

## REQUEST FOR BOARD ACTION

ITEM NO. 22.

**DATE OF MEETING:** April 5, 2010

**REQUESTED BY:** Charles R. "Tom" Collins, Emergency Management Director

**SHORT TITLE:** Resolution Adopting the Debris Management Plan for Pender County, and Approving One-Year Extensions of Present Debris Management Contracts with DRC Emergency Services, LLC and CrowderGulf

**BACKGROUND:** The County's Debris Management Plan was prepared utilizing the current Emergency Operations Plan, Hazard Mitigation Plan, Department Operational Procedures, Debris Contracts, and other documents incorporated to address the FEMA Public Assistance Pilot Program for Debris Management Planning. On January 29, 2010 the Debris Plan was finalized by Johnson Environmental & Disaster Consulting Services.

The two Debris Management contracts will expire June 30, 2010. Based on the cost and time to develop a new Request for Proposal, the two debris contractors will agree to extend the current contracts at the same terms which will remain in effect for one year, expiring June 30, 2011.

**SPECIFIC ACTION REQUESTED:** To consider a resolution to adopt the Debris Management Plan for Pender County, and approving a one-year extension of the present contracts with DRC Emergency Services, LLC and CrowderGulf.

**COUNTY MANAGER'S RECOMMENDATION**

Respectfully recommend approval.

MB  
Initial

**RESOLUTION**

**NOW, THEREFORE BE IT RESOLVED** by the Pender County Board of Commissioners that:

the Pender County Debris Management Plan is hereby adopted; and

**BE IT FURTHER RESOLVED** that

debris site management and disposal contracts with DRC Emergency Services, LLC and CrowderGulf are hereby extended for one year subject to the existing terms. The Chairman/ County Manager is authorized to execute any/all documents necessary to implement this resolution.

**AMENDMENTS:**

MOVED \_\_\_\_\_ SECONDED \_\_\_\_\_

APPROVED \_\_\_\_\_ DENIED \_\_\_\_\_ UNANIMOUS \_\_\_\_\_

YEA VOTES: Tate \_\_\_ Blanchard \_\_\_ Brown \_\_\_ Rivenbark \_\_\_ Williams \_\_\_

\_\_\_\_\_  
Jimmy T. Tate, Chairman 4/5/10  
Date

\_\_\_\_\_  
ATTEST 4/5/10  
Date



**DRC Emergency Services, LLC**  
740 Museum Drive • Mobile, Alabama 36608  
1-888-721-4372 • 1-251-343-3581 • FAX 1-251-343-5554

March 5, 2010

Mr. Tom Collins  
605 E Fremont Street  
Burgaw, NC 28425

Via Email: [tcollins@pendercountync.gov](mailto:tcollins@pendercountync.gov)  
Phone: 910.259.1210

Re: Contract Extension between DRC Emergency Services and Pender County, NC

Dear Mr. Collins:

The Debris Site Management and Disposal Contract currently in place is due to expire June 30, 2010. DRC Emergency Services, LLC, would like to take this opportunity to offer Pender County an extension to the contract between DRC Emergency Services and Pender County, dated July 1, 2009, for a period of one (1) year. The pricing, terms and conditions will remain in effect for the duration of this contract expiring June 30, 2011.

If this offer of renewal is acceptable to you, please execute below and fax or email it to my attention to (251) 343.5554 or ([acallaway@drcusa.com](mailto:acallaway@drcusa.com)). Also, if you have any questions, please feel free to contact me. I look forward to working with you and the citizens of Pender County.

Sincerely,

April Callaway  
Contracts Manager  
Cell: 251.423.1158

Agreed and Accepted By:  
Pender County, North Carolina

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

# CrowderGulf

Disaster Recovery and Debris Management

5435 Business Parkway  
Theodore, Alabama 36582

Office: (800) 992-6207  
Fax: (251) 459-7433

**March 5, 2010**

Charles R. "Tom" Collins  
Emergency Management Director  
Pender County, NC  
Law Enforcement Center  
605 E. Fremont St.  
P.O. Box 28  
Burgaw, NC 28425

[tcollins@pendercountync.gov](mailto:tcollins@pendercountync.gov)

**Re: Debris Site Management and Disposal Contract**

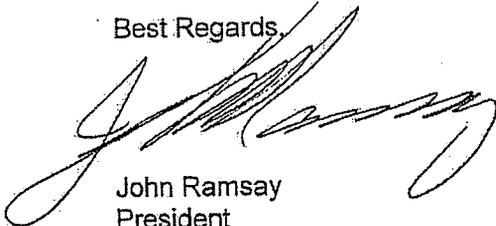
Dear Mr. Collins,

CrowderGulf has been providing Pender County, NC "Debris Site Management and Disposal Services" per the contract originally executed on 07.20.09. The terms of the contract are for a one year period. The contract is currently in its first renewal period which will expire on 06.30.10.

If Pender County is in agreement to extend the existing contract, please sign the renewal acceptance below and return to CrowderGulf. Upon receipt of this acknowledgement, the contract will continue with the same terms and conditions and will be extended until its expiration on 06.30.11.

We appreciate the opportunity to renew this contract and stand ready to respond immediately in the event our services are needed by the community of Pender County. If you have any questions or if we can be of any further assistance please do not hesitate to contact me or Ashley Ramsay-Naile at 800.992.6207 or by e-mail [jramsay@crowdergulf.com](mailto:jramsay@crowdergulf.com).

Best Regards,



John Ramsay  
President

**RENEWAL ACCEPTANCE - Pender County, NC**

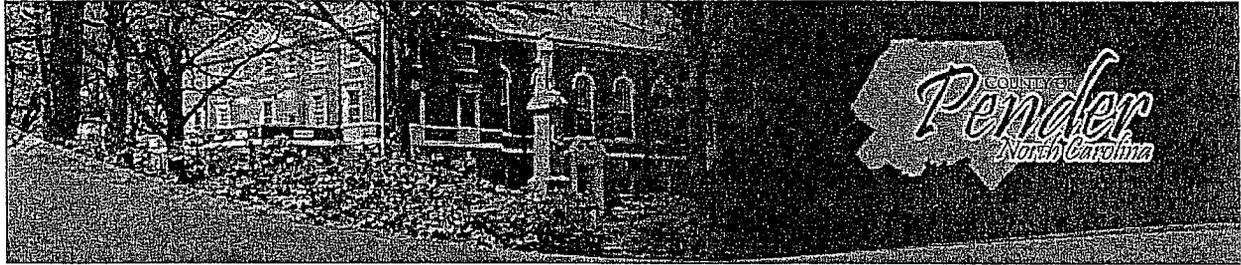
\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Name/Title*

\_\_\_\_\_  
*Date*



## DEBRIS MANAGEMENT PLAN



### **Mission:**

**Our mission is to execute a response to natural and manmade disasters that reduces loss of human life, property and quality of life.**



**Objective:**

The following document has been prepared utilizing current Emergency Operations Plan, Hazard Mitigation Plan, Department Operations Procedures, Debris Contracts and other documents incorporated to address the FEMA Public Assistance Pilot Program for Debris Management Planning.



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### List of Acronyms

<u>Acronym</u>	<u>Expansion</u>
AIWW	Atlantic Intracoastal Waterway
CAMA	Coastal Area Management Act
C&D	Construction & Demolition Debris
CFR	Code of Federal Regulations
DMS	Debris Management Site(s)
EM	Emergency Management
EOC	Emergency Operation Center
EOP	Emergency Operation Plan
EPIC	Emergency Public Information Center
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Federal Insurance Rate Maps
GIS	Geographical Information System
HAZMAT	Hazardous Materials
HHW	Household Hazardous Waste
HMGB	Hazard Mitigation Plan
IC	Incident Commander
ICS	Incident Command System
IEMS	Integrated Emergency Management System
JENV	Johnson Environmental & Disaster Consulting Services
MOU	Memorandum of Understanding
MSW	Municipal Solid Waste
NCEM	North Carolina Division of Emergency Management
NCDOT	North Carolina Department of Transportation
NCGS	North Carolina General Statute
NIMS	National Incident Management System
NRCS	National Resource Conservation Service
OSHA	Occupational Safety and Health Act
PA	Public Assistance
PDA	Preliminary Damage Assessment
PIO	Public Information Office
PPE	Personal Protective Equipment
PW	Project Worksheet
ROW	Rights-of Way
SOG	Standard Operating Guidelines



