

**Bertie County, NC**  
**Debris Management Plan**  
(Annex to County Emergency Operations Plan)

**June 2, 2005**  
**Coordinating Draft**

# **DEBRIS MANAGEMENT PLAN**

## **FOREWORD**

This Debris Management Plan identifies the actions required to plan for and respond to a natural or man-made debris-generating event. It is designed to identify County, State and Federal agencies responsible for debris operations and defines the procedures to be followed in the event of a major debris-generating event. This Debris Management Plan is an Annex to the Bertie County Emergency Operations Plan, dated September 16, 2003.

The Directors of the Bertie County Office of Emergency Management (OEM) and the County Economic Development Department recognize the need for close coordination between their departments and from other County departments, State and Federal agencies identified in this plan. Therefore, debris operations will be directed and coordinated from a centralized Debris Management Center (DMC) located at 106 Dundee Street, Windsor, NC, 27893. The Director of OEM has designated the Director of Economic Development as the County Debris Manager.

The County Debris Manager will be responsible for coordinating all disaster debris operations with respect to the emergency clearance and permanent removal and disposal of all debris deposited along or immediately adjacent to public rights-of-way in consultation with other County and State departments. This approach will ensure a seamless and efficient cleanup operation. This plan solely covers the unincorporated areas of Bertie County. All incorporated areas within Bertie County have been made aware of the development of this plan.

Your support and understanding of the importance of having a coordinated Debris Management Plan in place prior to a natural or man-made disaster will contribute to the safety and well being of all residents of Bertie County.

Rickey Freeman  
Coordinator  
Bertie County Office of Emergency Management

Steve Biggs  
Director  
Bertie County Economic Development

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## **BERTIE COUNTY, NC DEBRIS MANAGEMENT PLAN**

### **I. AUTHORITY**

This Plan is developed, promulgated, and maintained under the following State and Federal statutes and regulations :

- Article 36A of chapter 14, Chapter 166A, and Chapter 153A of North Carolina General statutes
- Public Law 93-288 as amended by Public Law 100-107, the Stafford Disaster Relief and Emergency Assistance Act and in this plan as “the Stafford Act.”
- Public Law 81-920, Federal Civil Defense Act of 1950, as amended.
- CFR, Title 44, Part 200 et seq.
- Bertie County Emergency Operations Plan, updated September 16, 2003.

### **II. OVERVIEW**

#### **A. Background**

The institutions of Bertie County, NC, along with the natural and built environment, present opportunities for a number of potential natural and technological disasters or emergencies. The County Emergency Management Coordinator is responsible for planning and emergency preparedness, response and recovery, and mitigation activities. The County coordinates with the North Carolina Division of Emergency Management (NCEM) office in response to disasters, emergencies, severe weather conditions, and other catastrophic events.

The County subscribes to the guidance developed by the Bertie County Office of Emergency Management (OEM) and the State Emergency Operations Plan (EOP) developed by the NCEM. The EOP establishes responsibilities for each State government agency and sets forth lines of authority and organizational relationships that are essential for the protection of the public. The EOP also establishes the concepts and policies under which all elements of the State government will operate during disasters and emergencies by providing for the integration of those resources.

This Plan is based on guidance provided by Bertie County and procedures outlined in the State Debris Management Plan. This Plan focuses on the types of activities that are likely to be required during a disruption or emergency, without regard to the type or cause of that disruption or emergency.

#### **B. Purpose**

This Plan has been developed to provide the framework for Bertie County government and other entities to clear and remove debris generated during a public emergency within the limits of Bertie County. This Plan unifies the efforts of public and private organizations for a comprehensive and effective approach to:

- Provide organizational structure, guidance, and standardized guidelines for the clearance, removal, and disposal of debris caused by a major debris-generating event.
- Establish the most efficient and cost effective methods to resolve disaster debris removal and disposal issues.
- Implement and coordinate private sector debris removal and disposal contracts to maximize cleanup efficiencies.
- Expedite debris removal and disposal efforts that provide visible signs of recovery designed to mitigate the threat to the health, safety, and welfare of County residents.
- Coordinate partnering relationships through communications and pre-planning with local, State, and Federal agencies that have debris management responsibilities.

### **C. General Approach**

Bertie County is vulnerable to numerous natural and technological hazards, including severe weather and hazardous materials spills. Tropical storms, hurricanes, tornadoes, severe lightning, wind storms, hail and floods pose the highest natural threats to the County. Critical government and private facilities are potential targets for terrorist attack. The County can manage many disaster situations with internal resources. However, there are potential debris-generating events that may overwhelm the County's assets and capabilities.

This Plan establishes the framework within which the County will respond and coordinate the removal and disposal of debris generated by potential manmade and natural disasters. This Plan will also address the potential role that State and Federal agencies and other groups will take in a debris operation.

This Plan defines the roles and responsibilities of unincorporated Bertie County government, the North Carolina Department of Transportation (NCDOT), as well as state and federal agencies, with respect to debris planning prior to an event and actions following a major debris-generating event.

The Bertie County OEM has the responsibility of coordinating and conducting Debris Removal and Disposal Operations on all non-system roads within the unincorporated portions of the County. The Bertie County OEM is also responsible for identifying and operating any necessary Temporary Debris Storage and Reduction sites (TDSRs) for debris from non-system roads. Final disposal of all disaster-generated debris will be to licensed landfills. The County TDSR sites may also be used as secondary or backup sites for NCDOT and the municipalities if coordinated with the County Debris Manager.

The Director of Economic Development will be designated as the County Debris Manager and will coordinate all Debris Removal and Disposal Operations from the Economic Development offices located at 106 Dundee Street, Windsor, NC, 27983.

The County Debris Manager will be the County's single point of contact responsible for all disaster debris removal and disposal operations and interfacing with representatives from municipal, state, and federal agencies.

NCDOT has the sole responsibility of coordinating and conducting Debris Clearing, Removal and Disposal Operations from all system roadways within Bertie County utilizing NCDOT personnel and/or private Contractors. The County is responsible for identifying and obtaining and operating any TDSRs. Final disposal of all disaster-generated debris will be to licensed landfills.

Each municipality within Bertie County has the responsibility of coordinating and conducting Debris Clearing and Debris Removal and Disposal Operations within their own jurisdictions. This plan is written to cover Bertie County Unincorporated areas exclusively. Each municipality is responsible for pickup and disposal of all disaster-generated debris independently.

