Pre-positioned Contracts
 - Debris Hauler
 - Debris Monitor
 - Emergency Roadway Clearing (Optional)
- Review and Update Road List
- Review and Update Contact List
- Review and Update DMS Locations
- Review and Update Relevant Ordinances
- Review and Update Memorandums of Understanding
- Monitor and Evaluate Disposal Capacity at Landfills
- Review and Update Debris Management Plan
- Annual Media Press Releases

Increased Readiness (Details 5.10 – 5.11)

OPCON 4 through OPCON 1

The Increased Readiness phase occurs when there is a high probability that a natural disaster will impact the County. This phase calls for the County to prepare for a disaster event under the assumption that the threat is imminent. The County activates the Increased Readiness Phase when a hurricane has moved into the Atlantic Basin and Beaufort County has been placed in the NOAA three or five day forecast map. Key County personnel and representatives of involved outside agencies will be put on alert and will monitor the progress of the storm event to gauge where and when it might strike the area and with what severity. All participating parties will be briefed of their specific duties.

The availability of pre-selected/ pre-approved DMS locations will be evaluated. Alternative locations will be considered by prioritizing potential alternate sites if one or more pre-approved site is not available. County representatives will place pre-positioned contractors on standby and request each provide a representative at the PWCC no later than 36 hours prior to the estimated landfall time.

Increased Readiness Checklist

- Download Most Recent Road List and Relevant Documents to a thumbdrive
- Alert Key Personnel
- Review Plan with Key Personnel
- Pre-event Media Press Release
- Alert Debris Contactors and Place on Standby
- Activate Sandbag operation for public use (Appendix Q)

Response (Details 5.11 – 5.16)

The Response phase is the period immediately after the event occurs and a disaster declaration has been issued. For contractual and FEMA reimbursement purposes, the response phase is generally defined as the first 70 contractor working hours following a storm. (This time frame is subject to change due to severity of the event and other disaster specific circumstances.) During this phase the County Public Works Department Debris Teams will initiate emergency roadway debris clearing operations. Road Clearance priorities are pre-established to allow access to critical public facilities such as:

Emergency Operation Center, fire stations, police stations, hospitals, emergency supply centers, and other critical facilities. In order to maximize reimbursement, the Public Works Department shall document labor, equipment, and materials used during the emergency response phase. All labor costs (including benefits) as well as the actual time equipment is in use are eligible for reimbursement through the PA Program.

Response Phase Checklist

- Conduct Damage Assessment
- Begin Emergency Roadway Debris Clearance
- Activate Debris Removal Contractors – Establish Contractor Boundaries
- Prepare DMS Locations Based on Concentration of Debris
- Collect soil samples at potential DMS locations
- Conduct Meetings/Briefings with Key Personnel
- Review Debris Volume and Collection Cost Assessment
- Request Contact Information and a Meeting with the FEMA Public Assistance Officer.
- Coordinate with State EMD officials
- Issue Media Press Release

Recovery (Details 5.16 – 5.36)

For the purpose of debris management, the Recovery Phase is marked by debris removal contractor(s) collecting and reducing storm generated debris from the public right-of-way (ROW).

Concurrent to the commencement of ROW debris removal operations, the County evaluates the need for contract debris removal on private property, stormwater, marine and recreation parks. The County will also confirm that The Town of Hilton Head Island and South Carolina Department of Transportation (SCDOT) are either under way or in the process of initiating or have began programs that address debris removal on the roads for which they are responsible. SCDOT may opt to activate an existing Memorandum of Understanding (MOU) with the County and issue a Notice to Proceed to have Beaufort County’s contractor clear state roads located within the County.

Recovery Phase Checklist

2 Days – 2 Weeks

- Monitoring Function (Secure Monitors)
- Begin Truck Certification
- Initiation of DMS Operations
- Prioritize Roads/Areas
- Issue Press Release on Segregation of Vegetative, C&D, and HHW
- Begin ROW Cleanup – Vegetative
- Begin ROW Cleanup – C&D
- Begin ROW Cleanup – Household Hazardous Waste
- Begin ROW Cleanup – White Goods

- Begin Parks Cleanup
- Coordinate with External Agencies
- Initiate Discussions with FEMA Debris Team
- Obtain FEMA Guidance for Gated Community and Private Property Debris Removal
- Obtain FEMA Guidance for Marine Debris removal
- Obtain NRCS Guidance for Stormwater removal
- Issue Media Press Release

2 Weeks – 1 Month

- Maintain and Evaluate ROW Cleanup – Vegetative and C&D
- Open Additional DMS Locations (as necessary)
- Open Citizen Drop-off Stations
- Conduct Daily Meetings with FEMA Debris Team
- Begin Processing Contractor Invoices
- Continue Media Press Release

1 Month – 3 Months

- Maintain and Evaluate ROW Cleanup – Vegetative and C&D
- Begin ROW Leaners/Hangers Program
- Begin Right of Entry (ROE) Vegetative and C&D Recovery Process
- Initiate Haul outs (as necessary)
- Maintain Coordination with External Agencies
- Progress to Bi-weekly Meetings with FEMA Debris Team
- Continue Media Press Releases

3 Months – Project Completion

- Complete all Debris Recovery Activities
 - ROW Cleanup Activities – Vegetative, C&D, etc.
 - Complete ROE Vegetative and C&D
 - Complete Parks and Leaners/Hangers Cleanup
- Identification of Ineligible Debris on ROW
- Finalization of Haul out of Debris
- Begin and Complete Abandoned Vehicles/Vessel Recovery
- Closeout and Remediate DMS Locations
- Conduct Project Closeout Meetings with FEMA Debris Team and External Agencies
- Continue Media Press Releases

SECTION 3 - ROLES AND RESPONSIBILITIES

Lead Agencies

The four primary County departments responsible for the debris removal and management process are the Public Works Department, the Disaster Response Recovery Dept, the Office of the County Administrator, and the Division of Emergency Management. Each agency's unique role in managing the debris cleanup process has been summarized in Table 3.1

Public Works –Disaster Response Recovery Department

PW/DRRD is the lead agency for the debris removal process. PW/DRRD's responsibilities are to facilitate the debris removal, reduction, and disposal activities. These include but are not limited to:

- Coordinating with designated County Departments prior to and after the event;
- Acting as the Beaufort County representative in discussions and meetings with municipal jurisdictions and entities (i.e. utility companies); Coordination meetings will be held daily at the Public Works Coordination Center (PWCC);
- Communicating with various State and Federal agencies (i.e. FEMA, South Carolina Department of Environmental Control - SCDHEC, and SCDOT);
- Scheduling all training activities and meetings regarding the issue of debris management;
- Activating and overseeing all private contractors including hauling, marine, and monitoring firms through the duration of the cleanup process; and
- Providing the County Administrator, elected officials, and the public with information regarding the progress of the debris removal effort.

One individual from PW/DRRD shall be designated as the primary point of contact. The County may consider appointing one or more individuals to coordinate the debris removal operations.

Office of the County Administrator

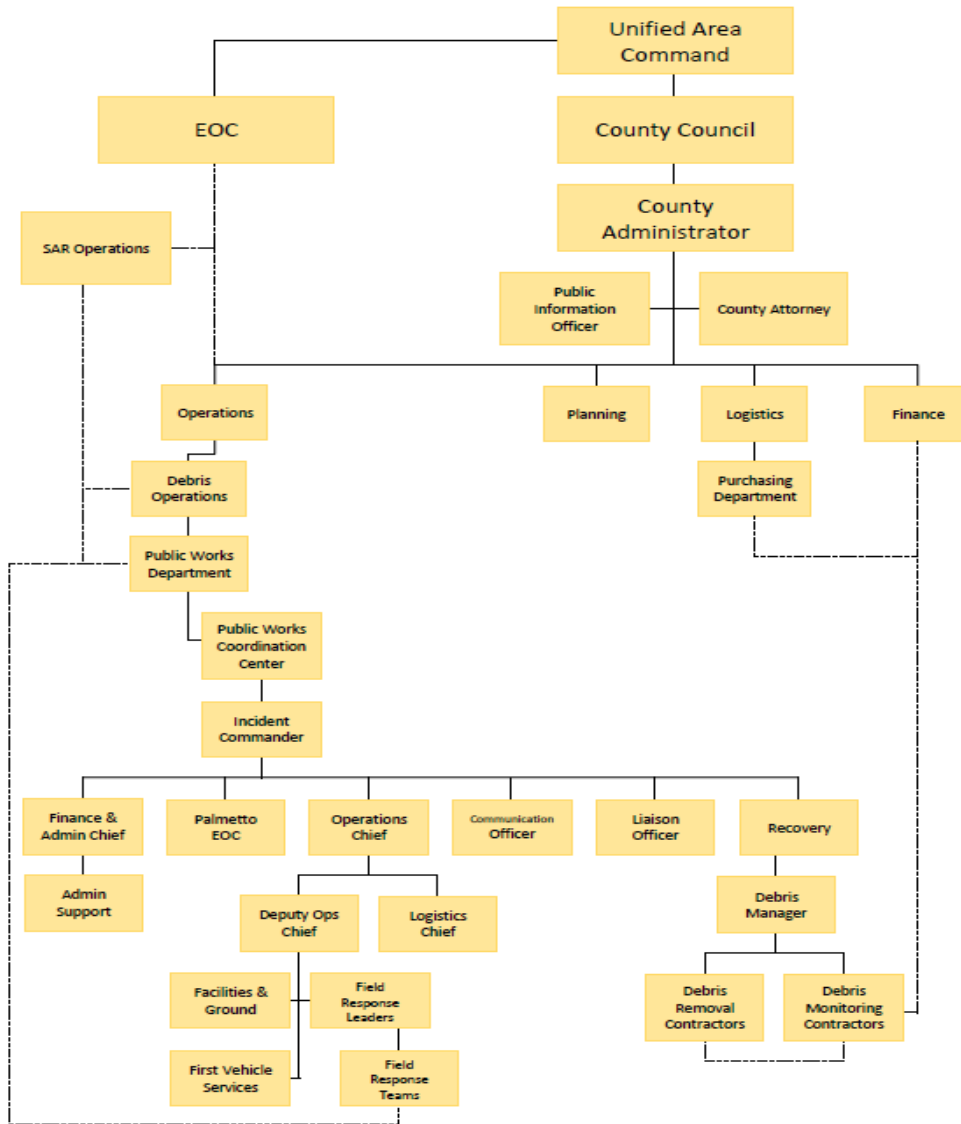
The Office of the County Administrator (County Administrator) will provide a degree of oversight and coordination for all debris removal activities. Through the Assistant Administrator for Civic Engagement & Outreach, the County Administrator will provide information to the public regarding the progress of the cleanup activities.