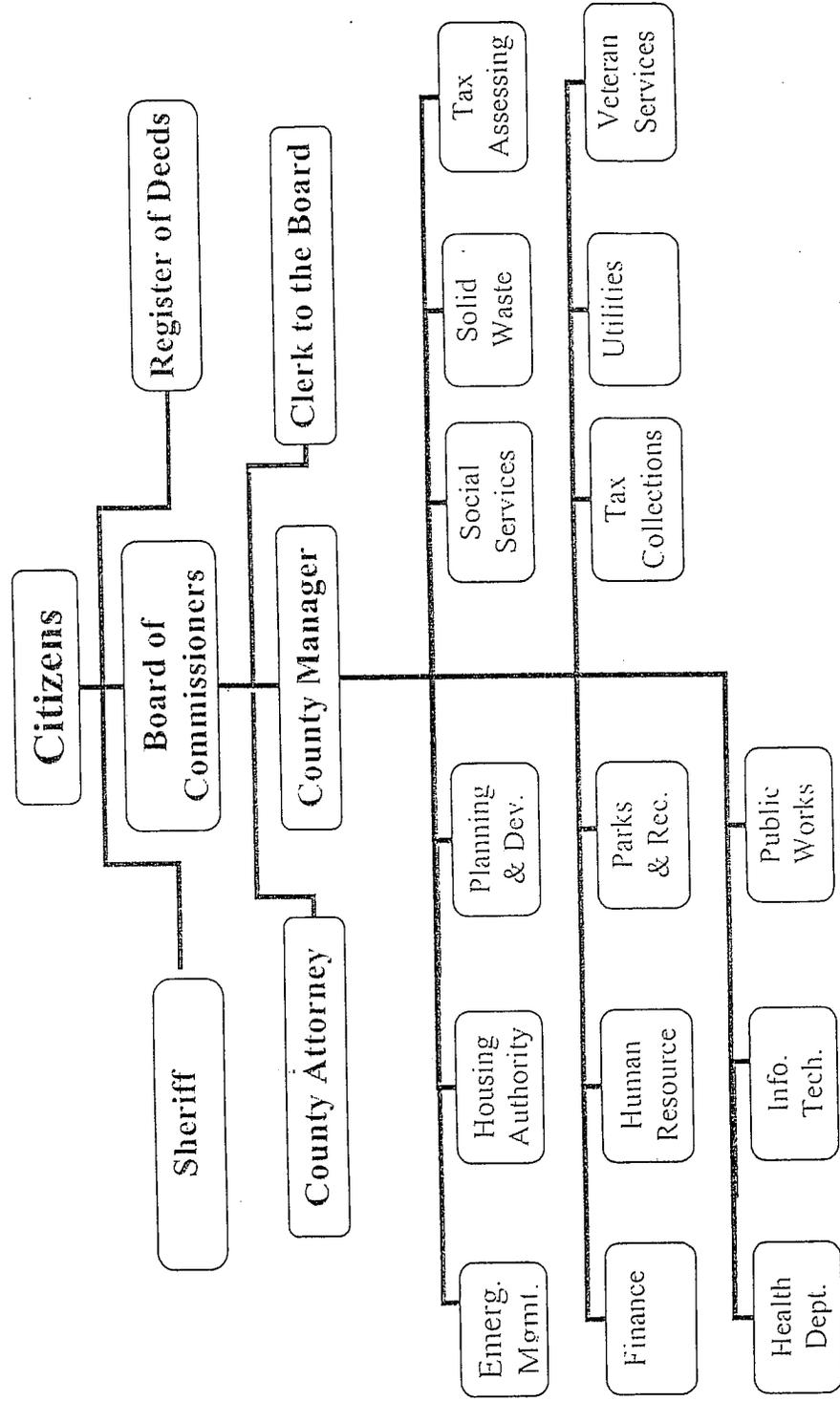
List of Acronyms (continued)

<u>Acronym</u>	<u>Expansion</u>
SOP	Standard Operating Procedures
TDMS	Temporary Debris Management Site(s)
TDSR	Temporary Debris Storage & Reduction
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
VFD	Volunteer Fire Department
VH	Velocity Hazard



## Staff Roles and Responsibilities

A. Staffing Organizational Chart –





## B. Roles and Responsibilities

### Staffing Assignments and Duties

#### Preface

Pender County is located in the coastal plains of southeastern North Carolina. The county has approximately 30 miles of coastline as its southeastern border. The county is subject to multiple disasters, but in particular the county's proximity to the coast makes us particularly at risk to the damages of hurricanes and tropical storms. Pender County (County) prepares, responds and recovers from disasters with coordination from elected officials, county staff, state agencies, municipal representatives, volunteers, partnership groups and contractors. Staff roles for overall disaster activities can be found in the Pender County Hazard Mitigation Plan (HMGP). This plan defines available resources, specific responsibilities, standard operating procedures, and other major factors that will facilitate effective mitigation from the effects of destructive weather or man-made disasters. Specific roles relating to operating procedures, with specific insight into debris management appear below.

#### 1. Administration

Board of Commissioners – The Board of Commissioners will give appropriate authorization as necessary that may be relative to an event; for example: Declare a State of Emergency for Pender County (See General Attachment 1) and assume direction and control of emergency operations in cooperation with other members of the Control Group, to include: Chairman of the Board of Commissioners, County Manager and Emergency Management Director, and others as requested by the County Commission.

When needed, the Pender County Commissioners can declare a "State of Emergency" as directed by State Statute 166A-8, to assist the local emergency response agencies in carrying out their duties and for the protection of the citizens and property within the disaster area. Municipalities can independently declare a "State of Emergency" in the event of a disaster or, by resolution, can sign off on a county "State of Emergency" if one is declared.

Chairman and Board of Commissioners – As chief elected official, the Chairman will have a designated seat at the county EOC during a countywide emergency. Assume leadership of the assembled elected officials in the EOC. The Chairperson or commissioner on shift will give appropriate authorization as necessary that may be relative to an event, for example; make decisions regarding warnings, protection actions, possible evacuations, and allocation of county resources for the protection of citizens and property, declaration of emergency, mutual aid requests, and authorization to the County Manager to enter contractual agreements, etc. The Board of Commissioners will order evacuations of all or parts of the county, order curfew, restrict entry into Pender County, ensure the line of succession for county departments and agencies, coordinate emergency response activities with Chairpersons of adjoining jurisdictions



and Mayors in Pender County, authorization to the County Manager to enter contractual agreements, etc., and direct county personnel to return to work following a disaster or emergency. (See General Attachment 2 for specific duties)

County Manager / Administration – The County Manager through authority of the County Board of Commissioners will coordinate with the State of North Carolina, the municipalities of Pender County, operations teams, county staffing, information coordination teams and other operations centers. The office of the County Manager notifies debris contractors and debris monitoring contractor with “Notice to Proceed” orders (see General Attachment 3 for specific duties for the County Manager).

## 2. Contracting and Procurement

The Department of Emergency Management budgets and coordinates with the disaster management consultant for preparation of debris related contracts and is intricately involved in determining Scope of Services for all debris related operations.

During April and May of each year the Emergency Management Director assists the consultant with contract review, legal review, procurement and solicitation. The Emergency Management Director forwards recommendations for selection of the Debris Site Management and Disposal Contract contracts currently completed as part of the Debris Readiness and Preparedness Program. The Emergency Management Director is also responsible for all contract related signatures, and documentation requirements, i.e. Final Executed Contracts, Performance and Payment Bonds, Certificate of Insurance, etc. (see General Attachment 4 for specific duties for the Emergency Management Coordinator).

## 3. Legal

The County Attorney is responsible for document review, contractual interpretation and obligations, and recommendation of contract language. The County Attorney represents the County’s interests regarding any debris contracts or Memorandum of Agreement(s) and provides legal guidance during planning, response and recovery.

## 4. Operations

Public Works / Public Utilities - Following the debris generating event the Departments of Public Works and Public Utilities serve as the primary county departments conducting and/or supplementing the Phase I Debris Clearance Operations Teams (beginning with primary route and critical facilities assignments). (See General Attachment 5 for specific duties)



## 5. Planning and Development

Planning and Development – staff EOC, functions as lead department for volunteer training and coordination, conducts safety sweep and damage assessment, downed trees, damaged structures and assessment of critical facilities following debris generating events. Planning and Development prepares Preliminary Damage Assessment (PDA) reports for Pender County Emergency Management (See General Attachment 6 for specific duties).

### C. Emergency Communications Plan

During and directly following an emergency, the Emergency Operations Center (EOC) is the central location for all information dispersed to the media during a major countywide emergency. The EOC will operate from the Pender County Law Enforcement Center and consists of representatives from the county, municipal governments, contractors, and other agencies as needed.

The role of the EOC is to give citizens a specific number to call for information and to give the media a central location to receive all official information. We publish the Emergency Operations Center (EOC) phone number for citizens to call (910) 259-1210, which also serves as the Emergency Management Directors regular number. All Press Releases/Briefings and media interviews are conducted from the EOC. Utilizing the EOC enables the county to focus on the emergency, thereby minimizing distractions due to general inquiries made by citizens or interruptions from the media. The centralization of the EOC is also a quality assurance mechanism to ensure that the media and citizens do not receive conflicting or inaccurate information. This can occur during an emergency if several locations and different people are trying to respond to the same questions without having compiled all of the relevant information. Therefore, it is necessary to create a structure for the flow of Pender County's information to and from its central location. (see General Attachment 7 for Communication Flow Chart).

County staff in the EOC will answer incoming inquiries. Should detained information be required, the EOC will call the respective representative of the EOC Information Team, and obtain the information needed. This information is relayed to the caller, or the call transferred to the respective EOC representative for specific assistance.

The County provides a basic guide of emergency information to all representatives in the EOC. If a press release is required, the designated County PIO (Public Information Office) representative should prepare and send it to the EOC representative who will then issue the official press release. The PIO representative approves all County press releases and all joint Municipal/County press releases. County representatives or elected officials will conduct interviews. The PIO representative will call the County Manager if someone other than the PIO representative is required for the interview. (see General Attachment 8 for PIO specific duties).