#### **D. Planning Basis and Assumptions**

Natural disasters such as hurricanes, tornadoes, and flooding precipitate a variety of debris that includes, but is not limited to, trees and other vegetative organic matter, construction materials, appliances, personal property, mud, and sediment. Man-made disasters such as terrorist attacks may result in a large number of casualties and heavy damage to buildings and basic infrastructure. Crime scene constraints may hinder normal debris operations, and contaminated debris may require special handling. These factors will necessitate close coordination with local and Federal law enforcement, health, and environmental officials.

This Plan takes an all-hazards approach to identifying and responding to the following hazards that may pose a threat to Bertie County:

- Natural Hazards – severe weather, hurricanes, tornadoes, flooding, or earthquakes;
- Human-caused Events and Hazards – urban fires, special events, civil disorder, or transportation accidents; and
- Terrorist Incidents – bomb threats or attacks, sabotage, hijacking, armed insurrection, or Weapons of Mass Destruction (WMD) incidents.

The quantity and type of debris generated, its location, and the size of the area over which it is dispersed will have a direct impact on the type of removal and disposal methods utilized, the associated costs, and the speed with which the problem can be addressed. Further, the quantity and type of debris generated from any particular disaster will be a function of the location and kind of event experienced, as well as its magnitude, duration, and intensity.

For planning purposes and for pre-positioning response assets, this plan is based on the debris-generating capacity of a Category 4 Hurricane, which has the following characteristics or effects:

- Wind speeds ranging from 131-155 miles per hour;
- Heavy rainfall and a potential storm surge of 15 to 20 feet;
- Foliage torn from trees and some large trees uprooted;

- Practically all poorly constructed signs blown down;
- Damage to roofing materials of most buildings;
- Some window and door damage, and structural damage to small buildings; and
- Mobile homes usually destroyed.

The fact that this Plan is based on a particular size and type of event in no way diminishes the value of the Plan for use in response to other types and categories of events. This Plan establishes a general framework that can, with minor modifications, be used in any debris-generating event.

This Plan addresses the clearing, removal, and disposal of debris generated by the above hazards based on the following assumptions:

- A major natural or man-made disaster that requires the removal of debris from public or private lands and waters could occur at any time;
- The amount of debris resulting from a major natural disaster will exceed Bertie County's in-house removal and disposal capabilities;
- Bertie County will contract for additional resources to assist in the debris removal, reduction, and disposal processes;
- The County Commission will issue an Emergency Executive Order as a prerequisite to requesting emergency or major disaster assistance under a Presidential Disaster Declaration; and
- Federal assistance will be requested by the State to supplement Bertie County's debris capabilities in coordination with the Debris Manager.

#### **E. Federal Assistance**

The County Debris Manager may request Federal assistance through the NCEM when the debris-generating event exceeds Bertie County's in-house debris clearing, removal, and disposal capabilities. The request will be submitted to the NCEM who will then forward it to the Federal Emergency Management Agency (FEMA) Region IV requesting that the US Army Corps of Engineers (USACE) be given a mission assignment.

The USACE may provide a liaison to the State EOC when activated. This liaison will serve as an advisor to the State EOC staff providing advice as needed and ensuring that the USACE is prepared to respond when tasked.

The USACE will alert a Debris Planning and Response Team (PRT) and the Advance Contracting Initiative (ACI) contractor under contract for that area and have them ready to respond when a mission assignment is received. Once the USACE receives a mission assignment from FEMA, the management groups for both the PRT and ACI contractor will be available to meet with the Debris Manager to conduct contingency planning as required.



The USACE will also provide staffing to the County Debris Management Center (DMC) when activated to ensure a coordinated debris operation. USACE will coordinate with the County DMC staff on the use of any pre-identified TDSRs and identify/acquire other sites as required to accomplish the mission assignment.

### **III. DEBRIS RESPONSE AND RECOVERY ORGANIZATION – RESPONSIBILITIES BY AGENCY**

#### **A. Local Agencies**

##### **1. Economic Development Department**

The Economic Development Department's responsibilities include, but are not limited to, the following with respect to any and all debris management issues:

- a. Designate the Economic Development Department Director as the County Debris Manager responsible for overall control of the Debris Management Center (DMC).
- b. Provide a Public Information Officer (PIO) to the DMC staff to coordinate all media reports on debris operations.
- c. Coordinate with NCDOT to ensure clearing of major evacuation routes and access to critical facilities.
- d. Assign personnel to operate and staff the Debris Contractor Oversight Team (DCOT) element of the DMC, including communications equipment, transportation, etc.
- e. Ensure that the DMC is provided all needed administrative staff and equipment support, including administrative support personnel, computers, desks, chairs, etc.
- f. Appoint a Deputy Debris Manager responsible for daily operation control of the DMC.
- g. Manage all necessary contracts and/or temporary employees associated with debris removal activities, including, but not limited to, debris removal and disposal and debris management monitoring (Roving, Load Site, and Disposal Site Monitors).
- h. Coordinate traffic control at all loading sites and at entrances to and from debris management sites.
- i. Provide yearly training and refresher training for all personnel assigned to debris management monitoring responsibilities.
- j. Coordinate training requirements with County Emergency Management Director.

k. Primary Point of Contact: *Frank Bray, Director of Public Works.*

**2. County Office of Emergency Management**

County OEM’s responsibilities include, but are not limited to, the following with respect to any and all debris management activities:

- a. Coordinate between State EMA and County Agencies and Administrators.
- b. Ensures all agencies with responsibilities outlined in this plan are aware of and carryout their respective responsibilities.

Primary Point of Contact: *Rickey Freeman, Director, Office of Emergency Management.*

**3. Department of Parks and Recreation**

The Department of Parks and Recreation’s responsibilities include, but are not limited to, the following with respect to any and all debris management activities:

- a. Provide a DPR Debris Coordinator to the DMC staff to coordinate all DPR debris assignments.
- b. Ensure that debris removal from parks and recreational facilities is coordinated through and approved by the Debris Manager.
- c. Ensure that the DPR Debris Coordinator keeps the Debris Manager informed of cleanup progress and any problems encountered or expected.
- d. Assist in debris management site investigations.
- e. Provide digital map files of all identified DPR property greater than 10 acres.
- f. Coordinate with the Debris Manager for the removal, storage, burning, and disposal of debris at debris collection/management sites at DPR parks.

