Dorchester County Debris Management Plan

Prepared by:
Dorchester County Emergency Management Department

December – 2014

Dorchester County, South Carolina

U.S. Department of Homeland Security
Region IV
3003 Chamblee-Tucker Road
Atlanta, GA 30341

FEMA

December 2, 2014

Mr. Kim Stenson, Director
South Carolina Emergency Management Division
2779 Fish Hatchery Road
West Columbia, South Carolina 29172

Attention: Jenine Stevenson

Reference: Public Assistance Pilot Program
Debris Management Plan Review
Dorchester County

Dear Mr. Stenson:

This letter responds to the South Carolina Emergency Management Division's request dated September 10, 2014 for the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) to accept Dorchester County's (County) Debris Management Plan (Plan) for participation in the Public Assistance (PA) Alternative Procedures Pilot Program for Debris Removal. This pilot program allows a one-time two (2) percent Federal cost share increase for debris removal operations performed within 90 days from the start of the incident period of a major disaster or emergency declaration.

FEMA Region IV has determined that the Plan:

☒ **Contains the basic planning elements of a Debris Management Plan along with at least one prequalified debris and wreckage removal contractor (see enclosed Debris Management Plan Checklist). Therefore, FEMA has determined the Plan is acceptable. Accordingly, Dorchester County may receive a one-time two (2) percent Federal cost share increase as part of the PA Alternative Procedures Pilot Program for Debris Removal. Your office should notify FEMA when Dorchester County wishes to apply the incentive to its debris removal work.**

☐ Does not contain the basic planning elements as noted in the enclosed Debris Management Plan Checklist. Dorchester County may revise its Plan and resubmit it to FEMA, through your office, for reconsideration.

Acceptance of this Plan does not mean that FEMA is approving any operational component of the Plan nor does it mean that the Federal government will fund work conducted under any aspect of the Plan. Eligibility of costs for debris removal and management in a declared major disaster or emergency will be determined based on established PA Program authorities, regulations, policies and guidance. Subgrantees must comply with Federal procurement requirements (i.e., competitive bidding), as outlined in 44 CFR §13.36 in the procurement of debris removal services.

If you have questions or need additional information, please contact Mr. Jesse F. Munoz, CEM, Director, Recovery Division, at (770) 220-5300.

Sincerely,

for Jesse F. Munoz

Robert D. Samaan
Acting Regional Administrator

Debris Management Plan Checklist

Dorchester County	South Carolina
Applicant Name	State/Territory/Tribe
Justin Powell	843 – 569 - 0100
Applicant Point of Contact	Contact Number

Yes	No	Plan Requirements	Comment
✓		**Overview** – Does the plan describe the purpose and objectives?	Pgs. 4-5
✓		**Events and Assumptions**- Does the plan provide information on the types and anticipated quantities of debris that will be generated from various types and sizes of events?	Pgs. 5-17 , Appendix A
✓		**Debris Collection and Removal**- Does the plan have a debris collection strategy? Does the plan discuss the methods that will be used to remove debris and establish priorities for clearance and removal? Does the plan outline the roles and responsibilities of the various functions involved (Public Works, Finance, and Solid Waste Departments, etc.)?	Pgs. 18-21, pg. 24, pg. 27
✓		**Debris Disposal Locations and Debris Management Sites**- Does the plan identify where the disaster debris will be segregated, reduced, and disposed or whether debris will be hauled to a recycler?	Page. 28, appendix A
✓		**Debris Removal on Private Property**- Does the plan address the authority and processes for private property debris removal?	Pgs. 29, Last 5 pages, Municode search
✓		**Use and Procurement of Contracted Services**- Does the plan describe the types of debris operations that will be contracted? Does the plan describe the process and procedure for acquiring competitively procured contracted services?	Pgs. 21, 30-32
✓		**Use of Force Account Labor**- Does the plan define the types of work force account labor will accomplish?	Pages 20, 24, and pg. 31