Following the debris generating event and during the recovery phase the PIO will work with the Director of Emergency Management regarding debris related questions. In coordination with the



Department of Emergency Management, the PIO will issue press releases to citizens regarding proper debris disposal practices, what type of debris will be accepted and proper sorting of debris at the Debris Management Sites (DMS), debris disposal sites pre-qualified for use by citizens, etc. The PIO has prepared pre-scripted communication releases to be released to the media following debris generating events, additionally several sample Press Releases are included under General Attachment 9. Following the initial recovery phase communications regarding debris removal and related questions from citizens will be directed to the Department of Emergency Management.

The Director of Emergency Management will communicate with the Debris Project Management and Monitoring Contractor to investigate troubles regarding citizen complaints. If a field determination is made that immediate correction is not possible, and/or additional investigation is warranted, the Director of Emergency Management will also evaluate. If suspected illegal dumping or illegal practices are being conducted the Pender County Sheriff's Office will be requested to investigate.

It is the policy of Pender County to open the Emergency Operations Center for any storm or emergency situation that may arise. The County Manager will determine how much of the EOC should be activated.

During and directly following an emergency, the EOC is the central location for all information dispersed to County Staff, Municipalities, residents, and the media during a major county wide emergency (see General Attachment 10 for EOC Operation Plan). The EOC consists of representatives from elected officials, County staff, and staff representatives from the Municipalities, utility contractors and select County volunteers. One role of the EOC is to give citizens a specific number to call for information and to give the media a central location to receive all official information. All Press Releases /Briefings and media interviews are conducted from the EOC. Utilizing the EOC enables the County to focus on the emergency, thereby minimizing distractions due to general inquiries made by citizens or interruptions from the media. The centralization of the EOC is also a quality assurance mechanism to ensure that the media and citizens do not receive conflicting or inaccurate information. This can occur during an emergency if several locations and different people are trying to respond to the same questions without having compiled all of the relevant information. Therefore, it is necessary to create a structure for the flow of Pender County's information to and from its central location.

County and Volunteer staff in the EOC will answer incoming inquiries. Should detained information be required, the EOC will call the respective Incident Commander or representative, and obtain the information needed. This information is relayed to the caller, or the call transferred to the respective EOC representative for specific assistance. One staff person on the County EOC Information Team, with a dedicated phone line, should be assigned as the contact person to answer questions from the public and media. A record and log of all contacts should be provided to the EOC representatives daily to discuss.

During and directly following a disaster citizen calls are directed to the EOC (Emergency Operations Center). Following closure of the EOC communications from citizens regarding



debris related questions will be directed to the Office of Emergency Management (EM). The EM Director will communicate with the Debris Project Management and Monitoring Contractor to investigate certain troubles regarding citizen complaints and inquiries. If a field determination is made that immediate correction is not possible, and/or additional investigation is warranted, the EM Director will also evaluate. If suspected illegal dumping or illegal practices are being conducted the Pender County Sheriff Department will be requested to investigate.

#### D. Health and Safety Plan and Procedure

NC Department of Transportation, Fire & Rescue Personnel, Public Works and Public Utility Departments will be the primary providers of Phase I – Debris Clearing Operations. If the debris generating event is deemed beyond the County's work force immediate capacity, the County Manager may elect to request the assistance of Phase I debris clearance contractors. The Phase I – Debris Clearing contractor will be responsible for Health and Safety and Environmental Procedures associated with their response.

All power and utilities in Pender County are distributed above and underground by Four County EMC, Progress Energy and Jones-Onslow County EMC; danger of live power line exposure may exist from uprooted trees and flood recession. All teams, assessment and clearance will be vigilant and request assistance from utility representatives as appropriate to ensure that power lines do not pose a hazard to emergency work crews. (General Attachment 11, Electric Utility Company service area map)

During the debris clearance and removal process, the Emergency Operations Coordinator will be responsible for coordinating with the electric utility companies (Four County EMC, Progress Energy and Jones-Onslow County EMC) and other utility companies (telephone and cable TV) as appropriate to ensure that power lines do not pose a hazard to emergency work crews.

County personnel supplementing NC DOT efforts during these operations are Fire and Rescue personnel, and Public Works / Utilities personnel which are trained in use of equipment and appropriate personal protective equipment (PPE) assigned as part of recommended crew supplies and equipment, as noted in General Attachment 12.

NC DOT will be the responsible party in conducting Phase II – curbside debris removal activities for unincorporated Pender County on state maintained roads. Therefore NC DOT and their contractors will be responsible for all Health and Safety Aspects involved in removal activities. Pender County will assist county residents, municipalities and NC DOT in obtaining and operating TDMS (Temporary Debris Management Sites). TDMS facilities have been preapproved for temporary debris storage, staging, separation and reduction for certain disaster generated debris streams. The county will utilize the pre-selected Debris Site Management and Disposal Contractor (*DRC Emergency Services, LLC*) for this function as the primary contractor for *year ending June 30, 2010*. The selected contractor will be responsible for maintaining Health and Safety during these operations. For Debris Site Management and Disposal Contractor operations, *DRC* has submitted their Health and Safety Plan (see General Attachment



13). *DRC* will be responsible for delivery of C&D debris to the contracted landfill, and also will be responsible for disposal of vegetative debris by requirements of the contract. The contract allows for vegetative disposal by either air curtain incineration or by grinding vegetative debris. The facility has been inspected by NC DENR, Division of Waste Management Section as an Emergency Debris Management Site, and the site has been approved as a "TDMS" see attached NC DENR "Notification letter" [\(Debris Management Site Attachment 1\)](#).

#### E. Training schedule

Annually, prior to the most active period of the Atlantic Hurricane Season (typically in July / August) the Planning and Development Director meets with the teams responsible for Damage Assessment and Debris Clearance Teams to incorporate responsibilities, training, and objectives. During this training meeting Debris Assessment and Debris Clearance assignments are also set. A complete training module is under development for specific debris assessment and clearance activities, but the primary objective for each assessment team is to:

- First, assess access to critical facilities and their functionality of use regarding debris obstruction, as needed for rescue/extrication for emergency services
- Second, assess primary routes clearance to each of these critical facilities, with the initial primary goal of single lane clearance.
- Third, determine secondary route clearance and then all roads in the County.

Pender County also maintains a training program under the National Incident Management System (NIMS) and requires appropriate training for Incident Command System levels. Pender County by act of the board maintains NIMS compliance. Responder level employees that will be involved in debris clearing and removal operations have been certified to NIMMS 700 and ICS 100.



## II. Situation and Assumptions



Pender County is exposed to many hazards, all of which have the potential to disrupt the community, cause damage, and create casualties. Potential hazards are:

- Hurricanes, Tropical Storms and Nor'easters
  - Major fires / Wildfire and Forest fires
  - Tornadoes and Thunderstorms
  - Floods
  - Hazardous materials (stationary & conveyed on transportation systems)
  - Droughts and extreme heat
  - Bridge damage / failures
- 
- Civil Disorders
  - National security emergencies
  - Power failures
  - Earthquakes, Sinkholes and Landslides
  - Aircraft accidents
  - Acts of Terrorism
  - Erosion
  - Tsunami
  - Winter storms and freezes

### A. Design Disaster Event

Pender County, through the use of the current Debris Management Plan, is anticipated to be effective and reasonably prepared for response and recovery operations through a Category 2/3 Hurricane. Pender County has experienced a number of events in the past several years; see **Figure 1** for Disaster Experience since 1996. **Figure 1** includes the name of storm, date of landfall, intensity level, and debris activation operation status.

**Figure 1, Disaster Experience, since 1996**

<u>Tropical Storm Name</u>	<u>Month &amp; Year</u>	<u>Landfall Intensity (Saffir-Simpson Scale)</u>	<u>Activation of Debris Operations</u>
Hurricane Bertha	July 12, 1996	Category 2	Vegetative & C&D
Hurricane Fran	September 6, 1996	Category 3	Vegetative, C&D and Sand
Hurricane Bonnie	August 27, 1998	Category 2/3	Vegetative
Hurricane Dennis	September 4, 1999	Category 1	Vegetative
Hurricane Floyd	September 16, 1999	Category 3	Vegetative, C&D and Sand
Hurricane Irene	September 18, 1999	Category 1	Vegetative
Tropical Storm Irene	June 14, 2001	Trop. Storm	no activation
Tropical Storm Kyle	October 11, 2002	Trop. Storm	no activation
Hurricane Isabel	September 18, 2003	Category 2	Vegetative
Tropical Storm Bonnie (Rocky Pt. Tornado)	August 13, 2004	Tornado (f2)	Vegetative & C&D
Hurricane Charlie	August 14, 2004	Category 1	Vegetative
Hurricane Ophelia	September 14, 2005	Category 1	Vegetative
Tropical Storm Ernesto	September 1, 2006	Trop. Storm	no activation
Tropical Storm Hanna	September 6, 2008	Trop. Storm	no activation



The pre-event contracts have not been tested beyond hurricanes of Category 2 or small Category 3 levels of intensity and debris generation. It is our opinion that events with landfall intensity of Category 4 or higher may require additional TDMS sites for staging throughout the county. Additionally, limitations on *daily volume acceptance* may occur at the Waste Industries Subtitle D Landfill. However, a recent audit of the Sampson County Subtitle D landfill confirmed their ability to increase the number of scales in operation, add tipping machines, etc. to improve flow rate. Remaining capacity, at the time of the interview was approximate 44 million cubic yards of debris. This capacity under their current acceptance rate and projections will provide landfill space for in excess of 100 years. Therefore, even though the design event for this document is limited to Category 3 intensity, C&D capacity at the contracted landfill may prove sufficient, but the need to activate additional temporary debris staging and storage may be required.