Primary Point of Contact: *TBD, Director of Parks and Recreation*

**B. Debris Response and Recovery State and Federal Support Agencies**

Specific responsibilities of the various supporting agencies are shown in the sections that follow:

**1. NCDOT**

- Clear and remove debris from all system roadways in Bertie County. Debris will be taken directly to the East Carolina Regional Landfill or, if necessary, to a predetermined County TDSR for processing and hauling by the County.

Primary Point of Contact: *Lydia McKeel, P.E., NCDOT County Maintenance Engineer, (252) 332-2765.*

**2. Fire and Emergency Medical Services**

- Respond to fire and other emergencies at TDSR sites.
- Respond to request to investigate and handle hazardous materials incidents.
- Approve TDSR burn sites in accordance with appropriate local requirements to ensure safe burning.
- Issue bans on open burning based upon assessment of local conditions and ensure dissemination of information to the public.
- Supervise burn sites in accordance with all appropriate local requirements to ensure safe burning, subject to amendments by the Health Department and/or Fire Marshall.

Primary Points of Contact: *Mr. Rickey Freeman, County Emergency Management Coordinator, (252) 794-5302.*

**3. Police / Sheriffs Department**

- Assist in monitoring illegal dumping activities.
- Assist in monitoring TDSR sites to ensure compliance with local traffic regulations.
- Coordinate traffic control at all loading sites and at entrances to and from debris management sites

Primary Point of Contact: *Mr. C. Gregory Atkins, County Sheriff, (252) 794-5300.*

**4. Department of Health**

- Assists in monitoring TDSR site operations and closeout activities.
- Assistance as necessary on all environmental and health issues.
- Regulate the burning at TDSR sites.

Primary Point of Contact: *Ms. Joann Jordan, Albemarle Regional Health Department, (252) 794-5322*

**5. Mainland Department**

- Coordinate debris removal and disposal requirement on public facilities with the Debris Manager.

Primary Point of Contact: *Tom Brooks, Maintenance Department Director, (252) 794-5312.*

**6. Water Department**

- Coordinate debris removal and disposal requirement on Water facilities with the Debris Manager.

Primary Point of Contact: *Ricky Spivey, Superintendent, Water Department, (252) 794-4427.*

**7. Electric Utilities**

Coordinate with the Debris Manager with regards to debris removal along electrical easements and rights-of-way to ensure that all lines are de-energized.

- Provide a debris coordinator to the DMC.

Primary Points of Contact:

Roanoke Electrical Cooperative: *Mr. Marshall Cherry, (252) 539-2236*

Dominion Power: *Mr. Michael A Thompson, (919) 794-3725*

**8. North Carolina Division of Forest Resources (NCDFR)**

Coordinate with the Debris Manager during Phase I recovery to assist in emergency debris clearing on roads. The NCDFR's role is secondary to NCDOT and only activated when necessary for clearing hazards on system and non-system roads.

Primary Point of Contact: *Mr. Rudy @Whitehurst, (252) 794-3725.*

**IV. DEBRIS MANAGEMENT STAFF RESPONSIBILITIES**

**A. Debris Response and Recovery Organization and Responsibilities**

One of the primary functions of this Plan is to clearly delineate a basic organization and assign specific responsibilities. During the conduct of debris operations, many issues will arise that are not specifically mentioned in this Plan. However, responsibilities are sufficiently defined so that unexpected issues can be assigned and resolved efficiently.

This section of the Plan provides a listing of primary debris-related responsibilities for directors and managers, as well as debris-specific assignments for tasks and issues that normally arise during debris operations. Additional debris-specific assignments for tasks and issues that normally arise during debris operations are provided in Appendix I.

## **1. Debris Manager**

The Executive Director of Economic Development will assume the role of the County Debris Manager. In the role of Debris Manager, the Executive Director of Economic Development's responsibilities include, but are not limited to, the following with respect to any and all debris management activities:

- Overall control of the DMC.
- Provide a Public Information Officer (PIO) to coordinate all media reports on debris operations.
- Coordinate with NCDOT to ensure clearing of major evacuation routes and access to critical facilities.
- Assign personnel to operate and staff the Debris Contractor Oversight Team (DCOT) element of the DMC, including communications equipment, transportation, etc.
- Ensure that the DMC is provided all needed administrative staff and equipment support, including administrative support personnel, computers, desks, chairs, etc.
- Receive regular updates from the Deputy Debris Manager regarding cleanup progress and any problems encountered or expected.
- Manage all necessary contracts and/or temporary employees associated with debris removal activities, including, but not limited to, debris removal and disposal and debris management monitoring (Roving, Load Site, and Disposal Site Monitors)
- Provide yearly training and refresher training for all personnel assigned to debris management monitoring responsibilities.
- Coordinate training requirements with the County Emergency Management Coordinator, (252) 794-5302.
- Communicate timely information to the County Administrator and the County EOC staff regarding the status of the debris clearing, removal, and disposal operations.
- Assure that the County is represented at all meetings with other government and private agencies involved with the debris cleanup operation.
- Coordinate with appropriate County, State, and Federal agencies, including FEMA, USACE, and others as appropriate.

- Convene emergency debris coordinating meetings.
- Appoint a Deputy Debris Manager responsible for daily operation control of the DMC.
- Ensure that the DMC is provided all needed administrative staff support.

The Deputy Debris Manager will act as DMC Liaison to the County EOC to coordinate and respond to any debris removal or disposal request. Actions will focus on keeping track of Debris Control Zone assignments and progress of the initial debris clearance (Phase I) from emergency evacuation routes and critical facilities. The Deputy Debris Manager will keep the County EOC staff informed of any problems encountered or expected.

Point of Contact: *Mr. Steve Biggs, Executive Director of Economic Development, (252) 794-5301*

## **2. Deputy Debris Manager**

The Debris Manager will be supported by a joint debris staff made up of personnel from other County department staff personnel. The joint staff will constitute the daily operating element of the DMC.

The Deputy Debris Manager is responsible for daily operational control of the DMC staff. The Deputy Debris Manager will receive current information on the severity of the disaster from the County EOC. All requests for debris removal or disposal from the EOC staff will go to the Deputy Debris Manager. Requests for debris removal from public facilities and roadways will be reviewed and approved by the Debris Manager before being directed to implement the request.