Yes	No	Plan Requirements	Comment
✓		**Monitoring of Debris Operations-** Does the plan describe who and how debris removal contractors will be monitored at pickup sites, Debris Management Sites/Temporary Debris Storage and Reduction Sites and final disposal?	Pgs. 22, 31-33
✓		**Health and Safety Requirements-** Does the plan describe how workers and the public will be protected and discuss the specific measures for adherence to safety rules and procedures?	Pgs. 29 - 30
✓		**Environmental Considerations and Other Regulatory Requirements-** Does the plan identify all debris operations that will trigger compliance with environmental and historic preservation laws and how compliance will be attained?	Pgs. 30, Appendix A
✓		**Public Information-** Does the plan include a public information strategy to ensure that residents receive accurate and timely information about debris operations?	Page. 33
✓		**Identification of Debris Removal Contractors-** Does the jurisdiction identify at least one or more debris contractors that it has prequalified?	Appendix G Beck Disaster Recovery CrowderGulf

General Comments	OK. Good Plan. EDJ

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I. INTRODUCTION:

a) General

Dorchester County is located in the southeastern part of South Carolina. The County is comprised of 575 square miles of mostly rural land. The rural land includes both agricultural and forest, with approximately 70% of Dorchester County being covered by forestland. This rural land is interrupted by six incorporated areas that are densely developed as compared to the rest of the County: the Town of Harleyville, the Town of Reevesville, the Town of Ridgeville, and The Town of St. George. The Town of Summerville and the City of North Charleston cross county boundaries and can be found in Dorchester County, as well as Berkeley and Charleston Counties. Farms, forests, and swampland account for a large portion of the unincorporated areas of the County. According to the US Census Bureau the total population of Dorchester county is approximately 142, 496.

Dorchester County is vulnerable to natural and Human-made disaster, each have the potential to result in large amounts of debris. Following a disaster, debris must be cleared, removed and disposed of to reduce the impact to health, safety and welfare of the affected community, as well as expedite the recovery process

The Dorchester County Emergency Management Department (EMD) is responsible for coordinating all county mitigation, preparedness, response and recovery planning efforts and in coordination with Emergency Support Function (ESF)-3: Public Works & Engineering for debris clearance, removal and disposal in accordance with the Dorchester County Emergency Operations Plan. The development of this plan was a collaborative effort between state and local agencies to recover from a disaster more effectively. The focus of this plan is on activities that are likely needed following a hurricane; however the plan may be used to for any type of debris-generating disaster.

b) Mission

The mission is to facilitate and coordinate the removal, collection, and disposal of debris. The overall goal is to use existing solid waste best practice strategies and methods to reduce, reuse, recycle, recover and landfill where feasible by utilizing specific existing convenience centers as collection points.

c) Purpose

This Plan is intended to:

- Provide organizational structure, guidance, and standardized procedures 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.
- Expedite debris removal and disposal efforts that provide visible signs of recovery designated to mitigate the threat to the health, safety and welfare of Dorchester County residents.
- Coordinate partnering relationships through communications and pre-planning with local, state and federal agencies involved with debris management responsibilities.
- Implement and coordinate private sector debris removal and disposal contracts to maximize cleanup efficiencies.

d) Plan Maintenance and Update

The annual review, revision and update will be a coordinated effort between the EMD, Public Works Department and ESF – 3 support agencies, as well as input from our debris management contractors. Revisions and updates will include any relevant lessons learned and current federal guidelines to ensure all activities are using best practices.

II. SITUATION AND ASSUMPTIONS:

a) Situation

Natural disasters such as earthquakes 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. Human-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, State and Federal law enforcement, health, and environmental officials.

b) Assumptions

A major disaster can occur at anytime, but hurricanes are most likely to occur during the active Atlantic hurricane season from June 1st to November 30th. The quantity and type of debris generated, its location, and size of the area which it is dispersed, will have a direct impact on the type of collection and disposal methods utilized, associated costs, and how quickly the removal process can begin. Initial debris removal will concentrate on the clearance of roads for emergency responders and life saving activities. The amount of debris generated by a major disaster will likely exceed Dorchester County's removal, recycle, and disposal capabilities, necessitating the full use of existing local, state, and

nongovernmental organization debris management resources. The Governor will request a Presidential Disaster Declaration if the disaster exceeds both local and State resources. Private contractors will play a significant role in the removal, collection, reduction, and disposal of debris. The debris management process will be based on the waste management best practice approach of reduction, reuse, reclamation, resource recovery, incineration and land filling, respectively.