**B. Forecasted debris**

**1. Forecasted Types**

As demonstrated in **Figure 1** above, Pender County has had significant experience with activation of debris operations over the past 10 years. Below (see **Tables 1-5**) please find forecasted debris types and quantities utilizing a USACE hybrid model utilizing USACE estimation formulas and incorporating the County's historical comparisons of previous debris generation experience.

**Formula 1, USACE / Hybrid Debris Quantity Estimation Formula**

<b>Q=HCVBS</b>
----------------

Q= quantity of debris in cy	V= Vegetation characteristic
H= # of households	B=commercial/business/industrial multiplier
C= storm category	S=storm precipitation characteristic
P= population	

H= Population / 3 (3 considered average population per household)			
C = Storm Category Multiplier		V = Vegetative Cover	
<b>Category</b>	<b>Multiplier</b>	<b>Typical Cover</b>	<b>Multiplier</b>
1	2cy	Light	1.1
2	8cy	Medium	1.3
3	26cy	Heavy	1.5
4	50cy	S = Precipitation Multiplier	
5	80cy	<b>Precip. from event</b>	<b>Multiplier</b>
B = Commercial Density Multiplier		none to light	1
<b>Typical Density</b>	<b>Multiplier</b>	medium to heavy	1.3
Light	1		
Medium	1.2		
Heavy	1.3		

Table 1, Category 1, Debris Forecasting (type and volume)

<u>Cat 1, Light Precipitation</u>		<u>Cat 1, Heavy Precipitation</u>	
P	48,630	P	48,630
H	16,210	H	16,210
C	2.0	C	2.0
V	1.5	V	1.5
B	1.0	B	1.2
S	1.0	S	1.3
Q (Total Debris in CY)	48,630	Q (Total Debris in CY)	75,863
<u>Estimated Type</u>	<u>Volume (CY)</u>	<u>Estimated Type</u>	<u>Volume (CY)</u>
Vegetative	48,630	Vegetative	75,863
C&D	0	C&D	0

Table 2, Category 2, Debris Forecasting (type and volume)

<u>Cat 2, Light Precipitation</u>		<u>Cat 2, Heavy Precipitation</u>	
P	48,630	P	48,630
H	16,210	H	16,210
C	8.0	C	8.0
V	1.5	V	1.5
B	1.0	B	1.0
S	1.0	S	1.3
Q (Total Debris in CY)	194,520	Q (Total Debris in CY)	252,876
<u>Estimated Type</u>	<u>Volume (CY)</u>	<u>Estimated Type</u>	<u>Volume (CY)</u>
Vegetative	136,164	Vegetative	177,013
C&D	58,356	C&D	75,863



Table 3, Category 3, Debris Forecasting (type and volume)

<u>Cat 3, Light Precipitation</u>		<u>Cat 3, Heavy Precipitation</u>	
P	48,630	P	48,630
H	16,210	H	16,210
C	26.0	C	26.0
V	1.5	V	1.5
B	1.0	B	1.0
S	1.0	S	1.3
Q (Total Debris in CY)	632,190	Q (Total Debris in CY)	821,847
<u>Estimated Type</u>	<u>Volume (CY)</u>	<u>Estimated Type</u>	<u>Volume (CY)</u>
Vegetative	379,314	Vegetative	493,108
C&D	252,876	C&D	328,739

Table 4, Category 4, Debris Forecasting (type and volume)

<u>Cat 4, Light Precipitation</u>		<u>Cat 4, Heavy Precipitation</u>	
P	48,630	P	48,630
H	16,210	H	16,210
C	50.0	C	50.0
V	1.5	V	1.5
B	1.0	B	1.0
S	1.0	S	1.3
Q (Total Debris in CY)	1,215,750	Q (Total Debris in CY)	1,580,475
<u>Estimated Type</u>	<u>Volume (CY)</u>	<u>Estimated Type</u>	<u>Volume (CY)</u>
Vegetative	607,875	Vegetative	790,238
C&D	607,875	C&D	790,238



Table 5, Category 5, Debris Forecasting (type and volume)

<u>Cat 5, Light Precipitation</u>		<u>Cat 5, Heavy Precipitation</u>	
P	48,630	P	48,630
H	16,210	H	16,210
C	80.0	C	80.0
V	1.5	V	1.5
B	1.0	B	1.0
S	1.0	S	1.3
Q (Total Debris in CY)	1,945,200	Q (Total Debris in CY)	2,528,760
<u>Estimated Type</u>	<u>Volume (CY)</u>	<u>Estimated Type</u>	<u>Volume (CY)</u>
Vegetative	778,080	Vegetative	1,011,504
C&D	1,167,120	C&D	1,517,256

## 2. Forecasted Locations

Pender County is located in the coastal plains of southeastern North Carolina. The county has approximately 30 miles of coastline as its southeastern border. The county is subject to multiple disasters, but in particular the counties proximity to the coast makes us particularly at risk to the damages of hurricanes and tropical storms.

The County's total area of 933 square miles (2,416 km<sup>2</sup>), of which, 871 square miles (2,255 km<sup>2</sup>) of it is land and 62 square miles (160 km<sup>2</sup>) of it (6.64%) is water. 2006 Pender County had a population of 48,630, which represented an 18.4% increase in the population since 2000. Pender County has six municipalities: Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha. Total land area of the municipalities is 22.2 square miles, or less than 2.5% of the County. However, population of the municipalities is in excess of 12.5% of the total county population.

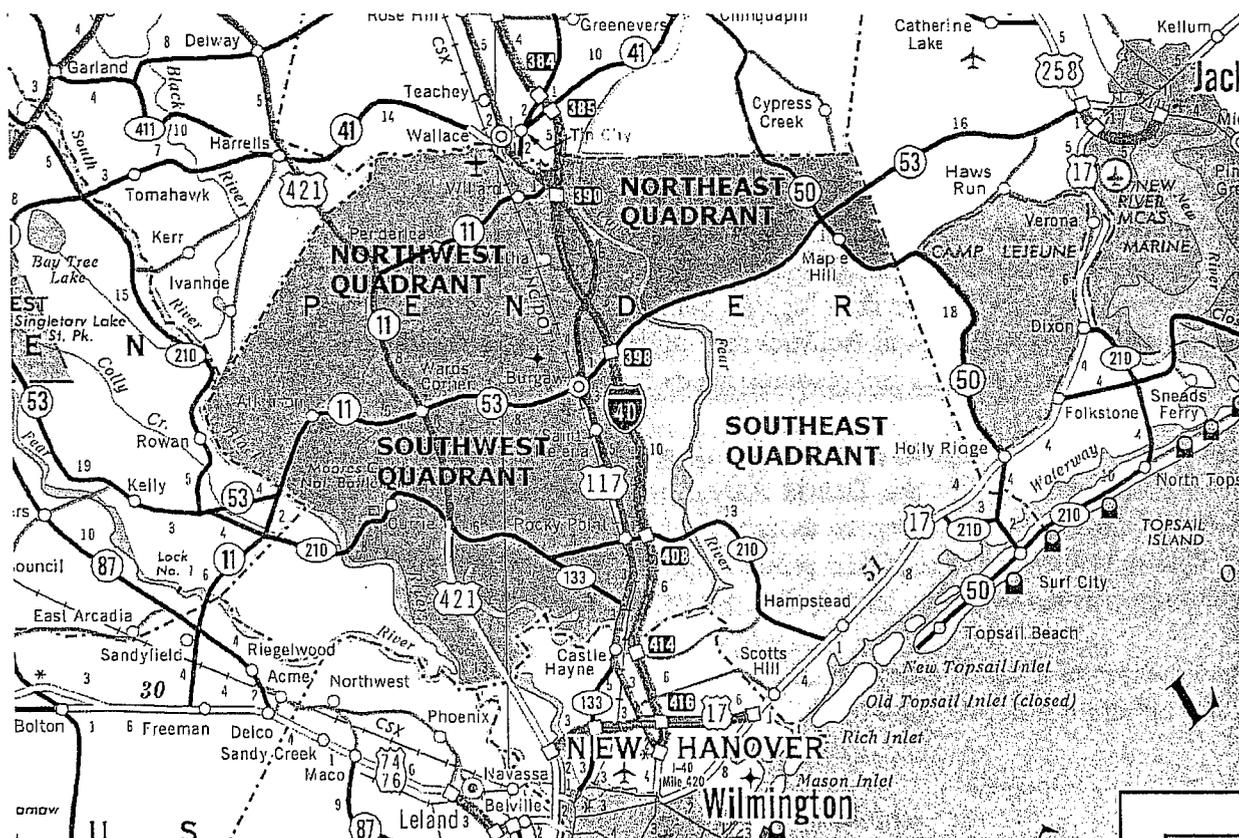
For the purpose of debris planning the county has been divided into four (4) quadrants: (see **Figure 2 Quadrant Map**). The county is divided east-west by Interstate 40, and north-south by NC-53 to NC 50 then NC 50 to the Pender / Onslow County line. Pender County has been growing steadily over the past few years with regards to total structures, mostly single family homes. Residential structures are found in all parts of the county, concentrations of high highest density are in the southeast quadrant adjoining New Hanover County and the Atlantic Ocean, an estimated 70% of the county's population is in this quadrant. Pender County and its



municipalities are not significantly dense compared with most municipalities modeled, and as a function of this overall vegetation cover is *heavy*.