The Deputy Debris Manager will appraise the extent of damage and resulting debris and coordinate with the Debris Manager to ensure that appropriate contracts are put place to efficiently an effectively remove the debris.

The Debris Manager will ensure that all Contractor debris removal and disposal operations are properly monitored utilizing personnel assigned to the Debris Contractor Oversight Team.

The Deputy Debris Manager will keep the Debris Manager and DMC staff informed on all ongoing debris management operations through, at a minimum, daily meetings and/or reports.

The Deputy Debris Manager will maintain a daily journal and file on all debris related documents and issues.

Point of Contact: *To Be Determined at a Later Date.*

### **3. Department of Parks and Recreation (DPR) Director**

The Director of DPR's responsibilities include, but are not limited to, the following with respect to any and all debris management activities:

- Act as DPR Debris Coordinator to the DMC staff to coordinate all P&R debris assignments.
- Ensure that debris removal from parks and recreational facilities is coordinated through and approved by the Debris Manager.
- Keeps the Debris Manager informed of cleanup progress and any problems encountered or expected.
- Assist in debris management site investigations.
- Provide digital map files of all identified DPR property greater than 10 acres.
- Coordinating with the Debris Manager for the removal, storage, burning, and disposal of debris at debris collection/management sites at PDR parks.

Primary Point of Contact: *Ms. Donna Mizelle, Director of Parks and Recreation, (252) 794-5363*

### **4. Debris Management Center Staff**

The DMC is organized to provide a central location for the coordination and control of all debris management requirements. The DMC will be located at 106 Dundee Street, Windsor, NC 27893, (252) 794-5301.

The DMC organizational diagram shown in Figure 1 below identifies the DMC staff positions required to coordinate the actions necessary to remove and dispose of debris using both County and contractor assets.

Specific DMC staff actions will include the following:

- Making recommendations for County force account and Contractor work assignments and priorities based on the County's Debris Control Zones. Appendix B contains a map showing the boundaries of the various Debris Control Zones.
- Reporting on debris removal and disposal progress, and preparing of status briefings.
- Providing input to the EOC PIO on debris removal and disposal activities.
- Coordinating with the State on debris issues affecting adjacent counties.
- Coordinating with the following Federal agencies in the event of a major natural or man-made debris-generating disaster that exceeds the County's capabilities:

- Federal Emergency Management Agency (FEMA)
- U.S. Army Corps of Engineers (USACE)
- Local Office of the Federal Bureau of Investigation (FBI)

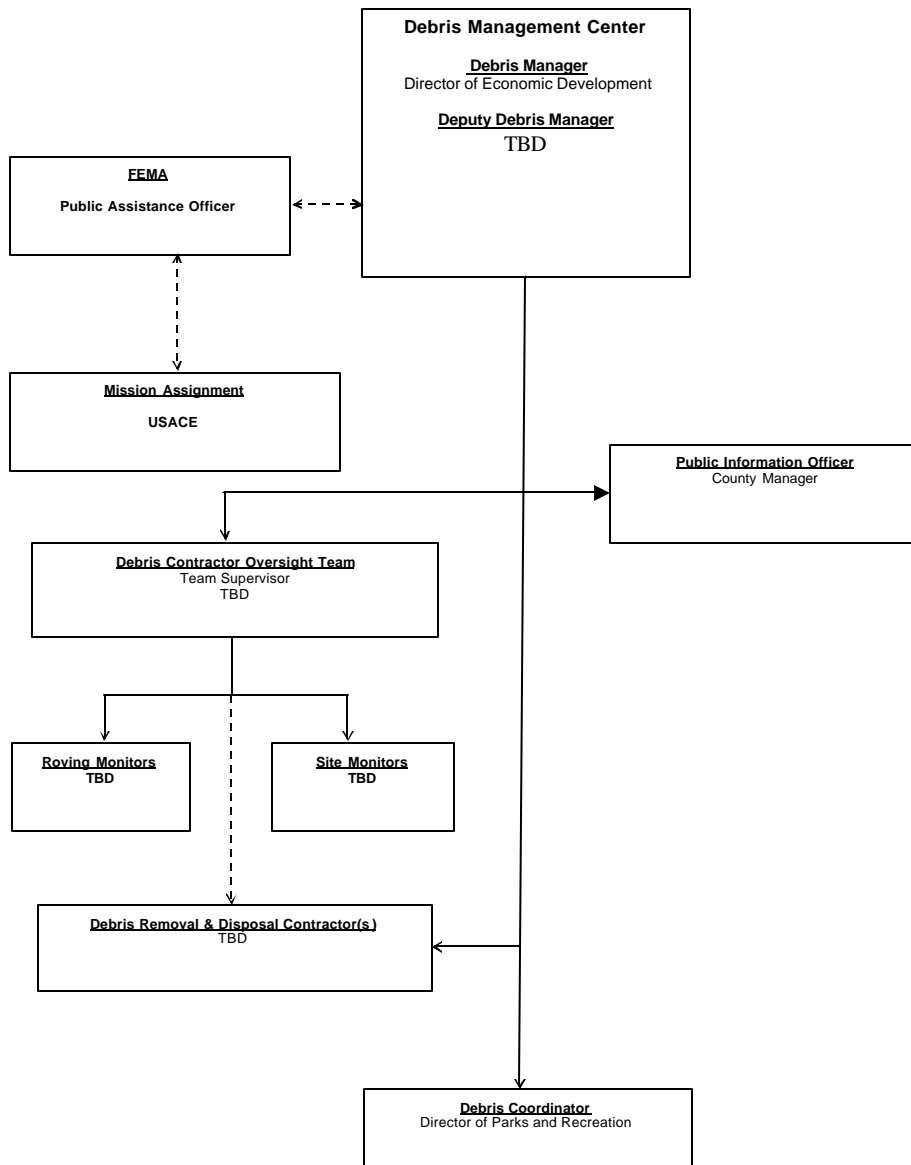
**5. Public Information Officer**

The PIO will serve as the DMC liaison to the County PIO. The PIO will develop a proactive information management plan. Emphasis will be placed on actions that the public can perform to expedite the cleanup process. Flyers, newspapers, radio, and TV public service announcements will be used to encourage public cooperation for such activities as:

- Separating burnable and non-burnable debris;
- Segregating Household Hazardous Waste (HHW);
- Placing disaster debris at the curbside;
- Keeping debris piles away from fire hydrants and valves;
- Reporting locations of illegal dump sites or incidents of illegal dumping;
- Segregating recyclable materials; and
- Disseminate pickup schedules through the local news media.