Moreover, the County Administrator will ultimately be responsible for the activities of the debris hauling contractor and monitoring firm. In conjunction with the PW/DRRD, the County Administrator and Finance Director will work to ensure that the County is not exposed to possible non-reimbursement for ineligible activities in the interpretation of FEMA rules and regulations.

Division of Emergency Management

The Emergency Management Division of the Sheriff's Office (EMD) coordinates all emergency management preparedness and response activities. EMD will be responsible for opening

and coordinating the Emergency Operations Center (EOC) and leading any emergency response activities. Representatives from EMD and PW/DRRD will work in conjunction throughout the year so that all debris management plans are updated. The emergency management organizational structure is shown in Figure 3.1.



Department / Division	Primary Duties / Responsibilities
Lead Agencies	
Disaster Response Recovery Department	Interact with FEMA staff Provide insight for recovery efforts and reimbursement procedures. Oversee debris hauling and monitoring contractors Update plans and DMS locations Schedule training activities for County staff throughout the year Provide general oversight for all phases of debris removal operation
Office of the County Administrator	Interact with FEMA debris team Provide information to the public on status of debris removal operations Operate and coordinate all activities at the EOC
Emergency Management	Coordinate with PW/DRRD on all updates of debris planning activities
Interdepartmental Coordination	
Engineering Department, Building Codes, Facility Management and Assessor's Office	Conduct damage assessments immediately following a hurricane
Stormwater Management Utility	Conduct damage assessments immediately following a hurricane for all inland drainage systems and projects
Public Works	Coordinate debris removal operations Identify and plan for the clearance of major arteries throughout the County Conduct emergency roadway clearance activities immediately following a hurricane
County Attorney	Review all contracts, ROE/Hold Harmless/Subrogation of Insurance and any contracts for the use of private lands for DMS locations Coordinate with PW/DRRD on the update of all County ordinances
Purchasing Department	Coordinate with the DRRD during the contractor Request for Proposals (RFP) process Generate Contractor Purchase Orders (PO) as necessary throughout the cleanup and restoration process
Communications and Accountability Department	Develop all press releases to the public regarding the debris removal process
Parks and Recreation Department and Facilities Maintenance Department	Work with the PW/DRRD on a pre- and post- event basis for the selection and operation of DMS locations in County Parks Coordinate any debris removal activities in County Parks
Finance Department	Coordinate all debris removal contractor invoice payment

	Work with the debris removal monitoring firm with regard to invoice reconciliation and project worksheet development for reimbursement process.
Geographical Information Systems Department	Provides maps for the debris management activities
Code Enforcement Division and Sheriff's Office Environmental Crime Unit	Assist with identifying any and all ineligible debris set out in the right-of-way or waterways

Interdepartmental Coordination

With the Public Works Department/ DRRD acting as the lead agency in the cleanup effort, various County departments will have specific duties that will assist in the cleanup effort. An account of the primary roles and responsibilities for each Department has been summarized in the following section.

Each Department or Division will be responsible for appointing a primary point of contact to interface with PW/DRRD.

Facility, Building Codes, Engineering Department and Assessor's Office

The Engineering Department, Facility Department, Building Codes Department and Assessor's Office will be primarily involved in the damage assessment immediately following the hurricane. The damage assessment will be used to develop preliminary FEMA Project Worksheets and debris estimates.

Stormwater Management Utility

Following a disaster event, the Stormwater Management will conduct damage assessments for inland drainage systems and projects.

Public Works Department

The Public Works Department's primary responsibility is to conduct the emergency road clearing activities during the hours following a hurricane until debris removal contractors arrive and assume control of operations. The Public Works Department will stage equipment in strategic locations throughout the County to allow for the push crews to begin work immediately after the disaster. Primary arteries leading to emergency operation center, hospitals, shelters and distribution centers will be identified and cleared as soon as possible. The Public Works Department must document all labor, equipment and material costs associated with response to an event.

County Attorney

The role of the County Attorney is to ensure the legality of all debris removal activities. Specifically, the County Attorney should review all contracts, ROE/Hold Harmless/Subrogation of Insurance, and any contracts for the use of private land for DMS locations.

The County Attorney should be involved in any updates to County condemnation/ nuisance ordinances that may be used in the Right-of-Entry cleanup process.

Purchasing Department

The primary responsibility of the Purchasing Department is to work with the PW/DRRD during the contractor RFP process. It is imperative that the PW/DRRD and County Administration are involved in the finalization of the “Scope of Services” so that their input and expertise be incorporated into the final RFP.

To ensure that the RFP abides by all local and state requirements, the Purchasing Department should take the lead role in the development of all forms and standard language, the advertisement and notification to prospective contractors, pre-bid meetings, and contract negotiations.

This department will also generate Contractor Purchase Orders (PO) as necessary throughout the cleanup and restoration process.

Communications and Accountability Department

The Communications and Accountability Department Coordinator will be responsible for coordinating all press releases to the public regarding the debris removal process. These activities will include the development of a proactive Integrated Communications Plan (ICP) for debris management during the non-hurricane season. The focus of the ICP will be to provide the public with information on:

- Proper debris set-out procedures;
- Progress of the debris cleanup process;
- Explanation of any FEMA disaster declarations;
- Deadlines for debris set-out and removal; and
- Locations of residential debris drop-off sites.
- Explanation of FEMA process.

Parks and Recreation Department and the Facilities Maintenance Department

The Parks and Recreation Department (P&R) and the Facilities Maintenance Department should coordinate with the PW/DRRD on a pre- and post-event basis as County owned parks may be used as a last resort for the selection and operation of DMS locations. As described in Section 5, County owned Parks may be used as a last resort location as a DMS. Going forward, communication to ensure that this land is still available will be imperative for contractors to begin the cleanup process.

In addition, the Facilities Maintenance Department will be responsible for coordinating any debris removal activities in County Parks or offices. County staff will need to coordinate with the PW/DRRD and contractors to ensure that each park or office is surveyed prior to debris removal or tree trimming/removal activities commence.

Finance Department

The Finance Department will serve as the clearing house for all debris removal contractor invoice payments. Working in conjunction with the County’s debris management and monitoring firm, the Finance Department will ensure that the County’s contractors are paid in a timely fashion and that all documentation for FEMA reimbursement is kept in order. The

Finance Department will be the primary contact for the debris removal monitoring firm with regard to invoice reconciliation and project worksheet development.

Geographical Information Systems Department

The Geographic Information Systems Department (GIS) drafts, updates and provides maps for the debris management activities. These maps include road lists with the most updated street centerline information, parcels maps for each property in Beaufort County, and are instrumental in assisting with managing the private property vegetative debris ROE program.

Codes Enforcement Department and Environmental Crimes Unit (ECU)

The Codes Enforcement Department and Environmental Crimes Unit (ECU) of the Sheriff's Office are charged with assisting with the identification of any and all ineligible debris placed in the ROW. This is largely made up of debris placed in the ROW. Code Enforcement should work closely with the Public Information Officer (PIO/C&A DEPT.) to inform the public of deadlines. Additionally, the Codes Enforcement Department should particularly target private contractors dumping debris on the ROW. These ineligible debris piles should be tagged by Codes Enforcement staff and the individuals responsible for the "illegal dumping" will be prosecuted via the ECU of their violation.

External Agencies

Other agencies, quasi-governmental entities, and incorporated municipalities should be involved in the debris management process. Representatives from these groups shall be invited to the County's annual coordination meeting so that the County is aware of cleanup activities in other jurisdictions. In addition, in the event of a hurricane, weekly or bi-weekly meetings need to be held to update the agencies on the debris cleanup progress.

City of Beaufort

The City of Beaufort in a Memorandum of Understanding (MOU) will use the Beaufort County debris contractors to assist in the cleanup of all ROW in the incorporated town limits. Beaufort County will make application for the reimbursement of the costs associated with this debris removal. Upon completion of debris removal, the County will bill the City of Beaufort for its reimbursement matching contribution.

Town of Port Royal

The Town of Port Royal in an MOU will use the Beaufort County debris contractors to assist in the cleanup of all ROW in the incorporated town limits. Beaufort County will make application for the reimbursement of the costs associated with this debris removal. Upon completion of debris removal, the County will bill the Town of Port Royal for its reimbursement matching contribution.

Town of Bluffton

The Town of Bluffton in an MOU will use the Beaufort County debris contractors to assist in the cleanup of all ROW in the incorporated town limits. Beaufort County will make application for the reimbursement of the costs associated with this debris removal. Upon completion of debris removal, the County will bill the Town of Bluffton for its reimbursement matching contribution.

Town of Hilton Head Island

The Town of Hilton Head Island will be responsible for all debris removal activities within the incorporated city limits. There is a MOU in place between the Town and County for mutual aid and/or assistance upon specific written request.