Past experience may not be indicative of future events but historically, vegetative debris generation has been County wide. Sand debris over-wash is highly likely on the barrier island (Topsail Island) but the entire island within Pender County is now incorporated with each municipality managing debris recovery efforts regarding sand debris. Construction and Demolition Debris (C&D) is generated from tropical events by wind, flood and storm surge. C&D generation is probable with any storm but volume is directly proportional to wind speed and storm surge, however the residential structures found along the coastline and Atlantic Intracoastal Waterway (AIWW) will have first line vulnerability to storm surge and wave forces and along the rivers and creeks are especially subject to storm surge flood events.

Figure 2, Quadrant Map





### III. Debris Collection Plan

#### A. Priorities

##### *Phase I – Debris Clearing*



Initial evaluation of damages will be reported and forwarded to the EOC from debris assessment teams. The EOC will then assist in communicating specifics to the Debris Clearance Teams.

Immediately following a storm or when winds die down to safe levels, Debris Assessment and Debris Clearance Teams will be dispatched from the EOC. Debris Assessment Teams will be the first responders from Damage Assessment. The Debris Assessment Teams primary goal is to communicate impact assessments for all primary routes, critical facilities, and the debris clearance requirements and initial estimates of debris quantities to the Emergency Coordinator. The Emergency Coordinator then logs all communications and identifies the debris locations on the primary routes and critical facilities map at the EOC. These impact assessments will be used to prioritize impacted areas and resource needs for Debris Clearance Teams.

The EOC will then assist in communicating specifics to the Debris Clearance Teams. Based on information provided by the Debris Assessment Teams, the Emergency Coordinator will set priorities and will issue urgent assignments to 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.

The Emergency Coordinator will establish initial priorities for debris clearance based upon the following ranking as provided by the Debris Assessment Teams:

1. Extrication of people.
2. Egress for fire, police, and Emergency Operations Center personnel.
3. Ingress to critical facilities
4. Primary routes.
5. Major flood drainage ways.
6. Supply distribution points and mutual aid assembly areas.
7. Government facilities.
8. Public Safety communications towers.
9. Secondary routes.



10. Access for utility restoration.
11. Neighborhood streets.
12. Private property adversely affecting public welfare.

Countywide Phase I – Immediate Response Clearing will begin with major thoroughfares, include but are not limited to: I 40, US 17, US 117, US 421, NC 133, NC 210, NC 53, NC 50, and NC 11.

Northeast Sector primary routes include but are not limited to: I 40, NC 53, US 117, NC 50, Murraytown Rd., Croomsbridge Rd., and Old Mapel Hill Rd.

Southeast Sector primary routes include but are not limited to: I 40, Sidbury Rd., US 17, NC 210, Scotts Hill Loop Rd., Country Club Rd., Sloop Point Loop Rd., Shaw Hwy., Stag Park Rd., Whitestocking Rd., NC 53 and NC 50.

Northwest Sector primary routes include but are not limited to: I 40, NC 53, US 421, US 117, NC 11, Penderlea Hwy., Piney Woods Rd., Bell Williams Rd., Horse Branch Rd. and Anderson Rd.

Southwest Sector primary routes include but are not limited to: I 40, US 421, US 117, NC 133, NC 210, Ashton Rd., Highsmith Rd., Herrings Chapel Rd., Montague Rd., Blueberry Rd., Malpass Corner Rd., Point Caswell Rd., John Henry Store / Union Chapel Rd. and Bell Williams Rd.

- Roadway debris clearing involves the opening of arterial roads and collector streets by moving debris to the shoulders of the road. There is no attempt to physically remove or dispose of the debris (\*).

\* Certain conditions may exist where right of way is minimal or debris moved to the immediate right of way would be dangerous, visually obstructive, and a hazard to public health, etc. A determination may be made to load debris and move to the nearest right of way, or public location for future Phase II Debris Removal / Disposal efforts.

### *Phase II – Curbside Debris Removal & Disposal*

NC DOT and municipalities will be the responsible parties in conducting Phase II – curbside debris removal/collection activities. Pender County will assist county residents, municipalities and NC DOT in obtaining and operating TDMS (Temporary Debris Management Sites). The pre-selected Debris Site Management and Disposal Contractor will be requested to begin operations, within 5 days of notice to proceed. TDMS facilities have been preapproved for temporary debris storage, staging, separation and reduction for certain disaster generated debris streams.



## *Phase II – Dangerous Trees and Hanging Limbs*

NC DOT and municipalities will be the responsible parties in conducting Phase II – Dangerous Trees and Hanging Limbs removal/collection operations. Pender County will assist county residents, municipalities and NC DOT in obtaining and operating TDMS (Temporary Debris Management Sites). The pre-selected Debris Site Management and Disposal Contractor will be requested to begin operations, within 5 days of notice to proceed. TDMS facilities have been preapproved for temporary debris storage, staging, separation and reduction for certain disaster generated debris streams.

## B. Response Operations

### *Phase I – Immediate Response Clearing*

Immediately following a storm or when winds die down to safe levels, Debris Assessment Teams communicate impact assessments for all primary routes, critical facilities, and the debris clearance requirements and initial estimates of debris quantities to the Emergency Coordinator. The Emergency Coordinator then logs all communications and identifies the debris locations on the primary routes and critical facilities map. These impact assessments will be used to prioritize impacted areas and resource needs for Debris Clearance Teams.

The Debris Clearance Teams will then be dispatched to perform debris clearance utilizing equipment staged pre-event, clearing operations and response activities by quadrant and by street.

#### Debris Clearance Teams:

One team per quadrant is initially considered. Makeup of these teams will be from Volunteer Fire Departments, Public Works Department, Public Utilities Department, Volunteers and Contractors and the Incident Commander will determine Crew Size. Following completion of Debris Assessment, Debris Assessment Teams will join the Debris Clearance Teams with their support equipment and personnel. Teams will operate with the equipment available and always under the "buddy system". Heavy Equipment specifics vary somewhat for each pre-staged location, however generally some combination of loaders, pickup trucks, and dump trucks will be included. In addition the Debris Clearance Teams Checklist includes:

- Chain Saws, Chain Oil, Extra Chains, Chain saw wrench, flashlights, 25' by 3/8" chain, axes, first aid kit, rope, water, hand cleanser, all necessary PPE, contact # for EOC, Radio, Quadrant Map, Disposable (or digital) Cameras , 2 cycle oil, bungee cords, gloves, ear plugs, safety glasses, safety vest and chaps.

If the storm damages and debris are anticipated to be significant, most likely Category 3 direct hit or larger, or the initial damage assessment is determined to be greater than the ability of the County's workforce, debris clearance contractors maybe requested to assist. If contractors are



activated, they will be requested to perform operations under hourly rates for equipment and labor. All Phase I Debris Clearance Contractors will work in conjunction with County Clearance Teams and the scope of work for the contractor is listed below, with all determination of location and prioritization of routes to be made by the Incident Commander.

Scope of Work to be performed by the Phase I Debris Clearing Contractor(s):

- Pender County will identify critical routes and facilities that are essential to emergency operations and resumption of critical services and prioritize routes and facilities to be cleared.
- A daily meeting will be required between CONTRACTOR and the Incident Commander, or his designate. In this meeting a written report is required from the CONTRACTOR on the current status of clearing efforts, location of crews, identifying any problems, and the anticipated completion of clearance of the critical route(s)/facilities assigned. This meeting will be the basis for determining the next route(s) and/or facility(s) to be cleared with the ultimate the goal of completing clearing of all critical route(s) and/or facility(s) and terminating the Immediate Response Debris Clearing efforts.
- CONTRACTOR will clear the identified critical route(s)/facilities by moving debris to the shoulders of the road. There is no attempt to physically remove or dispose of the debris, only to clear key access routes.
- Special crews equipped with chain saws may be required to cut up downed trees. This activity is hazardous, and common sense safety considerations are necessary to reduce the chance of injury and possible loss of life.
- When electric lines are involved, work crews must coordinate with local utility companies to insure that power lines are de-energized for safety reasons.
- The CONTRACTOR will not be paid for equipment or manpower mobilization or down time. Hourly rates for equipment are to include operators, and maintenance, etc.
- The CONTRACTOR will not exceed 70 working hours conducting Phase I operations, unless a written notice to exceed is prepared and approved by the County Manager.
- The CONTRACTOR will be responsible for damages caused by the CONTRACTOR to both private and public property.

### *Phase II – Vegetative Debris Removal/Disposal & C&D Debris Removal*

NC DOT and municipalities will be the responsible parties conducting Phase II – curbside debris removal/collection activities. Therefore NC DOT, municipalities and their associated contractors will be responsible for all aspects involved in removal activities. Pender County will assist



county residents, municipalities and NC DOT in obtaining and operating TDMS (Temporary Debris Management Sites). The pre-selected Debris Site Management and Disposal Contractor will be requested to begin operations, within 5 days of notice to proceed. TDMS facilities have been preapproved for temporary debris storage, staging, separation and reduction for certain disaster generated debris streams.