Point of Contact: *Mr. Zee Lamb, County Manager, (252) 794-5300*





**Figure 1 - Debris Management Center Organization Chart**

## **V. DEBRIS MANAGEMENT RESPONSE AND RECOVERY OPERATIONS**

The Debris Manager will be the single point of contact to coordinate and control all personnel and equipment responding to a major debris-generating event. This Plan provides guidance for the efficient and effective control and coordination of initial debris assessments through debris clearance, removal, and disposal operations.

### **A. Damage Assessment**

The County Debris Manager is responsible for coordinating impact assessment for all County public structures, equipment, and debris clearance immediately following a large-scale disaster. Impact assessments are performed by Bertie County Tax Department personnel and used to prioritize impacted areas and resource needs as well as make initial estimates of debris quantities.

NCDOT has the primary mission of identifying debris impacts on critical roads. Based on the state-mandated prioritization of roads, NCDOT will clear debris from at least one lane on all evacuation routes and identified primary and secondary roads to expedite the movement of emergency service vehicles such as fire, police, and medical responders. A listing of Critical Facilities is provided in Appendix C. The state-mandated prioritization process will be followed in all circumstances.

Assessment teams will conduct initial zone-by-zone windshield surveys to identify the type of debris and to estimate amounts of debris on private and public property. The results of the windshield surveys will be provided to the Debris Manager and the Deputy Debris Manager located at the County EOC.

During the debris clearance and removal process, the DMC staff will be responsible for coordinating with the Electric Power Company Debris Coordinator and other utility companies (telephone and cable TV) as appropriate to ensure that power lines do not pose a hazard to emergency work crews.

### **B. Phase I – Initial Response**

For ease of control and coordination, debris management operations are divided into two phases.

Phase I will be implemented immediately after a debris-generating event to open emergency evacuation routes and roadways to critical facilities and affected neighborhoods. The major emphasis during this phase is to simply push debris from the traveled way to the right-of-way or curb. This activity is commonly referred to as Debris Clearance. Little or no effort is made to remove debris from the right-of-way.

As noted above, NCDOT will be responsible for implementing all Phase I activities along system roads, with support as required from NCDFR. The Debris Manager is responsible for implementing all Phase I activities along non-system roads and other public facilities. Requests for additional assistance will be submitted to the Debris Manager located at the DMC.

Phase I activities for the Debris Manager include:

- Implementation of the Debris Management Plan.
- Determination of incident-specific debris management responsibilities.
- Establishment of priorities based on evacuation needs and prediction models.
- Identification and procurement of TDSRs.
- Activation of pre-positioned contracts, if necessary to support Phase I clearance operations.
- Implementation of Public Information Plan.
- Coordination and tracking of resources.
- Formal documentation of costs.

**C. Phase II - Recovery**

Phase II will be implemented within two to five days following a major debris-generating event, and will encompass the processes of debris removal and disposal. This delay is normal and allows time for affected citizens to return to their homes and begin the cleanup process. Debris must be brought to the rights-of-way or curb to be eligible for removal at public expense.

The Debris Manager will be responsible for implementing all Phase II activities. All debris removal and disposal operations on non-system roads and public facilities will be coordinated by the Debris Manager located at the DMC. Phase II may be quite lengthy as disaster recovery continues until pre-disaster conditions are restored.

Phase II activities include:

- Activation of pre-positioned contracts.
- Notification to citizens of debris removal procedures.
- Activation of TDSRs.
- Removal of debris from rights-of-way and critical public facilities.
- Movement of debris from TDSRs to permanent landfills.

It should be noted that all efforts will be made to dispose of debris in the most efficient manner possible. Normally, due to the close proximity and adequate cell space at the East Carolina Regional Landfill, there may not be a need to utilize TDSRs. In that case, debris will be taken directly to the landfill and processed at the landfill.

**D. Phase II - Debris Removal and Disposal Overview**

The general concept of debris removal operations includes multiple, scheduled passes by each critical site, location, or right-of-way. This manner of scheduling debris removal allows residents to return to their properties and bring debris to the edge of the right-of-way as property restoration proceeds.

The County has been divided into three Debris Control Zones to control and expedite debris-removal and disposal operations (please refer to Appendix B for zone delineation). The estimated quantity of debris that would be generated by a Category 4 Hurricane for each Debris Control Zone is shown below in Table 1. Estimated debris quantities for Hurricane Categories 1 through 5 are shown in Table 2.

<b>Debris Control Zone</b>	<b>Number of Structures</b>	<b>Estimated Debris Quantity (cubic yards)</b>	<b>Temporary Debris Storage and Reduction Site (required acres)</b>
<b>1</b>	2,232	108,810	11
<b>2</b>	2,232	108,810	11
<b>3</b>	2,232	108,810	11
<b>Total</b>	<b>6,696</b>	<b>326,430</b>	<b>33</b>

**Table 1 - Debris Control Zone Estimates**

Note: Estimated debris based on destruction of 50% of structures.  
Required acres represent the worst case and assumes open space. Multiple small or large sites maybe used in this situation.  
Estimated debris quantities for Hurricane Categories 1 through 5 are shown in Table 2.  
These zones and numbers do not include incorporated areas.