c) Types of Disasters

1. Hurricanes and Typhoons

The terms "hurricane" and "typhoon" are two regional names for the same phenomenon. The damaging forces of hurricanes and tropical storms include high velocity winds (up to 150 miles per hour or higher in gusts), storm surge, and wave action. The most severe damage frequently occurs in the shore lands adjacent to the ocean. The resultant debris consists primarily of vegetative matter, construction materials from damaged or destroyed structures, personal property, marine vessels, and sediment. The greatest concentration of debris is located along the shoreline. Flooding and tornadoes spawned by hurricanes can cause damage and leave extensive amounts of natural and manmade debris far inland.

It is important to consider the mix of debris that may be generated, though there is no standard composition data that can be applied for all hurricanes. For example, the composition of debris from Hurricane Andrew (1992) in Florida was generally 30 percent clean, woody debris and 70 percent construction and demolition debris. After Hurricane Fran (1996) in North Carolina, the mix was exactly the opposite. Considering the land-use types and existing infrastructure (types of structures) will assist in making forecasts for planning purposes. ***(See Appendix A: HAZUS-Hurricane Scenario)***

2. Tsunamis

A tsunami is a wave train, or series of waves, generated in a body of water by an impulsive disturbance that vertically displaces the water. Earthquakes, landslides, volcanic eruptions, explosions, and even the impact of cosmic bodies, such as meteorites, can generate tsunamis. Tsunamis can savagely attack coastlines, causing devastating property damage and loss of life. They are capable of inundating and flooding areas hundreds of yards inland past the typical high water level. The fast-moving water associated with the inundating tsunami can crush homes and other coastal structures. Debris from tsunamis may consist of construction and demolition debris, vegetative debris, dead mammals, fish, and other marine forms. Tsunamis can be very deadly, and a community could expect to have a high loss of life.

3. **Tornadoes**
   Damage from tornadoes is caused by high-velocity rotating winds. The severity of the damage depends on the velocity of the tornado funnel and the length of time the funnel is on the ground. Damage is generally confined to a narrow path, which can be up to one-half mile wide and from 100 yards to several miles long. Tornado debris consists primarily of vegetative debris, construction materials from damaged or destroyed structures, and personal property.

4. **Floods**
   Severe rainstorms, hurricanes, tsunamis, or reservoir failure can cause flooding. Damage to structures from flooding is caused either by inundation or high-velocity water flow. Structural damage is usually limited to the floodway and the floodplain area immediately adjacent to the waterway. Heavy structural damage may result from high-velocity waters in mountainous areas or failure of a flood control project, such as a dam or levee. Flood debris may consist of sediment, wreckage, personal property, and sometimes hazardous materials deposited on public and private property. Additionally, heavy rains and floods may produce landslides; in such cases, debris consists primarily of soil, gravel, rock, and some construction materials.

5. **Earthquakes**
   Seismic forces along fault lines generate shock waves that cause ground shaking, surface ruptures, liquefaction, landslides, mudflows, and earth cracking. Damage may be localized at the epicenter or widespread across adjoining areas. Secondary effects of earthquakes such as aftershocks, fires, explosions, and landslides cause further damage. Debris from an earthquake generally consists of damaged personal property, structural building materials, charred material, concrete, and asphalt. ***(See Appendix B: HAZUS- Earthquake Scenario)***

6. **Fires**
   Wildfires or urban fires can destroy or partially damage building structures, vehicles, public infrastructure, and vegetation. The loss of vegetative growth on hillsides may result in mudslides and subsequently cause further structural damage. Debris from fires consists of burnt personal property, burnt metals, charred wood, ash, asbestos, and other hazardous wastes.

7. **Ice Storms or Snowstorms**
   Debris from ice storms or snowstorms consists of significant amounts of vegetative debris and overhead utility service components.

8. Acts of Terrorism

Terrorism includes the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. Since terrorism is regarded as a criminal act, it involves coordination with law enforcement authorities, the coroner's office, and health officials before debris is handled or disposed.