### *Phase II – Dangerous Trees and Hanging Limbs*

NC DOT and municipalities will be the responsible party in conducting Phase II – Dangerous Trees and Hanging Limbs removal/collection operations. Therefore NC DOT, municipalities and their associated contractors will be responsible for all aspects involved in removal activities. Pender County will assist county residents, municipalities and NC DOT in obtaining and operating TDMS (Temporary Debris Management Sites). The pre-selected Debris Site Management and Disposal Contractor will be requested to begin operations, within 5 days of notice to proceed. TDMS facilities have been preapproved for temporary debris storage, staging, separation and reduction for certain disaster generated debris streams.

## C. Recovery Operations

### 1. Estimating staff, procedures and assignments

Initial Evaluation: Debris Assessment Teams are established and are staged prior to any anticipated landfall. Immediately following the storm or when winds die down to safe levels, individual teams will drive and evaluate their assigned quadrants and report specific areas with debris volume estimates requiring clearing primary routes and critical facilities. This 1<sup>st</sup> level procedure will then shed some knowledge of the need to request additional assistance from Phase I – Debris Clearance Contractors. If the routes following assessment indicate clearing operations can be completed by the VFD's, Departments of Public Works and Public Utilities and other County recovery teams, Phase I – Contractors will not be requested to perform.

#### Phase II – Debris Estimating:

Generally following a disaster an evaluation is made collectively with the Emergency Management Director, Public Works Director and Debris Project Management and Monitoring Consultant. Following this initial evaluation of the county and determining most heavily impacted locations, an estimate of volume is determined through comparison and similarities from previous disasters. We have determined that estimations by windshield evaluations immediately following a debris generating event will generally significantly underestimate actual volume. A considerable share of the debris generated by the disaster will not be brought the curbside until property owners return to inspect their properties, which depending on restrictions may be the 2<sup>nd</sup> or 3<sup>rd</sup> weekend following the event. At this time a more relevant volume estimate may be made by windshield survey, however this would be too late for FEMA kickoff meetings and damage request estimates. Therefore, historical reference and past experience has



been our best determining factor for debris volume estimating (see Tables 1 – 5 from previous pages 17 - 20).

## 2. Collection Method

### A. Curbside Collection

NC DOT and municipalities will be the responsible parties in conducting Phase II – curbside debris removal/collection activities. Therefore NC DOT, municipalities and their associated contractors will be responsible for all aspects involved in removal activities. Pender County will assist county residents, municipalities and NC DOT in obtaining and operating TDMS (Temporary Debris Management Sites). The pre-selected Debris Site Management and Disposal Contractor will be requested to begin operations, within 5 days of notice to proceed. TDMS facilities have been preapproved for temporary debris storage, staging, separation and reduction for certain disaster generated debris streams.

### B. Collection Centers

The pre-event contracts have not been tested beyond hurricanes of Category 2 or small Category 3 levels of intensity and debris generation. It is our opinion that events with landfall intensity of Category 4 or higher may require additional TDMS sites for staging throughout the county. Additionally, limitations on *daily volume acceptance* may occur at the Waste Industries Subtitle D Landfill. However, a recent audit of the Sampson County Subtitle D landfill confirmed their ability to increase the number of scales in operation, add tipping machines, etc. to improve flow rate. Remaining capacity, at the time of the interview was approximate 44 million cubic yards of debris. This capacity under their current acceptance rate and projections will provide landfill space for in excess of 100 years. Therefore, even though the design event for this document is limited to Category 3 intensity, C&D capacity at the contracted landfill may prove sufficient, but the need to activate additional temporary debris staging and storage may be required.

Pender County through contract with Waste Industries provides 13 Convenience Centers throughout the county. These sites are provided for customary generated residential municipal solid waste (MSW) and construction and demolition (C&D) refuse. Due to the anticipated increased volumes of debris generated following a disaster, these sites are not large enough or sufficiently equipped as TDMS (Temporary Debris Management Sites). Residents are directed to deliver disaster generated debris, under the restrictions indicated, to the following locations only:

## Pender County Temporary Debris Management Sites

**911 Tower Site** Hwy NC 53E, northeast of Burgaw, approximately 1 mile east of US 40 overpass

Storm Debris Accepted: Vegetative Debris, Construction and Demolition and White Goods



US 17 N Site (Hampstead/Topsail) Hwy US 17N, on right just north of Topsail Greens Drive

Storm Debris Accepted: Vegetative Debris Only

Cheshire Road Convenience Site (Rocky Point / St. Helena), Hwy NC 210W across from Cheshire Road

Storm Debris Accepted: Vegetative Debris, Construction and Demolition and White Goods

### 3. Collecting Hazardous Waste and White Goods

NC DOT and municipalities will be the responsible parties in conducting Phase II – curbside debris removal/collection activities. Therefore NC DOT, municipalities and their associated contractors will be responsible for all aspects involved in removal activities including collection of household hazardous waste and white goods. Pender County will assist county residents, municipalities and NC DOT in obtaining and operating TDMS (Temporary Debris Management Sites). The pre-selected Debris Site Management and Disposal Contractor is required to accept white goods at both the 911 Tower Site and the Cheshire Road Convenience Site. Hazardous Waste will not be accepted as a rule.

De minimis quantities of household hazardous waste (HHW) may be received with C&D waste from NC DOT, and municipal debris contractors and residents. These de minimis quantities will be managed per contract with Waste Industries Subtitle D Landfill in Sampson County, physically located at 7434 Roseboro Highway, Roseboro, NC. Pender County currently sends all municipal solid waste (MSW) and C&D waste that may contain de minimis quantities of HHW mixed wastes to this Subtitle D landfill. Household hazardous waste by definition is exempt from hazardous waste rules. The determination of what to redirect to the Subtitle D facility will be solely the responsibility of the Pender County Debris Site Management and Disposal Contractor.

We have confirmed proper disposal and debris acceptance with Waste Industries. During a recent audit, Waste Industries confirms the ability to accept such waste and furthermore has permitted capacity to accept approximately 44 million cubic yards of debris.



#### 4. Monitoring Staff and Assignments



Johnson Environmental & Disaster Consulting Services (JENV) is under contract to supply debris project management and debris monitoring services [see Contract Attachment 1](#). JENV staff will measure debris trucks, complete field observation at disposal locations, estimate final volume at TDSR's or disposal facilities, prepare load tickets, prepare daily monitoring records, entering all loads into a master database and maintaining these records, prepare recommendations and evaluations of

contractors work product at DMS locations, investigate troubles and citizen inquiries, and prepare reports with total volumes to compare contractor invoicing and/or used as the local governments agent in determining proper volume for contractor invoicing.

### IV. Debris Management Sites

#### A. Site Management

There are three (3) sites that have been evaluated, determined available, and approved for use as debris management sites (DMS). These sites received conditional approval through the NC DENR, Solid Waste Division, under DS10-021, DS10-022 and DS71-023 [see DMS Attachment 1](#). Application and site inspection information can be found in [DMS Attachment 2](#).

All DMS sites will be managed and supervised by the Debris Site Management and Disposal Contractor. For fiscal year ending June 30, 2010 DRC Emergency Services, LLC of Mobile, AL holds the primary contract. DRC as part of contractor evaluation has submitted their Debris Site Management Plan, and can be found as [DMS Attachment 3](#).

The primary DMS will be the 911 Tower Site located on Hwy NC53E, northeast of Burgaw. The proposed use of the Primary Site is for acceptance of vegetative, C&D and White Goods. Pender County's Debris Contractor will have the alternative to utilize the Primary Site for vegetative debris reduction by either air curtain burning or grinding. The contractor will be responsible for removing any reduced material (ash or chips) and dispose or recycle in an ecologically conscious manner. Pender County's debris contractor will provide final transport of C&D from either TDMS to the Waste Industries Subtitle D facility in Sampson County then

dispose accordingly. Pender County has obtained an agreement with Southern Metals, a metal recycler, for final management of white goods.

Additionally, following an event and determined upon severity and location of debris generation, the other two sites may be opened to accept waste. The Jeff Morris Parcel and the Cheshire Rd. Convenience Sites have been utilized for debris management in the past. The Jeff Morris Parcel is located off US 17N and will provide debris acceptance to southeastern Pender County, specifically the Hampstead and Topsail communities. It is the county's intention to accept vegetative debris only at the Jeff Morris Parcel, and that will be restricted to individuals. The Cheshire Rd. Convenience Site, located off NC 210W will provide debris acceptance to southern Pender County, specifically the Rocky Point and St. Helena communities. The Cheshire Rd. facility will be evaluated at the time of need to accept Vegetative, C&D and White Good wastes. C&D, White Goods as well as MSW are currently accepted at the site, and are consistent with the sites use as a convenience center and transfer location for the county as operated by Waste Industries.

Municipalities' of Pender County will be requested to deliver vegetative debris directly to the Primary Site, 911 Tower Site located on Hwy NC53E. Municipalities' will be directed to deliver C&D directly to the Waste Industries, Subtitle D landfill in Sampson County. At all TDMS locations where disaster generated debris may be delivered, a clear and adequate level of separation of C&D debris, white goods, and vegetative debris will be maintained.