Category 1	74 - 95 mph
Category 2	96 - 100 mph
Category 3	111 - 130 mph
Category 4	131 - 155 mph
Category 5	156+ mph

**Estimated Debris Quantities**

Population: 14813

Estimated damage @ 50% of total single family homes

Units	Category 1	Category 2	Category 3	Category 4	Category 5
Single Family Homes Affected	3348	3348	3348	3348	3348
Category Factor	2	8	26	50	80
Vegetation Factor	1.5	1.5	1.5	1.5	1.5
Commercial Density	1	1	1	1	1
Precipitation	1.3	1.3	1.3	1.3	1.3
Q = H(C)(V)(B)(S)	13,057	52,229	169,744	326,430	522,288

**Debris Reduction Site Requirements**

1 Acre (ac)  
 10 Feet Stack Height  
 Total Volume per Acre  
 Q  
 Acres Required  
 Road Buffers, etc.  
 Square Miles Required

	Category 1	Category 2	Category 3	Category 4	Category 5
CY	13,057	52,229	169,744	326,430	522,288
ac	1	3	11	20	33
ac	1	5	18	34	54
Sq. Miles	0.0	0.0	0.0	0.1	0.1

**Debris Classification**

Clean Woody Debris	CY	3,917	15,669	50,923	97,929	156,686
Mixed C&D	CY	9,140	36,560	118,821	228,501	365,602
Burnable	CY	3,839	15,355	49,905	95,970	153,553
Soil	CY	457	1,828	5,941	11,425	18,280
Metals	CY	1,371	5,484	17,823	34,275	54,840
Landfilled	CY	3,473	13,893	45,152	86,830	138,929

Days Required for Cleanup  
 Trucks per Day 300 trucks/day  
 Payload Size 18 CY/truck  
 Trips 10 trips/day  
 Total per Day 54,000 CY/day  
 Total Working Days Required for Cleanup

	1	1	4	7	10
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**Table 2 - Estimated Debris Quantities for Bertie County, NC**

**E. Phase II - Debris Removal and Disposal Operations**

The Debris Manager and staff will coordinate debris removal and disposal operations for all portions of the County non-system roads and public facilities. Phase II operations involve the removal and disposal of curbside debris by County force account and/or Contractor crews. All County-hired debris removal and disposal Contractor operations will be overseen by the Debris Contractor Oversight Team (DCOT).

Under this Plan, mixed debris will be collected and hauled from assigned Debris Control Zones to County-designated TDSRs or to a designated landfill location. Clean woody debris will be hauled to the nearest designated vegetative TDSR for eventual burning or grinding. A listing of TDSRs can be found in Appendix E.

The primary tracking mechanism for all debris loaded, hauled, and disposed of under this plan will be the Load Ticket, which is shown in Figure 2 below. Load tickets will be initiated at pickup sites and closed-out upon drop-off of each load at a TDSR or permanent landfill, and are to be used to document both force account and Contracted haulers. Load tickets will serve as supporting documentation for contractor payment as well as for requests for FEMA reimbursement.

**Figure 2 - Sample Load Ticket**

<b>BERTIE COUNTY LOAD TICKET</b>		<b>Ticket No.</b> 000001
<b>Section 1</b>		
<b>Prime Contractor:</b>		<b>Date:</b>
<b>Subcontractor (Hauler):</b>		<b>Departure Time:</b>
<b>Driver:</b>		<b>Truck Plate No.:</b>
<b>Measured Bed Capacity/County (cu. yds.):</b>		
<b>Debris Pickup Site Location:</b> (must be a street address)		
<b>Debris Type:</b>	? Vegetation	? Construction & Demolition
	? Mixed	? Other: _____
<b>Loading Site Monitor:</b>	<b>Print Name:</b> _____	
	<b>Signature:</b>	
<b>Remarks:</b>		
<b>Section 2</b>		
<b>Debris Disposal Site Location:</b>		
<b>Estimate Debris Quantity (cu. yds.):</b>	<b>OR TONS:</b>	<b>Arrival Time:</b>
<b>Disposal Site Monitor:</b>	<b>Print Name:</b> _____	
	<b>Signature:</b>	
<b>Remarks:</b>		
Copies: White – Load Site Monitor                      Green – Disposal Site Monitor Canary, Pink, Gold – Onsite Contractor's Representative or Driver		

For tracking of all debris moved in response to a given event, the following is the disposition of each ticket part:

- Part 1 (White) Load Site Monitor (Turned in daily to the DMC)
- Part 2 (Green) Disposal Site Monitor (Turned in daily to the DMC)
- Part 3 (Canary) Driver or Contractor's on-site representative (Contractor Copy)
- Part 4 (Pink) Driver or Contractor's on-site representative (Contractor Copy)
- Part 5 (Gold) Driver or Contractor's on-site representative (Driver/Subcontractor Copy)

## **1. Debris Contractor Oversight Team**

The DCOT is responsible for the coordination, oversight, and monitoring of all debris removal and disposal operations performed by private Contractors (see Appendix F, Debris Contract Oversight Team Standard Operating Guidelines).

The DCOT supervisor and team members will be detailed from the Economic Development Department, County OEM, as well as from other County departments as required. The DCOT team may also be supplemented with contracted inspectors and other personnel as needed.

The DCOT team supervisor will be located at the DMC and will provide overall supervision of the three monitoring elements described below. Specific responsibilities include the following:

- Planning and conducting debris management site inspections, quality control, and other contractor oversight functions.
- Receiving and reviewing all debris load tickets that have been verified by a Disposal Site Monitor (see description below).
- Making recommendations to the Debris Manager regarding distribution of County force account and Contractor work assignments and priorities.
- Reporting on progress and preparation of status briefings.
- Providing input to the DMC PIO on debris cleanup activities and pickup schedules.

The DCOT Supervisor will oversee the activities of three types of monitors. The functions and responsibilities of the field monitors are described below (see Appendix F, Debris Removal and Disposal Monitoring Plan).

### **a. Roving Monitors**

Two-person teams of Roving Monitors will be assigned to a specific Contractor depending upon the distribution of work assignments. The Roving Monitors' mission is to act as the "eyes and ears" for the Debris Manager and DCOT Supervisor to ensure that all contract requirements, including safety, are properly implemented and enforced.

Staff to fulfill the Roving Monitor positions will be provided by temporary local hires or by third party contract personnel. Roving Monitors will have the authority to monitor County Contractor operations and to report any problems back to the DCOT Supervisor. Roving Monitors may request contract compliance, but do not have the authority to otherwise direct Contractor operations or to modify the contract scope of work.