Debris generated as a result of an act of terrorism is highly variable in both quantity and type, depending upon the specific means utilized by the terrorists. An act of terrorism could generate little to no debris at all, or could result in large quantities of multiple types of debris, potentially requiring highly specialized personnel, procedures, and equipment for its removal and disposal.

d) Disaster Debris Streams

Typically, disasters generate a mix of different types of debris. The table below summarizes the typical types of debris for each type of disaster.

Different handling and disposal methods are required for particular debris types and impact the scope of work of the debris management plan. Managing debris containing hazardous, household hazardous, medical, and infectious materials requires various specialized handling and disposal methods. Planning Staff should consider the proper handling and disposal methods for each type of debris that could be generated during each design disaster event when preparing debris management plans.

		Typical Debris Streams								
		Vegetative	Construction& Demolition (C&D)	Personal Property/ Household Items	Hazardous Waste	Household Hazardous Waste	White Goods	Soil, Mud & Sand	Vehicles & Vessels	Putrescent
Types of Disasters	Hurricanes	X	X	X	X	X	X	X	X	X
	Tsunamis	X	X	X	X	X	X	X	X	X
	Tornadoes	X	X	X	X	X	X		X	X
	Floods	X	X	X	X	X	X	X	X	X
	Earthquakes		X	X		X	X	X		
	Wildfires	X		X		X	X	X		
	Ice Storms	X				X				

e) Forecasted Debris Types

1. Vegetative Debris

Vegetative debris consists of whole trees, tree stumps, tree branches, tree trunks, and other leafy material. Depending on the size of the debris, the collection of vegetative debris may require the use of flat bed trucks, dump trucks, and grapple loaders.

Most vegetative debris consists of large piles of tree limbs and branches that are piled on the public rights-of-way by the residents. The collection of this type of debris is eligible for reimbursement if it is within public rights-of-way and collected by an eligible applicant.

Vegetative debris is bulky and consumes a significant volume of landfill space if buried. To minimize the use of landfill space, it is prudent to reduce the volume of vegetative debris before burying. Vegetative debris may be reduced by as much as 75 percent of its volume by mulching or grinding and as much as 90 percent of its volume through burning technologies.

2. Hazardous Trees

Removing a hazardous tree may be eligible for Public Assistance grant funding. A tree is considered hazardous if its condition was caused by the disaster; it is an immediate threat to lives, public health and safety, or improved property; it has a diameter breast height of six inches or greater; and one or more of the following criteria are met:

- It has more than 50 percent of the crown damaged or destroyed.
- It has a split trunk or broken branches that expose the heartwood.
- It has fallen or been uprooted within a public-use area.
- It is leaning at an angle greater than 30 degrees.

Trees determined to be hazardous and that have less than 50 percent of the root-ball exposed should be cut flush at the ground level. Grinding of the resulting stump after the tree has been cut flush at the ground level is not eligible work. The cut portion of the tree is included with regular vegetative debris. The applicant should make an effort to cut the tree trunk as close to the ground as possible.

Straightening and bracing are emergency protective measures if they eliminate an immediate threat to lives, public health and safety, or improved property.

3. Hazardous Limb Removal (Hangers)

Removing hanging limbs may be eligible if the limbs are:

- Located on improved public property.
- Greater than two inches in diameter at the point of breakage.
- Still hanging in a tree and threatening a public-use area, e.g. trails, sidewalks, golf cart paths.

Only the minimum amount of work necessary to remove the hazard is eligible. Pruning, maintenance trimming, and landscaping are not eligible.
If the canopy of a tree located on private property extends over a public right-of-way such as a sidewalk, removal of hazardous limbs on the tree that extend over the public right-of-way and meet the above criteria may be eligible. Limbs on the tree that do not extend over the public right-of-way are not eligible.

4. Hazardous Tree Stumps

A stump may be determined to be hazardous and eligible as a per-unit cost for stump removal if it meets all of the following criteria:

- It has 50 percent or more of the root-ball exposed (less than 50 percent of the root-ball exposed should be flush cut).
- It is greater than 24 inches in diameter, as measured 24 inches above the ground.
- It is on improved public property or a public right-of-way.
- It poses an immediate threat to life, and public health and safety.