Town of Hardeeville

The Town of Hardeeville in an MOU will use the Beaufort County debris contractors to assist in the cleanup of all ROW in the incorporated town limits. Beaufort County will make application for the reimbursement of the costs associated with this debris removal. Upon completion of debris removal, the County will bill the Town of Hardeeville for its reimbursement matching contribution.

Town of Yemassee

The Town of Yemassee in an MOU will use the Beaufort County debris contractors to assist in the cleanup of all ROW in the incorporated town limits. Beaufort County will make application for the reimbursement of the costs associated with this debris removal. Upon completion of debris removal, the County will bill the Town of Yemassee for its reimbursement matching contribution.

Beaufort County School District

The Beaufort County School District (BCSD) in an MOU will use the Beaufort County debris contractors to assist in the cleanup of all ROW on school property. Beaufort County will make application for the reimbursement of the costs associated with this debris removal. Upon completion of debris removal, the County will bill the BCSD for its reimbursement matching contribution.

With respect to the County's debris operation, the County's debris contractors are requested to pay special attention to the debris piles around BCSD schools. If possible, the County would like the contractor to regularly monitor those streets contiguous to schools and keep them free from debris, thus providing unobstructed off street walk areas for school children.

SC Department of Transportation (SCDOT)

The South Carolina Department of Transportation is responsible for emergency road clearing activities immediately after a natural disaster and the "first pass" of debris removal on all State and Federal roads in Beaufort County. SCDOT may opt to activate an existing MOU with the County and issue a Notice to Proceed to have Beaufort County's Debris Removal contractor clear state roads located within the County.

U.S. Marine Corps – Marine Corps Air Station Beaufort

The U.S. Marine Corps is responsible for all debris cleanup activities on and along the major arteries on Marine Corps Air Station – Beaufort. In addition, the U.S. Marine Corps may assist in the County's debris cleanup process on a case by case basis. For example, by Federal law military activities may provide assistance when approved by the Department of Defense. Should assistance be needed, the County will need to follow proper procedures through the request process with the Department of Defense.

U.S. Marine Corps – Recruit Depot Parris Island

The U.S. Marine Corps is responsible for all debris cleanup activities on and along the major arteries on Recruit Depot Parris Island.

U.S. Navy – Naval Hospital Beaufort

The U.S. Navy is responsible for all debris cleanup activities on and along the major arteries on Naval Hospital Beaufort.

South Carolina Department of Health and Environmental Control (SCDHEC)

South Carolina Department of Health and Environmental Control (SCDHEC) representatives will be involved in all phases of DMS selection, closure, and environmental input. Staff from the SCDHEC's local office should be in regular communication with the County staff as requested and be provided with all necessary documentation regarding the DMS location operations.

During the site selection process, the County will notify and work with SCDHEC in order to get pre-approval for the use of these sites in the event of a hurricane.

South Carolina Department of Natural Resources (SCDNR)

During sand recovery and berm restoration activities, the South Carolina Department of Natural Resources can be instrumental in monitoring and ensuring beach restoration activities will not damage any natural environments.

U.S. Fish and Wildlife Service

During sand recovery and berm restoration activities, the U.S. Fish and Wildlife Service can be instrumental in monitoring sea turtle nests and ensuring beach restoration activities will not damage their habitats.

Federal Emergency Management Agency (FEMA)

Representatives from FEMA will be onsite during the response and recovery phases of the debris management cycle. FEMA staff will provide guidance to the County with regards to debris eligibility and the FEMA reimbursement process. FEMA's primary role will be in the development of project worksheets for the County's debris cleanup operations. In addition, their staff will be onsite to oversee any ROE private property cleanup, should this be declared in the County.

SECTION 4 - OVERVIEW OF RULES AND REGULATIONS

The documents described in this section provide the legal authority for local governments to engage in debris cleanup operations and seek reimbursement from the Federal Government. The County should review and update each of these documents on an annual basis not only to re-familiarize themselves with the governing statutes, but to also identify any changes to the regulations and guidelines.

Appendix B provides internet hyperlinks to each of the documents.

Federal Emergency Management Agency Guidelines

Under the current Federal system the Federal Emergency Management Agency (FEMA) coordinates the response and recovery efforts for all Presidential declared disasters. FEMA provides guidance documents for local governments to be used as a guide for disaster planning and response. Three guidance documents that are generally associated with debris recovery have been summarized below.

FEMA Publication 104-009-2 – Public Assistance Program and Policy Guide

The Public Assistance Program and Guide provides a general overview of the FEMA Public Assistance Program protocol immediately following a disaster. The PA program provides the basis for the federal/ local cost sharing program. This document specifically describes what entities are eligible for reimbursement under the PA Program, what documentation is necessary to ensure reimbursement, and any special considerations that local governments should be aware of to maximize eligible activities.

FEMA 323 Public Assistance Applicant Handbook

The 323 Public Assistance Applicant Handbook provides common understanding of program policies and procedures. By understanding the content of the Handbook and following the principles outlined in it, applicants are able to participate as knowledgeable partners in obtaining grant funding.

FEMA 325 Public Assistance Debris Management Guide

The Public Assistance Debris Management Guide provides an overview of preplanning and outlining what is needed to maximize eligible costs through the Public Assistance Program. The guide identifies and explains the debris removal eligibility criteria that applicants must meet in order to receive assistance under the FEMA Public Assistance (PA) Program. Provides a blueprint for assembling an effective and responsive plan for the entire debris management cycle, and outlines the FEMA Public Assistance debris removal organizational structure and strategy.

Disaster Specific Guidance

A Disaster Specific Guidance (DSG) is a policy statement issued in response to a specific post-event situation or need in a State or Region. Each DSG is issued a number and is generally referred to along with their numerical identification.

These guidance documents typically relate to the authorization of private property cleanup, cleanup and payment of stumps, or notification of large projects. Staff should be aware of any new DSG documents that are issued by FEMA following an event.

Other Relevant Documents

The two primary directives developed by the Federal Government that provide for the authorization and use of Federal funds to reimburse local governments for disaster related expenses are the Robert T. Stafford Disaster Relief and Emergency Assistance Act and the Code of Federal Regulations – Title 44 Emergency Management and Assistance. A brief summary of these laws is provided below.

Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) provides the authorization of the PA Program. The fundamental provisions of this act are as follows:

- Assigns FEMA the authority to administer Federal disaster assistance;
- Defines the extent of coverage and eligibility criteria of the major disaster assistance programs;
- Authorizes grants to the States; and
- Defines the minimum Federal cost-sharing levels.

Code of Federal Regulations: Title 44 – Emergency Management and Assistance

The Code of Federal Regulations – Title 44 Emergency Management and Assistance (44 CFR) provides procedural requirements for the PA Program operations. These regulations are designed to implement a statute based upon FEMA’s interpretation of the Stafford Act and govern the PA Program as well as outline program procedures, eligibility, and funding.

Sandy Recovery Improvement Act of 2013

<https://www.fema.gov/sandy-recovery-improvement-act-2013>

This page provides an overview of the current status of FEMA's implementation of the provisions of the Sandy Recovery Improvement Act (SRIA) of 2013.

A Fact Sheet updated as of November 2014 is also available.

On January 29, 2013, President Barack Obama signed into law the Sandy Recovery Improvement Act (SRIA) of 2013 and the accompanying Disaster Relief Appropriations Act, 2013. In many ways, the passage of SRIA represents the most significant legislative change to the FEMA substantive authorities since the enactment of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

The law authorizes several significant changes to the way FEMA may deliver federal disaster assistance to survivors.

SECTION 5 – ACTION PLAN

Normal Operations – OPCON 5

As described in Section 2, the optimal pre-event planning required during Normal Operations should be accomplished between December 1st and May 31st. This minimizes the County’s risk of having to perform planning functions during a hurricane emergency situation. The following section describes the Normal Operations Checklist provided in Section 2.

Establish Pre-positioned Contracts

In order to ensure rapid mobilization and debris clearance and removal response following an event, it is important for the County to secure debris removal pre-positioned contracts. Costs associated with establishing pre-positioned debris hauling contracts are minimal. As of the publication of this document, FEMA has reimbursed communities for debris removal operations under competitively bid pre-positioned, debris removal contracts. In order to assure FEMA reimbursement for debris removal operations, the Purchasing Department must follow its standard procurement procedure when issuing a debris removal solicitation and awarding pre-positioned contract[s].

Debris Hauling

In the event pre-positioned debris removal contracts are not established, the County may use an emergency procurement procedure to award contracts following a hurricane. Post event procurement will delay the inception of debris removal operations for several days. The County’s debris hauling contract should be written to encompass all potential debris removal activities that may be necessary to implement. Beaufort County encompasses one barrier island on the Atlantic Coast with a dense vegetative canopy inland, making it particularly vulnerable to a vast array of damage. This makes it extremely critical for the County to enter into a debris removal contract with a comprehensive scope of services.

The scope of services should include:

- Right-of-Way Vegetative Debris Removal – and Associated Processing and Haul out;
- Right-of-Way Construction and Demolition Debris Removal;
- Right-of-Way Removal, DMS Segregation, and Class I Disposal of Household Hazardous Waste;
- Right-of-Way Leaning Tree and Hanging Limb Cut Work;
- Right-of-Way Partially Uprooted Stump Removal;
- Private Property Leaner and Hanger Cut Work and Removal;
- Private Property Demolition and Debris Removal;
- White Goods Freon Removal¹; and

¹ Based on a per-unit rate.

- Hazardous Debris Separation, Documentation and Disposal.

The County should use cubic yards as the unit of measurement for payment. Cubic yard pricing is easier to monitor and document, and favored by FEMA for reimbursement purposes.