Pender County is not the property owner of either the Jeff Morris Parcel or the 911 Tower Site. The property owners have been contacted about lease agreements for the use of the properties and have indicated a willingness to enter into an agreement for their use as TDMS sites. Pender County has chosen not to incur the expense of leasing or drawing lease agreements until the time of activation.

Final disposal of C&D debris will be at Waste Industries Subtitle D landfill in Sampson County, NC. This is a commercial and permitted facility therefore they will be the responsible party for all operations below. The commercial sites have been requested to submit the information contained in Section IV, A and B where appropriate. Waste Industries documentation and site management specifics will be found as [DMS Attachment 4](#)

1. Site Manager
2. Monitoring Staff and Assignments
3. Safety Personnel

## B. Establishment and Operations Planning

1. Permits



Pender County has received permits from NC DENR, Division of Waste Management for three (3) Temporary Debris Management Sites, approved for utilization for both C&D debris storage and transfer and Vegetative Debris Storage and Reduction by grinding or burning. Please see the attached TDMS permit approval [\(DMS Attachment 1\)](#). NC DENR, Solid Waste Division has inspected the site for temporary use for storage and reduction of disaster generated debris and has indicated approval for use following notification of disaster use procedure. If additional permits, i.e. Air Quality, etc. are required, the primary contractor will be requested to complete application and be fully permitted prior to reduction by air curtain burning. Application and site inspection information can be found in [\(DMS Attachment 2\)](#). All other sites under contracted arrangements are with commercial and permitted facilities, permit information can be found in the [\(DMS Attachment 4\)](#).

**2. Locations**

**A. Baseline Data for each location**

**B. Ingress/egress for sites**

Location data will be found in **Figure 3 below** and arials and additional parcel identification information can be found in [\(DMS Attachment 2\)](#). Temporary Debris Management Sites may require additional preparation for ingress and egress roads, observation tower construction and location, etc. prior to use. The primary contractor will be requested to complete these site preparations prior to use. Soil samples in the anticipated use area will be taken for baseline data, prior to acceptance of debris on either site. Sites anticipated for final disposal under the contracted arrangements are commercial and permitted facilities. Therefore no baseline data is required as Pender County is not responsible for operation of these facilities. Site location information and ingress/egress for sites is included in [\(DMS Attachment 4\)](#).

**Figure 3, DMS Location and Area Information**

Location Description	coordinates	area - sq ft	area - acre
Primary Site NC 53E, 911 Tower Site	34° 35' 21" N 77° 53' 02" W	2,553,487	58.62
Jeff Morris Parcel US 17 N, (Hampstead/Topsail)	34° 25' 10" N 77° 38' 48" W	723,096	16.6
Cheshire Rd. Convenience Site NC 210W, (Rocky Point)	34° 25' 45" N 77° 55' 17" W	417,305	9.58



### 3. Site Layouts

Aerials and additional information can be found in [DMS Attachment 2](#). All TDMS may require additional preparation for ingress and egress roads, observation tower construction and location, etc. prior to use. Site layouts will be drawn, and photographed prior to, during and after operation.

### 4. Site Preparation

The 911 Tower Site is to be utilized as the primary location for all vegetative reduction (either by grinding, or air curtain burning), and all C&D and White Goods staging location from the municipalities and NC DOT of Pender County that desire to utilize the facility. This site is well suited, being 58.6 acres, and the only improved structures are the 911 Tower and support structure on final few acres of the southern boundary. The property is significantly cleared field, in excess of 40 acres. Recommendation for site preparation prior to utilization is improving current access road from NC Hwy. 53 for ingress. Also recommended is the preparation of a new drive to NC Hwy. 53 which will require clearing trees and the addition of a temporary RCP culvert and access drive east of the current drive to provide an egress point. Some minimal improvements may be necessary to the dirt road running the western property boundary used as access to any part of the field. Additional site preparation, i.e. security, fire control, etc. will be completed by the primary contractor under their planning document see [DMS Attachment 3](#).

The Jeff Morris Parcel, US Hwy. 17N in Hampstead has been approved for temporary staging and reduction of vegetative and C&D. However, Pender County intends to limit the site for vegetative debris only from Pender County residents only. If the site is used for reduction, the contractor will be limited to only grinding operations. This site is approximately 16 acres, with no improved structures. The property is significantly cleared field, with the cleared area nearest the highway in excess of 3 acres, and an additional cleared area at the rear of the property of approximately 11 acres. Recommendation for site preparation prior to utilization is improving current access road from US Hwy. 17 for ingress. Also recommended is the preparation of a new drive to US Hwy. 17 which will require the addition of a temporary RCP culvert and access drive north of the current drive to provide an egress point. Some minimal improvements may be necessary to prepare a roadway to the rear field if the area is needed to manage the volume. Additional site preparation, i.e. security, fire control, etc. will be completed by the primary contractor under their planning document see [DMS Attachment 3](#).

The Cheshire Rd. Convenience Site, NC Hwy. 210W has been approved for temporary staging and reduction of vegetative and C&D debris. It is Pender County's intention to limit the use of this facility to residents only. The site is currently used as a convenience location for MSW and C&D for residents in the St. Helena / Rocky Point communities of Pender County. The facility is equipped with security fence, ingress / egress drive that appears adequate. The C&D/White Goods laydown area envisioned has a concrete pad. Any vegetation will be brought through the



security fence to the back of the property. This area, envisioned for vegetative staging may require additional clearance and an improved roadway for residents delivering. Additional site preparation, i.e. fire control, etc. will be completed by the primary contractor under their planning document see **DMS Attachment 3**.

The final disposal site for C&D under the contracted arrangements is a commercial and permitted facility therefore they will be the responsible party for all operations below. Documentation for these sites will be found in the **DMS Attachment 4**, as submitted by the facility.

### 5. Volume Reduction Methods

- A. Incineration
- B. Grinding and Chipping

The 911 Tower Site, will be utilized as the primary site for all vegetative reduction. The Debris Site Management and Disposal Contract allows for reduction at this site by either incineration or by grinding. Any reduction to take place at the other proposed sites, (Jeff Morris Site or Cheshire Rd. Site) will be by grinding only. The contract explains that the "contractor" is the owner of the debris following acceptance but confirmation can be made by the debris site monitor that material is reduced however all prices under contract include reduction and final disposal, no separate line item for payment is included for transportation or disposal of residual ash or chips.

### 6. Recycling

The Debris Site Management and Disposal Contractor indicate that if vegetative reduction is by grinding, final disposal will employ one of several recycling options. Contractor has indicated that they have options for this product to include: pulp and paper raw material stock, industrial boiler fuel, cogeneration fuel source, decorative chip and mulch are also options. Documentation for these facilities recycling practices will be found in the **DMS Attachment 3**, as submitted by the debris contractor.



White goods are to be managed through agreement with Southern Metals Recycling **(see Contract Attachment 1)**. White goods collected, separated, and stored at the DMS staging facilities will be transported to Southern Metals and transfer facility. Southern Metals employ personnel that evacuate Freon, oils, etc., and then send the material to a shredder for metal separation and recovery.



## 7. Environmental Monitoring Program

No specific environmental program for disaster activated debris activities has been developed by Pender County. The conditional Temporary Debris Management Site permit, issued by the State of North Carolina will recommend specific limitations prior to use. Following the activation of the Debris Site Management and Disposal Contract and notification to accept disaster generated debris, the Debris Site Management and Disposal Contractor will incorporate their Environmental Monitoring procedures, which are incorporated and described in [DMS Attachment 3](#).

All final disposal sites for C&D and White Goods contracted are commercial and permitted facilities therefore the commercial facility will be the responsible party for all environmental compliance and monitoring. Documentation received from the contracting facilities regarding environmental monitoring and planning will be found in the [DMS Attachment 4](#).

## 8. Site Closure

Under condition 11.0 of the Pender County Debris Site Management and Disposal Contract the CONTRACTOR is responsible for returning all utilized debris management sites to pre-disaster conditions. See excerpt of 11.0 below:

### 11.00 LOCATIONS FOR TEMPORARY DEBRIS STORAGE AND REDUCTION SITES (TDSR)

The CONTRACTOR upon completion of debris reduction and disposal, and no *later than 20 days following receipt of final load of disaster generated debris*, CONTRACTOR will return the (named DMS site) to pre-contract conditions and confirmed acceptable in writing by the County Manager or his designee prior to the release of funds for the final invoice.

The method of closure and return to pre-existing conditions is described in the Contractor Debris Management Site Plan, see [DMS Attachment 3](#).

All sites anticipated for use for final disposal of C&D under the contracted arrangements are commercial and permitted facilities and any closure requirements will be directed by their individual permits and regulatory authority. Permit numbers and/or copies of permits for these facilities can be found in [DMS Attachment 4](#).



## V. Contracted Services

### A. Emergency Contracting/Procurement Procedures

Pender County annually prepares contracts and completes procurement and solicitation and selects a primary and secondary Debris Site Management and Disposal Contractor. The contract term is 1 year, coinciding with the county's fiscal year (July 1 through June 30). Primary contractor selected for this fiscal year is DRC Emergency Services, LLC and Crowder-Gulf as secondary or backup contractor, see **Contract Attachments 2 and 3** respectively. This procedure has served well and has eliminated the need to prepare emergency contracting following the disaster and allows the county to focus on response and recovery operations. A copy of procurement related documents; each public notice and bid tabulation are attached as **Contract Attachment 5**.