5. Construction and Demolition Debris

The definition of construction and demolition debris may vary between States. Construction and demolition debris can be defined as damaged components of buildings and structures such as lumber and wood, gypsum wallboard, glass, metal, roofing material, tile, carpeting and floor coverings, window coverings, pipe, concrete, fully cured asphalt, equipment, furnishings, and fixtures. To be eligible, construction and demolition debris must be a result of a Federally declared disaster. Certain types of construction and demolition debris are reusable recyclable. To conserve landfill space, it is prudent to separate materials for reuse or recycling.

Some construction and demolition debris may be hazardous, such as asbestos roofing and floor tile, and lead pipes. Public Assistance grant eligibility is subject to all other Federal laws and regulations, including environmental and hazardous waste ordinances. Documentation of the debris origin, any processing (reduction or recycling), and the final disposition is required for Public Assistance grant consideration.

Typically, removal of construction by-products generated by repairs or rebuilding is covered by insurance policies or included in the overall cost for reconstruction projects; therefore, it is not eligible for Public Assistance grant funding as emergency work under debris removal. It may, however, be reimbursed as part of the permanent work for the reconstruction of an eligible project.

6. Hazardous Waste

Hazardous waste is waste with properties that make it potentially harmful to human health or the environment. Hazardous waste is regulated under RCRA. In regulatory terms, a RCRA hazardous waste is a waste that appears on one of the four hazardous waste lists or exhibits at least one of the following four characteristics: ignitable, corrosive, reactive, or toxic.

7. Hazardous Household Waste (HHW)

HHW are defined as products and materials that are used and disposed of by residential, rather than commercial or industrial consumers. HHW includes some paints, stains, varnishes, solvents, pesticides, and other products or materials containing volatile chemicals that catch fire, react, or explode under certain circumstances, or that are corrosive or toxic.

Electronic waste, or e-waste, refers to electronics that contain hazardous materials such as cathode ray tubes. Examples include computer monitors and televisions.

(See Appendix F: Household Hazardous Waste)

8. White Goods

White goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, and water heaters.

Many white goods contain ozone-depleting refrigerants, mercury, or compressor oils. The Clean Air Act prohibits the release of refrigerants into the atmosphere, and requires that certified technicians extract refrigerants from white goods before they are disposed of or recycled. Some States also require certified technicians to extract compressor oils before disposing of or recycling white goods. Applicants should follow all Federal, State, and local requirements concerning ozone-depleting refrigerants, mercury, or oils.

9. Soil, Mud and Sand

Floods, landslides, and storm surges often deposit soil, mud, and sand on improved public property and public rights-of-way. Facilities commonly impacted by this type of debris may include streets, sidewalks, storm and sanitary sewers, water treatment facilities, drainage canals and basins, parks, and swimming pools.

The removal of this type of debris from improved public property and public rights-of-way may be eligible for Public Assistance grant funding. For instance, removing soil, mud, and sand from a roadway or sidewalk, or clearing out mud and sand from sewer lines, may be eligible for Public Assistance grant funding if it is the legal responsibility of an eligible applicant. Natural streams and unimproved property are not considered eligible facilities.

The amount of Public Assistance grant funding for removal of soil, mud, and sand is based on the quantity that was deposited due to the disaster. In order to determine the disaster-related debris quantities, the applicant should provide regularly scheduled maintenance reports that indicate the pre-disaster soil, mud, and sand levels. Maintenance reports are commonly requested for soil, mud, and sand removal from sewers, water treatment facilities, and drainage channels.

10. Vehicles and Vessels

For the removal of vehicles and vessels to be eligible, the following must demonstrated:

- The vehicle or vessel presents a hazard or immediate threat that blocks ingress/egress in a public-use area.
- The vehicle or vessel is abandoned, e.g. the vehicle or vessel is not on the owner's property and ownership is undetermined.
- Dorchester County followed local ordinances and State law by securing ownership.
- Dorchester County verified chain of custody, transport, and disposal of the vehicle or vessel.

11. Putrescent Debris

Putrescent debris is any debris that will decompose or rot, such as animal carcasses and other fleshy organic matter. The cost of putrescent debris collection and disposal may be eligible. Disposal of putrescent debris must be in compliance with applicable Federal, State, and local requirements to be eligible for Public Assistance grant funding. NRCS has developed specific disposal guidelines for animal carcasses.