Further, the contractor must clearly define expectations of the County and limitations on the Contractor. These should include, but not limited to:

- Limit time and materials work to the first 70 working hours following an event.
- Utilize a retainage or liquidated damages clause to ensure that Contractors repair all damage for which they are responsible prior to receiving full payment.
- Verify that vegetative cut work is consistent with most recent FEMA Guidance's for Reimbursement

Included in Appendix C is a list of pre-positioned debris removal contractors that were selected through various RFP's and the following selection criteria:

- Experience and qualifications;
- Cost proposal overhead and profit percentage;
- Percentage of use of local subcontractors;
- Bonding capacity; and
- Financial capacity.

Monitoring Services

Debris monitors are responsible for ensuring that contracted debris haulers are in compliance with their contract. The monitoring firm is responsible for, but not limited to, the following activities:

- Developing load tickets;
- Instituting electronic ticketing system or ADMS;
- Verifying the estimated amount of debris hauled to the DMS;
- Identifying Household Hazardous Waste (HHW) on the ROW and at DMS locations and ensuring that it is properly collected, segregated, and disposed of at a Class I facility;
- Providing comprehensive program management for the debris removal and cleanup process;
- Communicating with key County personnel on a regular basis;
- Managing an extensive database for reimbursement, invoice reconciliation and auditing purposes;
- Reviewing and reconciling contractor invoices prior to recommending payments to the County; and
- Assisting the Office of Management and Budget with the development of Project Worksheets.

Optional Task: Immediate Response Activities

The Public Works Department is responsible for initial emergency road clearance activities following a storm. The County may supplement the Public Works Department resources and response ability by entering into a pre-positioned emergency road clearance contract. FEMA has historically reimbursed communities 100 percent for work performed in the first 70 working hours. Contracts for emergency road clearance should be competitively solicited on a time and materials contract limited to 70 working hours immediately following a hurricane or disaster declaration.

Review and Update Road List

A comprehensive, updated list of all roads in Beaufort County should be stored electronically by the PW/ DRRD. A comprehensive road list helps ensure that the clean-up process is properly documented for the purposes of:

- FEMA reimbursement;
- Payment responsibility;
- Contractor invoice reconciliation; and
- Debris removal operations cover all eligible roads.

The PW/ DRRD should coordinate with the GIS Department to maintain a current road list.

Review and Update Contact List

The PW/ DRRD will be responsible for maintaining and annually updating a “Disaster Debris Management Contact List.” A preliminary Disaster Management Contact List is included in Appendix A. As indicated by its name, this is a comprehensive list of County Staff and County Departments involved in the debris management process. Contact information for the Private Contractors is located in Appendix C. The Disaster Management Contact List can be used to ensure that all key staff and departments are:

- Informed of any training or meetings held in the non-hurricane season;
- Called to any coordination meetings immediately following the storm and in the weeks thereafter; and
- Ready with any information or deliverables that the PW/DRRD needs for coordinating the debris removal operation.

Review and Update DMS Locations

Prior to June 1st, the County should identify a number of Debris Management Sites (DMS) and seek pre-approval by SCDHEC.

DMS Review

Beaufort County has identified a number of planned DMS locations geographically distributed throughout the County, as shown in Appendix K. The planned DMS sites are as follows:

- Two Tier One sites owned by Beaufort County, Ihley Farms and Pinckney Point;
- Four Tier Two sites owned by private citizens that have indicated their willingness to assist the County, Joe Harden Cotton Hall, two sites on Henry Sod Farm and Tom Zinn property;

- Two Tier Three sites that are County Parks that would be used as a last resort, Burton Wells Park and Buckwalter Community Park.
- One County Solid Waste site in Oak Grove.

Future DMS Locations Selection

The current distribution of potential DMS locations indicates that it is imperative for the County to find additional sites to service the County. Future land purchases by the County should always include review as a potential candidate for a DMS.

Potential sites should be evaluated based on the following selection criteria:

- **Public Property** - Preference should be given to public land rather than private, due to potential rental costs commonly associated with private property sites.
- **Size** - The larger and more open the property is the better suited it will be for debris removal operations.
- **Environmental Feasibility** - Properties must be outside watershed range to environmentally sensitive areas (such as, wetlands, areas with endangered species, critical habitats, etc.).
- **Proximity to Densely Populated Areas** - Areas as removed as possible from private residential housing developments. Dust, smoke, noise and heavy vehicle traffic could pose health and safety hazards and public complaints. However, if possible, DMS locations should be within 15 miles of densely populated areas to ensure quick truck turnaround and facilitate debris removal progress.
- **Access** - Properties that allow for easy ingress and egress.
- **Legal** - Some local ordinances that could preclude DMS activities in an area.

Review and Update Relevant Ordinances

FEMA requires that a community follow its local ordinances should it engage in a special demolition or other private property debris removal program. Specific guidance addressing these issues can be found in the Beaufort County Disaster Recovery Plan and the associated Disaster Recovery ordinance.

Review and Update Memorandums of Understanding

Memorandums of Understanding (MOUs) or Mutual Aid Agreements are documents developed between governmental entities that formally document the responsibilities of each entity in the event of a hurricane. This document should also outline the reimbursement procedures, if applicable.

Monitor and Evaluate Disposal Capacity at Landfills

PW should monitor the remaining airspace at contracted landfills in order to determine capacity to dispose of storm generated debris. Capacity at regional municipal and C&D landfills outside the County should be monitored and evaluated.

Review and Update Debris Management Plan

The Debris Management Plan is a “working document.” This document should be reviewed and updated annually to ensure that all information presented in this plan is updated.

Annual Media Press Releases

Providing citizens with information regarding the debris management process during the “off season” is an effective way to continually educate the public about the debris management process. Since the radio and television may not be readily available to the general public in the days or weeks immediately following the storm, providing this information in print prior to an emergency situation will give many citizens an initial “how-to” regarding the debris management process.

During the month of May, the PW/DRRD, County EMD and Public Information Officer, should work together to include information regarding the debris management process to the public. Examples of this information would be:

- Proper set-out techniques for vegetative and Construction and Demolition (C&D) debris;
- Proper set-out and/or drop-off locations for HHW;
- Debris hotline information;
- Estimated timelines for collection; and
- Explanation of first, second and third passes.

Increased Readiness

The checklist performed during a period of Increased Readiness is critical in assembling a coordinated response. The checklist is a valuable tool to ensure that proper steps are taken in a time of extreme stress.

Download Most Recent Road List and Relevant Documents to a Thumbdrive

The PW/DRRD coordinates with the GIS Division to acquire the most recent road list and maps of the County prior to the hurricane. Many of the computers and servers that store this information will be unavailable immediately after the event. Having this information on-hand ensures that debris collection operates properly and commence in a timely manner. The most recent road list has been downloaded and is affixed it to the Debris Management Plan.

Copies of the thumbdrive should be stored in the Emergency Operations Center (EOC) and in a safe location outside the projected path of the hurricane.

Alert Key Personnel

Key personnel from the Debris Management Contact List should be put on alert by the PW/DRRD. The PW/DRRD should contact these primary points of contact via verbal and electronic communication informing them of information needed to begin the response and recovery process. County contractors located in Appendix C should also be notified and placed on standby. In addition, the PW/DRRD should schedule a meeting with primary points of contact at the PWCC to discuss emergency road clearing activities and response activities.

Review Plan with Key Personnel

Once a meeting is scheduled with all primary points of contact at each of the relevant County Departments, the PW/DRRD and its Contractors should review the Debris Management Action Plan. This meeting should focus on key activities that need to occur immediately following the storm including damage assessments and emergency road clearing activities.

Pre-event Media Press Release

The PW/DRRD and Public Information Office will issue a press release to the public that assures them that the County is prepared and has a plan in place to immediately respond to the event. In addition, the County should provide information on proper set-out procedures and estimates on when the cleanup will begin. See Appendix D for sample press releases.

Alert Debris Contactors and Place on Standby

All debris contractors should be put on alert by the DRRD that their contracts may be activated. Discussions with the Contractors should address the following key issues:

- Availability and amount of assets that will be dedicated to debris removal operations;
- Estimating time of mobilization;
- Identifying primary points of contact;

Prior to the Storm- Sandbag operation will be activated – details are attached in Appendix Q

Response (First 70 Hours)

As described in Section 2, the response phase is generally defined as the first 70 contractor working hours following a storm.² The County should activate this plan immediately following an event.

Conduct Damage Assessment

Damage assessments are necessary to determine the extent and the location of the debris. Windshield surveys of the County are taken and used to communicate critical damage areas to Public Work Staff to assist in prioritizing road clearance efforts. If possible, additional surveys should be conducted by helicopter or drone in order to obtain an aerial view of damaged areas within the County. Often times helicopter surveys are available through debris removal contractors independently surveying the County to determine asset levels and configuration.

Assessment Responsibility

- Assessors Office
- Building Codes Department
- Facility Management
- GIS Department
- Public Works Department
- Debris Removal Contractor
- Debris Monitoring and Management Firm
- Emergency Management (Aerial)

² This time frame is subject to change due to severity of the event and other disaster specific circumstances.

Mapping Responsibility

- GIS Department

Begin Emergency Roadway Debris Clearance

The County PW Department commences with road clearance or “cut and toss” activities and determines necessity of activating the Debris Contractor. These operations first focus on major arteries leading to storm shelters, hospitals, supply points, and other critical locations throughout the County. SCDOT maintains road clearance responsibility for all State and Federal Roads.

Debris Contractor Activation

- PW/ DRRD Department

Emergency Road Clearance Priorities and Operations

- PW Department

Activate Debris Removal Contractors

PW/DRRD will utilize the damage assessments conducted by the Assessor’s Office and Building Codes Department to determine whether to activate debris removal contractors. The PW/DRRD should immediately meet with the County Administrator to make this determination. Debris hauling and monitoring contractors are generally required if the tropical disturbance makes landfall as a Category 1 or greater. Once the contractors are activated, each contractor should review an updated road list and the debris collection zone map. The full list of debris collection zones has been provided in Appendix M and the road priorities in Appendix N. Contractors should begin logistical coordination and equipment ramp-up immediately upon receiving a Notice-to-Proceed.