Roving Monitors will monitor debris operations on a full-time basis and make unannounced visits to all loading and disposal sites within their assigned debris management zone(s). In addition, Roving Monitors shall do the following:

- Assist in the measuring of all Contractor trucks and trailer with the Contractors representative. Take photographs of all trucks and trailers.
- Obtain and become familiar with all debris removal and disposal contracts for which they are providing oversight.
- Observe all phases of debris management operation, to include loading sites, TDSRs, and final landfill sites.
- Prepare a daily written report of all Contractor activities observed to include photographs.
- Periodically monitor each TDSR to ensure that operations are being followed as specified in the applicable Debris Removal and Disposal Contract with respect to local and Federal regulations and the Debris Removal and Disposal Monitoring Plan (Appendix F), as well as the TDSR Baseline Checklist (Appendix G).

Roving Monitors will also submit daily written reports to the DCOT supervisor outlining their observations with respect to the following:

- Is the Contractor using the site properly with respect to layout and environmental considerations?
- Has the Contractor established lined temporary storage areas for ash, household hazardous wastes, and other materials that can contaminate soil and groundwater?
- Has the Contractor established environmental controls in equipment staging areas, fueling, and equipment repair areas to prevent and mitigate spills of petroleum products and hydraulic fluids?
- Are plastic liners in place under stationary equipment such as generators and mobile lighting plants?
- Has the Contractor established appropriate rodent control measures?
- Are burn sites constructed and operating in accordance with the plans and requirements in Appendix G?



- Has the Contractor established procedures to mitigate smoke, dust, noise, and traffic flow?

Roving Monitors' reports will also include written observations at loading sites, disposal sites, and the locations of any illegal dumping sites. If the monitor sees a problem they are to notify the DMC immediately and take photographs of the site.

**b. Load Site Monitors**

Load Site Monitors will be stationed at designated Contractor debris loading sites. The Load Site Monitors' primary function is to verify that debris being picked up is eligible under the terms of the contract.

Load Site Monitor positions will be staffed by temporary local hires or by third party contract personnel and supplemented by other County department personnel depending on the magnitude of the debris-generating event. Load Site Monitors will be assigned to each Contractor's debris loading site within designated Debris Control Zones, and will initiate and sign load tickets as verification that the debris being picked up is eligible.

**c. Disposal Site Monitors**

Disposal Site Monitors will be located at both TDSRs and landfill sites as identified by the DMC through out the recovery process. The Disposal Site Monitors' primary function is to ensure that accurate load quantities are being properly recorded on pre-printed load tickets (see Figure 2).

At each TDSR and landfill disposal site, the Contractor will be required to construct and maintain a monitoring station tower for use by the Disposal Site Monitor. The Contractor will construct the monitoring station towers of pressure treated wood with a floor elevation that affords the Disposal Site Monitor a complete view of the load bed of each piece of equipment being utilized to haul debris. The Contractor will also provide each site with chairs, table, and portable sanitary facilities.

The Disposal Site Monitor will estimate the quantity (in cubic yards) of debris in each truck/trailer entering the Contractor's selected TDSR or landfill disposal site and will record the estimated quantity on pre-numbered debris load tickets. The Contractor will only be paid based on the number of cubic yards of material deposited at the disposal site as recorded on debris load tickets. This is to be done on all types of debris removal contracts and force account vehicles.

Disposal Site Monitors will be staffed by temporary local hires or by third party contract personnel depending on the magnitude of the debris-generating event. The Disposal Site Monitors will be stationed at all TDSRs and landfill disposal sites for the purpose of verifying the quantity of material being hauled by the contractor. The Disposal Site Monitor will be responsible for closing out and signing each load ticket and returning a copy to the DCOT Supervisor at the end of each day.

## **2. Household Hazardous Waste Drop-Off Locations**

Mr. Rickey Freeman, County Emergency Management Coordinator, (252) 794-5302, will identify one or more Household Hazardous Waste (HHW) drop-off locations within each of the Debris Control Zones. Contractors will be encouraged to separate HHW at the curb and not haul it to a TDSR or landfill. Residents will be encouraged to separate and transport HHW to pre-identified drop-off points. The County Emergency Management Coordinator will coordinate with local Environmental Protection Agency (USEPA) officials for the collection of eligible industrial or commercial hazardous waste resulting from the disaster.

## **3. Utility Company Property**

Roanoke Electric Cooperative, Marshall Cherry, (252) 539-2236, Dominion Power, Michael A. Thompson, (919) 418-1642 and other utility crews will remove and dispose of all utility related debris such as, power transformers, utility poles, cable, and other utility company material.

## **4. Contractor Debris Removal and Disposal Operations**

The County recognizes that disasters may generate debris of types and quantities that exceed the County's capabilities. The County does not own equipment nor have personnel for debris removal activities. Thus, the County will implement a pre-positioned contracting process to have Contractors on stand-by to respond within a pre-determined period to assist in requested aspects of the debris operation.

The Debris Manager or his or her authorized representative will contact the firm(s) holding pre-positioned debris removal and disposal contract(s) and advise them of impending conditions. The scope of the pre-positioned contract provides for the removal and lawful disposal of all natural disaster-generated debris, excepting household, industrial, or commercial hazardous waste. Debris removal will be limited to County-maintained streets, roads, and other public rights-of-way based on the extent of the disaster. Debris removal will be limited to disaster related material placed at or immediately adjacent to the edge of the rights-of-way by residents within designated Debris Control Zones.

Each Contractor, upon receipt of notice to proceed, will mobilize such personnel and equipment as necessary to conduct the debris removal and disposal operations detailed in the Contractor's General Operations Plan (required by the Debris Removal and Disposal Contract). All Contractor operations will be subject to review by the Debris Manager.

The Contractor will make multiple, scheduled passes of each site, location, or area impacted by the disaster according to assigned Debris Control Zones and as directed by the Debris Manager. Schedules will be provided to the DMC PIO for publication and notification by the news media.

The load ticket, coupled with inspections by Roving, Load Site, and Disposal Site Monitors, will be the primary mechanism for monitoring Contractor performance and tracking quantities for pay purposes.

Federal support will be requested if the incident is beyond the County's capability and its Contractors. The USACE will be tasked by FEMA through the mission assignment process to provide the necessary support to the County.

The USACE will respond by providing trained and experienced Debris PRTs that are responsible for managing the debris mission from removal to final disposal. These tasks are accomplished utilizing pre-awarded contracts to private industry contractors experienced in debris removal operations. The USACE also has Debris Subject Matter Experts available to provide advice and support to the Contractor and the DMC staff.