#### Procurement Procedure:

Beginning in February of each year the temporary debris management sites are evaluated and the debris contract is developed under the budget of the Director of Emergency Management. Sites are evaluated for change of ownership, use, and if any improvements had been made since the last evaluation that would affect the use as a Debris Management Site. Draft documents are prepared, reviewed by staff to confirm the scope of service meets anticipated needs, and then the documents are reviewed by both the Director of Emergency Management and the County Attorney to confirm the County's best interests are being addressed. Following this final approval of the bidding instructions and contract documents, the Emergency Management Director posts the public notice and complete bidding documents on the County's website, and an advertisement of notice is placed in the Pender Post.

During the public notice period, typically 10 days from the website posting to the "mandatory pre-bid conference", previously interested contractors and industry leaders are notified of the bidding opportunity. The pre-bid conference is typically held at a conference room in the County Managers annex, and all bidders are made aware of the complexity of the sites, anticipated limitations for use, and specific elements of the bidder's instructions are discussed and contractors participate in this open forum conference. Sealed bids are due seven (7) to ten (10) days following the pre-bid conference and the bids are opened and tabulated at a location open to the public.

Following the bid opening, tabulations and initial evaluations are completed to determine the lowest and next lowest bidder for each contract. The selection process though does not end at that point; the staff will recommend the "lowest responsible bidder". These lowest bidders are then requested to provide due diligence documentation. Through research and validation of this documentation staff will then make a determination of "responsible". Due diligence documentation requested tests the contractors previous experience with debris site management reduction / disposal operations, financial strength, bonding experience, bonding limits, ability to acquire bonding, insurance limits and experience with insurer, equipment availability, and



subcontractor relationships. Additionally, all contractors are evaluated through the Federal Excluded Parties List System to determine if the submitting contractor has been listed as non-participatory for any Federal Projects. If due diligence does not provide any reason for disqualification a primary contractor and secondary contractor will be recommended by staff to the County Board of Commissioners for approval.

## B. Debris operations to be outsourced

- Phase I – Immediate Response - Debris Clearing (following determination of need)
- Debris Site Management and Reduction / Disposal Services
- Debris Monitoring Services
- C&D Disposal
- White Goods and Metal Recycling

## C. General Contract Provisions

- Debris Contracts are prepared annually
- Terms are 1 yr, coinciding with the County's fiscal year.
- C&D facilities are contacted to determine capacity, and availability to accept C&D debris following a disaster. If the facility confirms ability to accept waste they are requested to quote rates for debris disposal.

## D. Qualification Requirements

- Mandatory attendance of pre-bid conference for Debris Site Management and Disposal Contract.
- County to award two (2) Contracts; a primary contract to be awarded to the lowest overall responsible Bidder and a secondary contract to the next overall lowest responsible Bidder.
- A fair and equitable rate for services is required and determined by evaluation of previous bidding results, current bids as received, and comparison of surrounding local government's rates for similar services.
- Additional qualifications include the due diligence evaluation criteria. Due diligence documentation tests the contractors previous experience with debris removal/disposal operations, financial strength, bonding experience, bonding limits, ability to acquire bonding, insurance limits and experience with insurer, equipment availability, and subcontractor relationships. Additionally, all contractors are evaluated through the Federal Excluded Parties List System to determine if the submitting contractor has been listed as non-participatory for any Federal Projects.



### E. Solicitation of Contractors

Following the final approval of the bidding instructions and contract documents, by the Emergency Management Director and County Attorney, the Emergency Management Director posts the public notices and complete bidding documents on the County's website, and advertises in the Pender Post. During this public notice period, minimum of 10 days from website and newspaper posting to the "mandatory pre-bid conference", previously interested contractors and industry leaders are notified of the bidding opportunity. The pre-bid conference is typically held at a conference room in the County Managers annex, and all bidders are made aware of the complexity of the sites, anticipated limitations for use, and specific elements of the bidder's instructions are discussed and contractors participate in this open forum conference. Sealed bids are due seven (7) to ten (10) days following the pre-bid conference and the bids are opened and tabulated at a location open to the public.

## VI. Private Property Demolition and Debris Removal



Pender County Planning and Development Department staff was interviewed and standard procedures were discussed regarding management of uninhabitable properties and unsafe structures. Pender County Planning and Development Department is authorized under NC General Statutes, specifically § 153A-350 through § 153A-375 (see General Attachment 14) to monitor, inspect and apply safe building and construction codes and ordinances.



Inspection Department staff explains there is a procedure in place for demolition of "hazardous structures". This process generally takes several months, but may be expedited during periods of emergency and due to the magnitude of severity to public safety. The process begins with the authority granted under § 153A-364. This statute allows inspectors to evaluate properties suspected of unsafe, unsanitary, or otherwise hazardous and unlawful conditions. The next statute § 153A-365 requires the property owner to immediately remedy defects or hazardous conditions. However, under statute § 153A-366 if the inspector determines that a building is especially dangerous to life the building shall be condemned.

Pender County Building Inspections explains they have not developed a fast track program for disaster events and that they will comply with the statutes and streamline the process as much as possible, if necessary to demolish multiple structures to ensure the public health and safety.

## A. Condemnation criteria and procedures

### 1. Legal documentation

The Pender County Department of Planning and Development is charged with enforcing the provisions of NC General Statutes regarding unsafe structures. Pender County has the sole responsible authority for condemnation procedures within the County boundaries, to include the municipalities. The authority is extended by NC General Statute § 153A-366, Condemnation of Unsafe Buildings (see General Attachment 14).

### 2. Demolition permitting

The County's procedures for demolition are through a series of legislative acts, General Statute, § 153A-368, gives the legal authority to take action in event of failure to take corrective action of a building that has been condemned, and under the same statute article (3) the inspector may issue order to repair, close, vacate or *demolish the building*. Also, NC GS § 153A-372.1, authorizes ordinance to repair, close, and *demolish nonresidential buildings or structures* (see General Attachment 14).

## B. Mobile home park procedures

Pender County has no special procedure for demolition of mobile home parks. Uninhabitable mobile home identification and demolition would be managed under current codes and ordinances.



### C. Navigation hazard removal, procedures

Pender County has no responsibility for maintaining any navigational waterway within the county. To the best of the County's knowledge all navigational waterways within the county boundaries are maintained either federally, or by the state of North Carolina.

## VII. Public Information Plan

Public information generated during disasters and any time comes from the Public Relations Officer(s) of the Office of the County Manager. The Public Relations Office serves citizens and staff alike, with both internal and external communications. The primary responsibilities of the Public Relations Office are to:

- Continuously enhance a positive image of the County through effective, targeted communication efforts;
- Develop and implement a comprehensive, proactive communications program;
- Provide communications support to County departments; and
- Provide information to media, alert media to news events, and respond to media on county wide issues.

### A. Public Relations Officer

Public Relations Officer(s):

County Manager  
Emergency Management Director

The offices of the Public Relations Officer(s) are:

- County Manager - 805 S. Walker Street, Burgaw, NC 28425  
(910) 259-1200
- Emergency Manager - 605 E. Fremont St., Burgaw, NC 28425  
(910) 259-1210

### B. Pre-scripted information

Several documents have been prepared in the past for communications to citizens. See General Attachment 9 for a sample document.



### C. Distribution plan

Public Relations Office tries to get the information to citizens about debris site management and disposal in as many ways as possible. The distribution plan involves:

- a. notification on the front page of the County's website
- b. notification of all area media via electronic press release
- c. notification to County Commissioners via internet and phone communications
- d. notification of County staff via email communications
- e. each of the above methods provides phone numbers, for people to call if they have further questions.

**Table of Attachments**

**Yellow Tabbed**

General Attachment #

Title / Description

1	State of Emergency Declaration (sample document)
2	Board of Commissioners - Emergency Operations Duties
3	County Manager - Emergency Operations Duties
4	Emergency Manager - Emergency Operations Duties
5	Public Works Director - Emergency Operations Duties
6	Planning Director - Emergency Operations Duties
7	EOC Communication Flow Chart
8	Public Information Officer - Emergency Operations Duties
9	Pre Scripted Communications Release & Sample Press Releases
10	Emergency Operation Center - Operations Plan
11	Electric Utility Service Area Map
12	Emergency Equipment & PPE
13	Site Safety & Health Plan (DRC, primary DMS contractor)
14	Condemnation Procedures / Legal Authority

**Red Tabbed**

Contract Attachment #

Title / Description

1	Agreement with Southern Metals for White Goods and Metals Recycling
2	Debris Site Management and Disposal Contract (DRC - Primary)
3	Debris Site Management and Disposal Contract (CrowderGulf - Secondary)
4	Debris Monitoring Contract (Johnson Environmental & Disaster Consulting Services)
5	Procurement Related: Public Notice, Bid Tabulation, etc.

**Green Tabbed**

Debris Management Site

Attachment #

Title / Description

1	NC-DENR - TDMS Approval
2	NC-DENR - TDMS Application and Site Information
3	DRC Emergency Services, LLC - DMS Site Management Plan
4	C&D Debris Management Site (Waste Industries - Subtitle D Landfill, Sampson County, NC)