Activate Debris Removal Contractors

- DRRD
- County Administrator

Prepare DMS Locations Based on Concentration of Debris

PW staff, debris contractors, and Parks Department staff will meet to discuss the opening and operation of pre-identified DMS locations.³ The following items should be taken into consideration when opening and operating a DMS:

- Qualification criteria:
 - Current availability;
 - Duration of availability;
 - Ingress/Egress;
 - Concentration of debris relative to each site; and
 - Geographic location within the County.

³ These sites are ranked in a three tier format in Appendix K.

- Reduction Method:
 - **Incineration** – The burning of vegetative debris typically has a reduction ratio of 20:1. The open burning of vegetative debris does require approval from the SCDHEC. The leftover ash must be hauled to a final disposal facility.
 - **Chipping and Grinding** – Using this method, vegetative debris is chipped or ground and typically results in a reduction ratio of 4:1. The leftover mulch is either hauled to a final disposal facility or recycled.
 - **Crushing** – The crushing of vegetative debris is typically the least effective reduction method and results in a reduction ratio of 2:1. Crushing is an appropriate reduction method for C&D debris that cannot be recycled.
- Recycling of Debris:

Common recyclable materials that are a result of a debris generating event include wood waste, metals and concrete/asphalt. The following are potential uses for each of the materials:

- **Wood Waste** – Vegetative debris that is reduced through chipping or grinding results in leftover mulch. The remaining mulch can be used for agricultural purposes or fuel for industrial heating. For the mulch to be viable in agricultural purposes the end user usually has a size requirement and requests mulch to be as clean as possible of plastics and dirt.
- **Metals** – Metal debris such as white goods, aluminum screened porches, etc that may result from a debris generating event can be recycled. Certain metals such as aluminum and copper are highly valuable to scrap metal dealers.
- **Concrete** – Concrete, asphalt and other masonry products that may become debris as a result of a debris generating event can be crushed and potentially used for road construction projects or as trench backfill.

Upon a review of availability and suitability, the debris contractors will begin site preparation. As part of the preparation, baseline data should be gathered from the site to document the state of the land before debris is deposited. The following action items are recommended as baseline data:

- Photograph the site – Digital photos should be taken to capture the original state of the site. Photos should be updated periodically throughout the project to document the progression of the site.
- Record physical features – Records should be kept detailing the physical layout and features of the site. Items such as existing structures, fences, landscaping, etc. should be documented in detail.
- Historical Evaluation – The past use of the site should be researched and documented. Issues relating to historical or archeological significance of the site should be cleared with the state historical preservation agency.
- Sample Soil and Water – If possible it is recommended that soil and water samples are taken before debris reduction activities commence. Samples will help ensure the site is returned to its original state.

DRRD and the monitoring firm will oversee the contractor’s activities to ensure that they are in compliance with their contractual obligations, environmental standards, and acting in the best interest of the County and its residents. SCDHEC will be contacted to provide final approval under an emergency declaration for the DMS locations. The SCDHEC will provide guidance for Establishment, Operation and Closure of DMS for Hurricane-generated Debris.

Review DMS availability and suitability:

- DRRD
- Debris Removal Contractor

DMS Site Preparation

- Debris Removal Contractor
- Public Works Staff

SCDHEC Emergency Approval and Permitting

- PW/DRRD
- Debris Monitoring and Management Firm

Conduct Meetings/Briefings with Key Personnel

Coordination meetings and briefings with key personnel: the County Administrator, Public Works, and DRRD are conducted to update the status of the road clearance efforts, DMS openings, contractor asset ramp-up, and pertinent public information for press releases.

Review Debris Volume and Collection Cost Assessment

The PW/DRRD, the debris monitoring and management firm and debris hauling contractors will meet to review the debris assessment. Table 5.7 describes the debris total estimates for each category of hurricane.

**Table 5-7
Hurricane Debris Total Estimates: Categories 1-5**

Category	Estimated CY
1	530,000
2	2,120,000
3	6,900,000
4	13,280,000
5	21,250,000

The topics included in this meeting may include, but are not limited to:

- Amount of debris generated – millions of cubic yards;
- Type of debris generated – vegetative, C&D and/or sand;

- Number and estimated date of arrival for assets – trucks, loaders, monitoring personnel;
- Estimated number of DMS locations necessary;
- Preliminary scope of debris removal efforts; and
- Estimated cost of the debris removal efforts.

Following this meeting, the County or monitoring firm will begin to collect required documentation for the development of FEMA Project Worksheets and contact the FEMA Public Assistance Officer (PAO) responsible for the County. A debris cost estimating model has been provided in Appendix E.⁴

Debris Volume Estimate

- DRRD
- Monitoring and Management Firm

Request Contact Information and Meeting with FEMA Public Assistance Officer

The DRRD and County Administrator will immediately request the contact information of the designated PAO for the disaster. Upon receiving the information, the County will request a meeting with FEMA. During this meeting the County will discuss the following issues:

- Summarize the County’s debris removal operations to date;
- Review debris and cost estimates for the County;
- Description of the County’s debris removal plan;
- Contact information for all County contractors and primary points of contact; and
- Determine what additional information the PAO will need to generate Project Worksheets for the County.

Issue Media Press Release

A press release from the DRRD and PIO/C&A DEPT to various media sources will be issued within the first three days following the storm. The subject matter of the press release will be to reassure and comfort the public that the County is responding and has activated contractors to begin debris removal activities.

Recovery- Timeline

Once emergency road clearance operations are complete, the County will commence with the Recovery phase and debris collection. At this time, the Health and Safety Supplement located in Appendix I and the Beaufort County Safety Policy located in Appendix J should be reviewed by all involved parties.

Trucks used to collect and haul recovered debris to DMS locations are certified for capacity and issued a placard. This placard designates them as a County Contracted Hauler and displays their

⁴ The debris estimations developed for Beaufort County were done so by using the U.S. Army Corps of Engineers Debris Estimating Model (Model). This Model is widely accepted by the industry. This Model should be used as a guide by Beaufort County for planning in the future.

unique truck number and the truck's volumetric capacity. Contractor(s) crews are then assigned to specific zones and streets to initiate the recovery process.

Trained monitors observe and document debris removal operations in order to validate the County contract and generate documentation to support FEMA reimbursement. Load tickets are issued at the point of collection to include loading time, location, date, and specific truck and contractor information. At the DMS location or final disposal site, debris loads are graded and assigned a volumetric percentage.

Based on the strength and severity of the storm, the County may implement additional debris removal programs during the recovery phase, including, but not limited to private property, beach, public parks, inland waterways debris removal, and stormwater.

For the purposes of developing project milestones, the Recovery Phase has been sub-divided into the following periods:

- **Milestone 1:** 2 Days to 2 Weeks
- **Milestone 2:** 2 Weeks to 1 Month
- **Milestone 3:** 1 Month to 3 Months
- **Milestone 4:** 3 Months to Project Completion

Deadlines for resident placement of debris on the ROW as well as contractor deadlines for debris removal should clearly be communicated within these time periods. These project milestones should be used as a “guide” and each event must be evaluated on a case-by-case basis.

Milestone 1: 2 Days to 2 weeks

The initial milestone during the Recovery Phase is the period immediately following the emergency road clearing activities end through the following two weeks. This period is typically characterized as the “ramping up” period, where contractors begin to mobilize the majority of their assets and debris collection begins. Ramp up activities will go on seven days per week during daylight hours.

Monitoring Function

Upon activation, the Debris Monitoring firm deploys staff to verify truck certification, collection, and disposal monitoring functions. The monitoring firm will orient employees with all disaster specific guidance and operational procedures and refresh staff with the field training program on current debris removal eligibility, FEMA requirements, County Contract Requirements, electronic ticket procedures, and safety procedures. Collection monitors must carefully document debris collection information to demonstrate eligibility and ensure proper Debris Removal Contractor payments and FEMA reimbursement.⁵ The documentation should include:

- Applicant name;
- Location of debris, including full address and zone;
- Time and date of collection;
- Name of contractor;

⁵ A copy of a sample load ticket has been included in Appendix H.

- Name and unique employee number of monitor;
- Truck certification number; and
- Disaster declaration number.

All monitoring staff in the field should be equipped with the following to assist in the documentation process:

- Contractor Damage Assessment Form;
- Ineligible road lists (including private or FDOT roads);⁶
- Collection zone map;
- Disaster specific guidance memorandums (if applicable);
- Contact lists (assigned Sub-Contractor, applicable personnel, etc.);
- Ticketing procedures; and
- Incident Reports.

Collection tickets are issued to truck drivers in the field, at the loading location, after a thorough inspection of the loading operation. Collection monitors perform a series of ticket quality assurance and quality control checks to ensure ticket accuracy and completion. A sample load ticket has been provided in Appendix H.

The monitoring firm is expected to interface and communicate constantly with PW/DRRD during this phase to ensure rapid mobilization.

Truck Certification

In order to properly document operations under a volume based contract and satisfy FEMA PA guidelines, all trucks must receive volumetric measurement and certification prior to debris collection operations. The monitoring and management firm will be responsible for all certification activities in the field. Truck certification occurs at staging areas determined by the contractor and PW/DRRD. A sample truck certification form has been included in Appendix H.

Truck certification documentation should include:

- Vehicle make, model, and plate numbers;
- Contractor, sub-contractor, and driver responsible for truck operation;
- Sketches and diagrams of the loading box;
- Sketches and diagrams of additions (sideboards, bed extensions) and deductions (dog box, missing tailgate) to loading box;
- Volumetric capacity of the measured unit;
- A uniquely assigned truck number;
- Photographs of the truck that capture the driver, the loading box, license plate, and all additions and deductions; and

⁶ To ensure that no debris is collected and ticketed on private roads.