## **5. Temporary Debris Storage and Reduction Sites**

The County recognizes the economic benefits of debris volume reduction, and will realize this benefit through the use of local TDSRs for processing of clean woody debris. The County will identify pre-designated vegetative TDSRs for the sole purpose of temporarily storing and reducing clean woody debris through either burning or grinding. A listing of TDSRs is located in Appendix E. This listing will be modified as further sites are identified.

Contractors will operate the TDSRs made available by the County. Each Contractor will be responsible for all site setup, site operations, rodent control, closeout, and remediation costs at each of its sites. The Contractor is also responsible for the lawful disposal of all by-products of debris reduction that may be generated.

The Contractor will restore the TDSR sites as close to the original condition as is practical so that it does not impair future land uses. All sites are to be restored to the satisfaction of the Debris Manager with the intent of maintaining the utility of each site.

Contractors are also expected to haul and manage construction and demolition (C&D) waste. C&D materials will be hauled to debris management sites for temporary sorting and storage until final disposal arrangements are made.

It is important to note that all material deposited at TDSRs will eventually be taken to a properly permitted landfill for final disposal. Under certain circumstances, the Debris Manager may direct contractors to bypass C&D TDSRs and approve the hauling of mixed C&D debris directly to a properly permitted landfill for disposal.

While residents will be encouraged to segregate HHW at curbside, small amounts of HHW may be mixed in with material deposited at the TDSRs. Therefore, the Contractor must be prepared to place any HHW in a separate enclosed and lined area for temporary storage, and must report any accumulation of HHW at the TDSRs to the DCOT staff. The DCOT staff will notify the Debris Manager, who will coordinate for removal and disposal.

## **6. Load Ticket Disposition**

The Load Ticket will be a 5-part pre-printed form (see Figure 2).

At initiation of each load, the Load Site Monitor will fill out all items in Section 1 of the Load Ticket and will retain Part 1 (White Copy). The remaining copies will be given to the driver and carried with the load to the disposal site.

Upon arrival at the disposal site, the driver will give all four copies to the Disposal Site Monitor. The Disposal Site Monitor will complete Section 2 of the Load Ticket and retain Part 2 (Green). Parts 3, 4, and 5 will be given either to the contractor's on-site representative or to the truck driver for subsequent distribution.

All trucks will be measured by the Contractor and DMC staff before the operation begins and periodically rechecked throughout the operation.

The Contractor will be paid based on the number of cubic yards of eligible debris hauled per truckload. Payment for hauling debris will only be approved upon presentation of Part 4 (Pink) of the Load Ticket with the Contractor's invoice.

Load tickets will also be completed and retained for County force account vehicles as a primary mechanism for tracking debris quantities deposited at TDSRs.

#### **7. Temporary Debris Storage and Reduction Site Setup and Closeout Procedures**

The Contractor will be responsible for preparing and closing out a TDSR site in accordance with specification in the Debris Removal and Disposal Contract and guidance contained in Appendix I.

#### **8. Private Property Debris Disposal**

Dangerous structures are the responsibility of the owner to demolish in order to protect the health and safety of adjacent residents. However, experience has shown that unsafe structures will often remain in place due to lack of insurance or absentee landlords. Care must be exercised to ensure that the County properly identifies structures listed for demolition.

The Debris Manager will coordinate with the County and State and FEMA Public Assistance Officers regarding:

- Demolition of private structures.
- Removing debris from private property.
- Local law and/or code enforcement requirement.
- Historic and archaeological sites restrictions.
- Qualified environmental Contractors to remove hazardous materials such as asbestos and lead-based paint.
- Execution of Right-of Entry/Hold Harmless agreements with landowners. A sample Right-of-Entry/Hold Harmless agreement is shown in Appendix I.

## **VI. WEAPONS OF MASS DESTRUCTION/TERRORISM EVENT**

The handling and disposal of debris generated from a Weapons of Mass Destruction (WMD) or terrorism event will exceed the capabilities of the County and will require immediate Federal assistance.

Normally, a WMD or terrorism event will, by its very nature, require all available assets and involve many more Federal and adjacent State and County departments and agencies. The nature of the waste stream as well as whether or not the debris is contaminated will dictate the necessary cleanup and disposal actions. Debris handling considerations that are unique to this type of event include:

- Much of the affected area will likely be a crime scene. Therefore, debris may be directed to a controlled debris management site by State and/or Federal law enforcement officials for further analysis.
- The debris may be contaminated by chemical, biological, or radiological contaminants. If so, the debris will have to be stabilized, neutralized, containerized, etc. before disposal. In such an occurrence, the operations may be under the supervision and direction of a Federal agency and one or more specialty Contractors retained by that agency.
- The presence of contamination will influence the need for pretreatment (decontamination), packaging and transportation.
- The type of contaminant will dictate the required capabilities of the personnel working with the debris. Certain contaminants may preclude deployment of resources that are not properly trained or equipped.

The Debris Manager will continue to be the single point of contact for all debris removal and disposal issues within the County. Coordination will be exercised through the USACE ESF #3 Branch located at the designated FEMA Disaster Field Office.

In this type of event, the County will become a supporting element to the U.S. Army Corps of Engineers, and will operate as defined in the USACE WMD Emergency Response Plan (to be published).

## **VII. ADMINISTRATION AND LOGISTICS**

All County departments and agencies will maintain records of personnel, equipment, load tickets, and material resources used to comply with this Plan. Such documentation will then be used to support reimbursement from any Federal assistance that may be requested or required.

All County departments and agencies supporting debris operations will ensure 24-hour staffing capability during implementation of this plan, if the emergency or disaster requires or as directed by the Debris Manager.

All County departments are responsible for the annual review of this Plan in conjunction with the annual update to the County EOP. It will be the responsibility of each tasked department and agency to update its respective portion of the Plan and ensure any limitations and shortfalls are identified and documented, and work-around procedures developed, if necessary.

The review will consider such items as:

- Changes in Mission
- Changes in Concept of Operations
- Changes in Organization
- Changes in Responsibility
- Changes in desired contracts
- Changes in pre-Positioned contracts
- Changes in priorities

This Plan also may be updated as necessary to ensure a coordinated response as other Debris Management Plans are developed. Surrounding cities may also develop Debris Management Plans that should be coordinated with the County's Plan and other plans. This coordination is especially important with respect to allocation of resources such as TDSRs and disposal facilities.