- Placards clearly labeling, at a minimum, the unique truck number and truck capacity. It is helpful to also include the prime and sub-contractor names.

Initiation of DMS Operations

Upon completion of all DMS preparation activities, debris contractors will begin to dispose of debris at the DMS locations. Debris contractors are required under contract to maintain and manage the DMS locations. This includes:

- Maintain flag-men at all ingress and egress of the property;
- Keep all tipping and reduction operations at a safe distance from the public;
- Ensure that all personnel wear proper safety attire;
- Provide portable toilets (male and female) for all staff to use;
- Supply water trucks on-site to minimize dust; and
- Properly operate all debris reduction equipment

DMS Management Oversight

The PW/DRRD and monitoring firm will offer guidance to ensure that all debris is properly accounted for and that the site is not a safety hazard.

Initiation of Environmental Monitoring Program of DMS

Throughout the duration of the project, data should be collected for use in the remediation and close-out of the DMS. Collected data can be compared to previous data to establish any remediation actions necessary to return the site to its original state. The following items should be included in an Environmental Monitoring Program:

- **Sketches of site operations** – During the course of the project, operations at the DMS may expand, condense or shift. It is important that changes in site operations are documented along with activity locations. The sketches and documentation can assist later in determining areas of concern that may need additional sampling and testing at site closure.
- **Documentation of issues at the site** – Meticulous records should be kept documenting issues such as petroleum spills, hydraulic spills or the discovery of HHW within debris at the site. This documentation will assist in remediation during site closure.

Debris Segregation

It is the responsibility of the debris removal contractor to segregate incoming C&D and vegetative debris loads, and place the debris types in separate areas at the DMS.

Intermingled HHW will be identified and removed from the debris and hauled to an authorized disposal facility.

Due to the limited availability of land for DMS locations, other jurisdictions, such as the City of Pensacola, may utilize County DMS locations. In such cases, operations as well as documentation will be managed completely separately. After a load call is made by the tower monitor, debris from other jurisdictions will be taken to their pre-designated section of the DMS and separated from the County debris piles. The reduction and processing of each debris pile will also be managed and documented separately. Reduced debris piles will be separated by

each jurisdiction so that the final hauling and disposal of each pile can be documented accordingly. Based on correspondences with the State Debris Coordinator, the process outlined above will meet the eligibility requirements of FEMA for utilization of DMS locations by more than one jurisdiction.

Disposal Monitoring

The primary function of the monitoring firm with regard to disposal monitoring is to document the disposal of disaster debris at approved DMS and final disposal locations. Monitors perform quality assurance/quality control (QA/QC) checks on all load tickets and haul-out tickets to verify that information captured by collection monitors is complete. This QA/QC includes but is not limited to the following:

- Inspection of truck placards for authenticity and signs of tampering;
- Verification that placard information is documented properly; and
- Verification that all required fields on the load ticket have been completed. Afterwards, the disposal monitor will document the amount of debris collected by making a judgment call on vehicle fullness (typically on a percentage basis). The percentage documented for each debris removal vehicle is later applied to the calculated CY capacity of the vehicle to determine the amount of debris collected. The disposal monitor's responsibilities include, but are not limited to the following:
 - Completing and physically controlling load tickets;
 - Verification debris removal trucks are accurately credited for their loads;
 - Verification trucks are not artificially loaded;
 - Verification hazardous waste is not mixed in with loads;
 - Verification all debris is removed from the debris removal trucks before exiting the DMS or final disposal site; and
 - Verification only debris specified within the County's scope of work is collected.

In addition to the responsibilities listed above, final disposal site monitors are also tasked with the following:

- Verification all debris is disposed at a properly permitted landfill.
- Matching landfill receipts and/or scale house records to haul-out tickets.

Debris Collection Documentation

Pre-printed load tickets or Automated Debris Monitoring System (ADMS) technology will be used as reimbursement documentation for the County. An example of a load ticket is located in below. The top portion of the ticket will be filled out by the collection monitor at the beginning of each load. The address field will be completed when the debris removal contractor has completed work. The collection monitor will also verify the debris removal contractor is working within the scope of the contract with the County. The load ticket will then be given to the debris removal vehicle driver to turn in to the disposal monitor upon arrival at the DMS or final disposal site. The disposal monitor will complete the remaining portion of the load ticket. The County may elect to task the monitoring firm with using ADMS technology to document debris removal efforts. FEMA 327

has provided guidance for the use of ADMS technology to monitor and document debris removal activities.

Per FEMA 327:

Recent advances in automated debris management tracking systems have provided real-time and automated tracking and reporting. Electronic load tickets, computer tablets, and systems employing electronic contractor ID cards allow for instant data tracking, verification, and reporting. Some systems also incorporate truck tracking systems, GPS capability, and enhanced analytical capabilities of debris monitoring data. FEMA embraces technological advancements and recognizes the potential benefits of these automated systems... reasonable costs associated with the use of electronic load ticket systems and other automated debris monitoring systems may be eligible for PA funding.

Right-of-Way Cleanup – Vegetative

Based on the geographic characteristics of Beaufort County and historical debris quantities from previous storms, it is the County's first priority to begin vegetative debris removal from the ROW. Vegetative debris in Beaufort County is expected to make up approximately two-thirds of the total debris removed.

Once the roads and areas have been prioritized, the County's debris haulers will dedicate assets to begin debris cleanup from the Right-of-Way (ROW).

Collection Monitoring and Eligibility

Collection monitors verify and record the address or closest street location of the debris collected. Unless FEMA issues a disaster specific guidance making debris removed from private property eligible for reimbursement, reimbursement is limited to debris that is a result of the storm and removed from publicly maintained property and roadways whose maintenance is the responsibility of the County. Debris removal efforts should focus on these areas during the initial phases of debris removal.

Truck drivers in violation of public property debris removal policies and standards are reported to their Prime Contractor. The Prime Contractor is encouraged to remove truck drivers and assets in violation from contracted operations.

For FEMA reimbursement and contract documentation purposes, it is critical that the County debris removal contractor, key County staff, and the monitoring agency are equipped with copies of the updated road list and zone maps. Zone maps will distinguish the maintenance of road segments and ensure that debris is not removed from SCDOT under the County debris removal contract.⁷

Assess Federal Highway Administration – Emergency Relief Eligible Roadways

Prior to commencing debris removal from FHWA-ER eligible roadways it is critical that damage estimates as well as digital photos are taken. The damage estimates and digital photographs will

⁷ When this document was published, SCDOT maintained debris removal responsibility for all SC state maintained roads.

assist in the development of a Detailed Damage Inspection Report (DDIR), which is necessary for reimbursement by FHWA-ER. Beaufort County Public Works will coordinate with the SCDOT Local Maintenance Engineer to ensure DDIRs are completed prior to debris removal work being performed. In addition to damage estimates and digital photos, a complete DDIR will also include the following:

- The specific location, type of federal aid highway, cause, nature and extent of damage, including milepost where available;
- The most feasible and practical method of repair;
- Work considered to be emergency or permanent should be identified and documented;
- Estimated repair cost;
- Recommendation by the FHWA field engineer;
- Acknowledgement by the applicant (and State representative, as appropriate);
- Potential environmental/historical impacts;
- Photographs supporting the above; and
- A location map and field site sketch.

ROW Cleanup – C&D

Following the mobilization of debris removal efforts, the PW/DRRD will coordinate with their debris contractors to ensure:

- The same monitoring and eligibility policies and procedures described for Assets are directed to C&D debris removal;
- DMS locations for C&D debris are located and permitted by SCDHEC;
- All Freon from white goods have either been removed, or the debris removal contractor has a plan in place to segregate white goods and remove Freon units at the DMS;⁸
- Every effort should be made to limit the amount of clean woody debris in C&D loads. Effective segregation of debris is reliant on the PIO/C&A DEPT.'s ability to reach residents with an effective messaging during the Response Phase with effective follow-up media releases throughout the Recovery Period.

The same monitoring and eligibility policies and procedures described for vegetative ROW debris removal apply to C&D ROW debris removal.

Household Hazardous Waste Cleanup - HHW

Household Hazardous Waste HHW includes:

- Gasoline cans;
- Aerosol spray cans;
- Paint;

⁸ Refrigerated units contain Freon gas in the compressors that is harmful to the environment if released during handling. To avoid unwanted release of this gas, the Freon is removed by certified handlers prior to collection and processing of these units. Cost of gas removal is typically based on a per unit basis. Units evacuated of the gas are marked to notify collection contractors that the unit is safe for handling.

- Lawn chemicals;
- Cleaning agents;
- Batteries;
- Fire Extinguishers;
- Fluorescent lamps; and
- Household electronic items (computer monitors and televisions).

HHW removal is eligible for FEMA reimbursement if the debris is a result of the storm and removed from publicly maintained property and roadways whose maintenance is the responsibility of the County. HHW should be collected separately and disposed of at an authorized facility. Collection of HHW can be conducted internally, or contracted out on a unit rate basis.

- Communicate to County residents HHW eligibility following an event. It is important that residents separate HHW from other storm debris to ensure that HHW does not enter the debris stream at DMS locations.
- Decide whether to establish HHW drop-off sites to augment or replace HHW curbside collection. This helps ensure that HHW is properly disposed of. Measures should still be taken jointly by the debris removal contractor and the monitoring firm to identify, segregate and dispose of intermingled HHW at DMS locations.
- Interface with the SCDHEC. Describe the HHW collection program and authorized facilities to be used for disposal.

White Goods Cleanup

White goods include:

- Refrigerators;
- Freezers;
- Air conditioners;
- Heat pumps;
- Ovens;
- Ranges;
- Washing Machines; and
- Clothes Dryers.

White goods debris removal is eligible for FEMA reimbursement if the debris is a result of the storm and removed from publicly maintained property and roadways whose maintenance is the responsibility of the County. White goods debris that contains ozone depleting refrigerants, mercury, or compressor oils need to have such materials removed by a certified technician before recycling. All state and federal laws should be followed regarding the final disposal of removed refrigerants, mercury, or compressor oils. Collection of white goods can be conducted internally, or contracted out on a unit rate basis.

- Communicate to County residents white goods eligibility following an event. Residents should also be advised that contents such as food must be removed from white goods before

they will be collected. It is important that residents separate white goods from other storm debris to ensure that white goods are not mixed with C&D or vegetative debris during collection.

- Interface with SCDHEC. Describe the white goods collection program and authorized facilities to be used for disposal of recovered refrigerants, mercury, or compressor oils.

Parks Cleanup

The Parks and Recreation Department and Facilities Maintenance Department will conduct vegetative debris damage assessments for all County parks during the first 70 hours following the event. This will occur concurrently with the damage assessment for all structures in the Parks. The Parks Department will have the option to conduct the debris removal using force account labor or engage the County's contractor to complete the cut-work required.

Should the Parks & Recreation and Facilities Maintenance Department decide that the level of effort to remove debris from the County Parks is beyond their capabilities using Force Account labor; the PW will meet with contractors, P&R, Facilities Department staff, and FEMA to discuss debris removal efforts in those areas.

Following the meeting, the contractor will be engaged to perform cut-work associated with the Beaufort County P&R. Monitoring of the activities associated with the debris removal in the County P&R parks is required to ensure FEMA reimbursement for these activities.

Coordinate with External Agencies

The PW/DRRD and debris contractors will hold an initial meeting at the PWCC inviting representatives from all external agencies in Beaufort County. The focus of this meeting will be to re-establish lines of communication between all debris removal efforts and identify any opportunities for collaboration.

A contact list for the potential participants in this meeting can be found in Appendix A and Appendix C.

Initiate Discussions with FEMA Debris Team

FEMA will assign a debris assistance team to Beaufort County immediately following the disaster. These individuals are available to answer questions and will provide a degree of oversight of the debris operations.

A meeting between the PW/DRRD, County Administrator, and the County's monitoring firm will be scheduled during this period to establish lines of communication between entities. The focus of this meeting will center on debris and cost estimates, debris removal activities and any additional guidance FEMA may be able to provide.

In addition, the County will provide an initial cost estimate folder to the FEMA Project Officer. This cost estimate will include:

- Debris removal volume estimates;
- DMS Site Locations and GPS coordinates;
- Monitoring estimates;
- Cost estimate based on contracted rates;

- Road lists; and
- Copies of all debris removal and disaster recovery contracts.

Once FEMA receives this information, they will begin their review process and begin to write a Project Worksheet for debris removal. Timely delivery of this information to FEMA is critical.

Obtain FEMA Guidance for Gated Community and Private Property Debris Removal

Eligibility of private property debris removal will be determined by FEMA on a case-by-case basis following an event. Typically, the debris and devastation must be so widespread that the debris removal from private property is a “public interest.” Under current FEMA Publication 325 guidelines, debris removal from private property is a “public interest” when operations:

- Remove threats to the health and safety of the community at large;
- Prevent significant damage to public or private property; and/or
- Assist in the economic recovery and thereby benefit the community at large.

In order for private property debris removal to be eligible for reimbursement the County must submit a written request to the Federal Coordinating Officer (FCO) before private property debris removal operations begin. The request should include the following information:

- **Immediate threat determination** – The County must provide documentation from the relevant state or County Department of Health or equivalent public health authority that debris on private property is a threat to public health and safety.
- **Documentation of legal responsibility** – The County must demonstrate that it has the legal authority to enter private property and gated communities and accept the responsibility to abate all hazards, regardless of whether or not a Federal Disaster Declaration is made.

If private property debris removal is authorized and considered for the County, the following documentation will be required by FEMA:

- **Right-of-Entry** – The County must attain signed Right-of-Entry (ROE) form holding the federal government harmless from any damages caused to private property. The County may execute ROE forms prior to a disaster under the condition that the ROE does not reference a particular event or disaster number. A sample ROE form is included in Appendix G.
- **Photos** – It is in the interest of the County to photograph conditions of private property before and after debris removal is completed. The photos will assist in the verification of address and scope-of-work on the property.
- **Private property debris removal assessment** – The assessment will be a property specific form to establish the scope of eligible work on the property. The assessment can be in the form of a map or work order, as long as the scope of work can be clearly identified.
- **Documentation of environmental and historic review** – Debris removal efforts on private property must comply with all review requirements under 44 CFR (specifically parts 9 and 10).

Obtain FEMA Guidance for Marine Debris

Begin and Complete Abandoned Vehicles/Vessel Recovery upon approval from FEMA.

- After a hurricane, abandoned vehicles and vessels are often overlooked and may be left on the County's roadways and property causing a threat to the public health and safety. To mitigate these hazards through the County, the DRRD should work with the debris removal monitoring firm to removal these abandoned vehicles and vessels. Guidance will be sought by FEMA in coordination with the County Attorney and County Administrator as to the determination of legal responsibility for the removal of vehicles and vessels. Based on guidance from FEMA, the DRRD will coordinate the monitoring firm to provide a process for executing removal to also be in accordance with FEMA and the county's ordinance.
- Assess the quantity of vehicles and vessels requiring removal as a result of the disaster event.
- Upon identifying quantity of vehicles and vessels to be removed, the debris removal monitoring firm will assist the Division of Code Enforcement with providing due notice as outlined in County Ordinance for vehicle removal.
- Marine Vessels will be identified using aerial drone footage and will then be relayed to DNR. DNR will be the responsible party to identify the owner of the vessel. The process for identifying ownership is 45 days. If no owner is determined, the vessel can be signed over to the county for removal.

Obtain FEMA Guidance for StormWater Debris

Stormwater debris removal is technically challenging in that the reimbursement arm is often times the National Resource Conservation Service (NRCS). FEMA will engage an applicant with inland waterways debris removal support only after an NRCS application is rejected. Also, access to inland waterways is limited because the majority of land surrounding them is private. The following steps should be taken to mitigate hazards in the waterways:

- Complete a damage assessment for waterways within Beaufort County; no removal should be done prior to approval from NRCS.
- Coordinate with the debris removal monitoring firm and the entities legally responsible for removing the debris to determine who will assume responsibility for removing the debris;
- Enter into MOU's with those entities to assume responsibility for removing debris from waterways; and
- Coordinate with the Purchasing Department to issue a RFP to perform the work based on the damage assessment of waterways.

Upon awarding a contractor, the debris removal monitoring firm should monitor the removal in accordance with the contract and coordinate to seek reimbursement through FEMA and/or the NRCS for each waterway.

Media Press Release

The DRRD and Public Information Officer will work with the newspapers, radio and television stations to provide information to citizens about the debris removal process. This information will be focused on educating citizens on the proper method of debris set-outs including information on debris segregation, distances to the curb, and what materials are prohibited.

In addition, the County may also issue information on debris set-out deadlines for ROW collection. Providing this information to the public in a timely manner will ensure the rapid placement of debris along the ROW.

Milestone 2: First 2 weeks – 1 month

During this period, the debris removal contractor is expected to be fully mobilized with asset configurations and sub-contractor placement dispersed to adequately and simultaneously service the entire County. In the event of sand displacement a milestone target for sand recovery and beach re-nourishment operation commencement would have to be established.

Hours of operation should continue to go on seven days per week during daylight hours.

Maintain and Evaluate ROW Cleanup – Vegetative and C&D

After evaluating the level of damage incurred by the County and the amount of debris generated, the County determines whether current asset configurations and contractor equipment levels are adequate, or need to be increased. Many factors may influence this decision including:

- **Time of hurricane season** – If the hurricane affects the community early in the hurricane season, the County should consider requesting that contractors increase assets to the recovery operation. Future storms will likely draw away from the County’s current asset levels and it is critical to increase equipment levels and expedite debris removal deadlines.
- **Debris removal operations in other parts of the U.S.** – During an above normal hurricane season, such as 2004 and 2005 where a multitude of debris removal operations are ongoing, assets may be difficult to acquire. It is imperative, in this case, for the County to set strict asset requirements and debris removal deadlines. If a debris removal contractor is unable to perform under these requirements, their zones will be re-assigned to another contractor.
- **Return of evacuees** – In the case an evacuation was ordered and the evacuees are slow to return back to their homes, the County may consider postponing adding additional resources until the residents have more time to set out debris.

Open additional DMS Locations as necessary

Throughout milestone 2, the County should continually re-evaluate the need to open additional DMS locations. The following factors impact this decision:

- Capacity of existing open sites;
- Drive time from remote portions of the County;
- Wait time at the disposal sites; and
- Average loads collected per truck/per day.

Assess Need for Sand Recovery

Depending on the integrity of the dunes as well as the severity of the storm surge, a sand recovery operation from the Right-of-Way may be necessary in certain locations. The County in coordination with the debris contractors, administrative staff, state of SC representatives and FEMA will hold a meeting to discuss the timing or need of a sand recovery operation.

Upon making the determination of commencing ROW sand recovery, the debris contractor will begin to collect, haul and stage sand at designated locations. Sand collection activities must be monitored and documented.

At selected staging sites, the debris contaminated sand will be processed through a 10mm screen. Screen rejected debris will be segregated and collected under normal collection procedures.

Open Citizen Drop-off Stations

In addition to ROW debris removal operations, it may be necessary to open citizen drop-off stations (Stations) for vegetative, C&D debris, and HHW. A list of the sites identified has been provided in Appendix L.

The County will coordinate with the debris contractors and monitoring firm to provide personnel at these sites to ensure that only residential debris is deposited. The County should require that all residents that use these Stations provide a copy of their last tax bill or alternate identification providing proof of residency.

The contractors will also be required to dedicate at least one piece of heavy equipment and operator at each site to manage the debris pile. Temporary fencing and proper signage should be set up to limit access and inform the public of operating hours. The hours of operations should be limited during weekdays and expanded during weekends.

Conduct daily meetings with FEMA Debris Team

Daily meetings with the FEMA Debris Team staff may be necessary as the scope of operation increases. These meetings will be scheduled at a regular time and place to ensure attendance. Representatives from the County and monitoring firm will be present to provide FEMA with a report on the progress of the debris removal process and identify any potential problems with the debris removal operation.

Continue Media Press Releases

The DRRD and Public Information Office will work with the various media outlets to release a press release on the debris removal process. This press release should focus on the progress of the debris removal operation, proper procedures for setting out and segregating debris, debris hotlines, and information on citizen drop-off stations.

Milestone 3: 1 month – 3 months

This period is characterized with the return of residents, restoration of basic services and infrastructure, and the re-opening of most businesses. The County should expect the Contractor to complete a first pass of debris collection on all streets by the beginning of the third milestone.

Operational hours may be reduced during this period to accommodate reduced debris density on roadways and shorter daylight hours.

Maintain and Evaluate ROW Cleanup – Vegetative and C&D

Based on the progress of the debris contractors, the PW/DRRD determines the end of the second pass period. At the end of the second pass, the contractor is generally given two to three days off in order to allow residents time to set out more material at the curbside. The PW/DRRD will schedule meeting(s) with the contractors and FEMA to discuss:

- ROW deadlines for third pass;
- Potential ROE programs;
- Potential Leaners/Hangers program;
- Sand recovery; and
- Deadlines for FEMA reimbursement.

Begin ROW Leaners/Hangers Program

PW/DRRD and the County Administrator determine the necessity of a right-of-way leaner and hanger debris removal program. Upon authorization by the County, a damage assessment to identify all leaners and hangers in the right-of-way along County roads will begin.

The debris contractor, based on the rates specified in their contract. Prior to commencement of the operation, the County must review the contract to ensure:

- Scope is consistent with disaster specific FEMA eligibility; and
- Scope of work adequately covers work needed to be performed.

All surveys and operations associated with the removal of leaning trees and hanging limbs must be documented and monitored closely. The County should confer with FEMA prior to beginning the operation.

Begin ROE Vegetative and C&D Recovery Process

In the wake of many storms, the hurricane generates a significant amount of vegetative hazards on private property that some residents were not able to abate and place on the right-of-way. FEMA considered this situation an immediate threat to public health and safety and authorized private property vegetative debris removal.

- The PW/DRRD, County Administration, the County monitoring agency, debris contractors and FEMA will evaluate whether the County has the legal authority to enter private property and hazards considered to be a threat to public health and welfare.

Haul out of Reduced Material from DMS to Final Disposal Site (as necessary)

The debris removal contractor should be expected to begin incineration or grinding reduction operations soon after DMS open. This helps ensure that an over-abundance of un-reduced debris doesn't negatively impact access and progress.

The reduction rate is approximately 20:1 for burning vegetative debris and 4:1 for chipping/grinding vegetative debris. Reduced and un-reduced materials should be stored separately at the DMS.

The goal is to reduce all material via incineration, grinding, etc. prior to haul out to various end markets. Reduction operations reduce the amount of usable space at the DMS locations, impacting the ability of the contractor to safely dispose of additional incoming debris collected on the ROW and rendering it necessary to haul reduced material to a final disposal site. Prior to the haul out of reduced debris, the PW/DRRD, Debris Removal Contractors, FEMA and SCDHEC will schedule a meeting to review previously identified final disposal site and discuss additional options for the disposal of reduced debris. During this meeting, parties will focus on viable alternatives for landfill disposal of all vegetative debris. Minimizing the impact of County contracted debris on the waste stream is extremely important since private debris associated with construction and roofing projects make a significant impact on landfill capacity. All possible alternatives for the reduced vegetative debris will be explored.

Once a solution has been agreed upon and all State environmental issues have been properly addressed, the debris hauler will begin to haul out debris. All debris haul out trucks will be certified for capacity by the monitoring firm and placards are issued. The monitoring firm tickets all out-going loads to provide documentation for FEMA reimbursement and invoicing.

Maintain Coordination with External Agencies

Additional coordination meetings may be needed throughout the debris removal process between the County and other external agencies. These meetings can provide a forum for all agencies to give an update on their debris removal activities, problems with the County contractors, and estimated timelines for project completion.

Progress to Hold Bi-weekly Meetings with FEMA Debris Team

Regular meetings with the FEMA Debris Team staff will continue as the scope of operations expands. These meetings will be scheduled at a regular time and place to ensure attendance. Representatives from the County and monitoring firm will be present to provide FEMA with a report on the progress of the debris removal process and identify any potential problems with the debris removal operation.

In addition, the PW/DRRD, County Administrator and monitoring firm will discuss the submission of contractor invoices to FEMA for reimbursement. The County will describe to FEMA representatives the documentation procedures of all contractor activities, provide a copy of the database of all tickets developed and filed for audits, and FEMA documentation requests.

This database will provide information for FEMA Project Worksheet generation and Beaufort County Financial Status Reports regarding invoice status, project status, and overall liquidity regarding reimbursement.

Continue Media Press Release

The PW/DRRD and Public Information Office will work with the local media outlets to release a press release on the debris removal process. This press release will focus on the progress of the debris removal operation, and again stress to citizens the proper procedures for setting out and segregating debris. Information will also be provided on any debris hotlines and citizen drop-off stations.

Should the County initiate a ROE program; the County will issue a separate press release via the various media outlets to make citizens aware of the ROE program on the beaches and the mainland. The press release should detail eligibility for the program, such as:

- Residency requirements;
- Citations of Notices of Hazard; and
- Telephone numbers to call for assistance.

Milestone 4: 3 months – Completion

This is the period where all basic services have been restored and many residents and businesses are returning to their pre-storm state of affairs. While special projects may remain active for periods of several months, the bulk of the debris removal from public property is complete.

Complete all Debris Recovery Activities

The County, debris contractors, and FEMA will schedule a meeting to discuss the completion of all tasks associated with the debris removal process. This meeting should focus on the deadlines and timing for the finalization of all activities in the field.

ROW Cleanup Activities – Vegetative and C&D

The County, with guidance from the FEMA debris team, will issue a deadline for all material to be out on the Right-of-Way. Material set out after this deadline will be deemed ineligible for County contractors to remove.

In addition, monitoring staff along with contractors will conduct windshield surveys along all County roads to identify areas that have received the final pass by contractors. Contractors will also be required to settle with homeowners any damages to their property as a result of mechanized equipment used in the cleanup process.

Complete ROE Vegetative and C&D

Monitoring staff and contractors will conduct site surveys to ensure that each property where vegetative and C&D debris removal activities occurred is completed to a satisfactory level. Photos will be taken of the property and documentation noting the completion of the property will be maintained. Table 5.14 provides a sense of the number of each “services” provided at each ROE property. This level of documentation is necessary to ensure FEMA reimbursement.

Complete Parks and Leaners/Hangers Cleanup

Monitoring staff and contractors will conduct site surveys to ensure that each park and leaner/hanger, where debris removal activities occurred, is completed to a satisfactory level. Monitors will use documentation completed during the damage assessment phase as a guide during this process. Photos will be taken of the park and documentation noting the completion of the property will be maintained.

Identification of Ineligible Debris on ROW

In order to minimize funding de-obligations from FEMA, the County through its debris monitoring contractor should proactively seek to develop a PW to fund the removal of ineligible debris piles in which the responsible party was not identified. This process will include:

- Assemble a team of debris eligibility specialists to identify ineligible debris on the ROW;
- Work with the Code Enforcement Division to identify and find the responsible party;
- Complete due diligence in the identification of the responsible party; and
- Develop a PW to fund the removal of ineligible debris piles in which the responsible party was not identified.

Finalization Haul out of Debris

The contractors will continue with all haul out activities until the debris at each DMS location is completely removed. Monitoring staff will coordinate the continuation and finalization of these activities until the County is satisfied that the haul out activity has been completed.

Once the haul out is complete, the contractor will begin with DMS site remediation.

Closeout and Remediate DMS

Upon finalization of all haul out activities, the debris contract will work to bring the DMS back to its pre-storm condition. The contractor will use any pre-site photos taken of each facility that have been kept on file by the County.

Conduct Project Closeout Meetings with FEMA Debris Team and External Agencies

As the debris recovery project draws to a close, the County will coordinate with the FEMA Debris Team to conduct a final inspection for Beaufort County. This will include, but not be limited to:

- Information on any outstanding Project Worksheets.
- Certified vehicle list that includes:
 - Length, height, and width of each vehicle;
 - Vehicle ID number, tag and name of hauling firm; and
 - Deductions.
- Daily recap worksheet by date of the PW including:
 - Load ticket numbers (numeric order);
 - Vehicle ID;
 - Cubic yards claimed/verified;
 - Road the debris was picked up; and
 - Copies of that days load tickets in numeric order.
- Labor invoices per day by PW claimed for all force account labor activities.
- Contract invoices to include:

- Labor;
- Site fees (dump sites); and
- Management fees.
- Consolidated list of roads that debris was picked up from for this PW.
- All invoices and supporting documentation sorted by PW/Date to include any force account labor.
- Copy of all contracts, including rate schedules describing:
 - Cost of hauling;
 - Temporary storage or site management;
 - Cost of reduction (i.e. grinding, open burning, air-curtain incineration);
 - Haul out;
 - Disposal (if applicable); and
 - Site restoration.

Continue Media Press Release

The DRRD and Public Information Office will work with the various media outlets to release a press release on the debris removal process. This press release will focus on the finalization of the debris removal operation. Information will be provided on the deadlines for debris removal, what to do regarding ineligible debris, and the progress of the ROE program.