12. Infectious Waste

Infectious waste is waste capable of causing infections in humans, including contaminated animal waste, human blood and blood products, isolation waste, pathological waste, and discarded sharps (needles, scalpels, or broken medical instruments).

Clearance, removal, and disposal of infectious waste may be the authority of another Federal agency. Upon review of applicable Federal statutes, regulations, and policies governing infectious waste, FEMA will determine eligibility on a case-by-case basis and may develop disaster-specific guidance when appropriate.

13. Chemical, Biological, Radiological and Nuclear-Contaminated Debris

Chemical, Biological, Radiological, and Nuclear (CBRN)-contaminated debris is debris contaminated by chemical, biological, radiological, or nuclear materials as a result of a natural or man-made disaster, such as a Weapon of Mass Destruction (WMD) event. Eligibility determinations on the clearance, removal, and disposal of CBRN-contaminated debris will be made by FEMA based on applicable Federal statutes, regulations, policies, and other guidance documents. Depending on the nature of the disaster and the debris it generates, FEMA may develop additional or disaster-specific eligibility guidance.

14. Garbage

Garbage is waste that is regularly picked up by an applicant. Common examples of garbage are food, packaging, plastics, and papers. In general, household food wastes can be collected through normal municipal waste collection methods and are not eligible.

f) Forecast Methods

After the disaster parameters and geographic extent is established, specific debris volumes can be quantified by using historical information or forecasting models. Historical records provide a basis for forecasting disaster-generated debris and can be used for planning purposes. Previous contracts for debris removal, recycling activities, volume-reduction processing, and landfill disposal records should be reviewed thoroughly to determine the quantity of disaster debris that was generated for a particular disaster event.

If previous disaster data is not available, assumptions may be made from neighboring jurisdictions' experience, or from USACE modeling. USACE emergency management staff has developed a modeling methodology designed to forecast potential amounts of hurricane-generated debris. Based on data from Hurricanes Frederic (1979), Hugo (1989) and Andrew (1992), the methodology has a predicted accuracy of plus/minus 30 percent. USACE mathematical modeling forecasts the quantity of debris specifically generated by hurricanes and is available in Appendix B, USACE Hurricane Debris Estimating Model.

1. Buildings

Several basic techniques have been established to forecast destroyed building debris quantities. These techniques can be used to forecast debris quantities prior to an event or estimate quantities after a disaster.

2. Residential Buildings

A formula for estimating the debris quantities from a demolished single-family home and associated debris is:

L' x W' x S x 0.20 x VCM =___ cubic yards of debris (cy)

Where:
L = length of building in feet
W = width of building in feet
S = height of building expressed in stories
VCM = Vegetative Cover Multiplier

The vegetative cover multiplier is a measure of the amount of debris within a subdivision or neighborhood. The descriptions and multipliers are described as:

- **Light** (1.1 multiplier) includes new home developments where more ground is visible than trees. These areas will have sparse canopy cover.
- **Medium (**1.3 multiplier) generally has a uniform pattern of open space and tree canopy cover. This is the most common description for vegetative cover.
- **Heavy** (1.5 multiplier) is found in mature neighborhoods and woodlots where the ground or houses cannot be seen due to the tree canopy cover.

The table below can be used to forecast debris quantities for totally destroyed single-family, single-story homes in the applicable vegetative cover category.

Typical House (square feet)	Vegetative Cover Multiplier			
	None	Light (1.1)	Medium (1.3)	Heavy (1.5)
1000 sq ft	200 cy	220 cy	260 cy	300 cy
1200 sq ft	240 cy	264 cy	312 cy	360 cy
1400 sq ft	280 cy	308 cy	364 cy	420 cy
1600 sq ft	320 cy	352 cy	416 cy	480 cy
1800 sq ft	360 cy	396 cy	468 cy	540 cy
2000 sq ft	400 cy	440 cy	520 cy	600 cy
2200 sq ft	440 cy	484 cy	572 cy	660 cy
2400 sq ft	480 cy	528 cy	624 cy	720 cy
2600 sq ft	520 cy	572 cy	676 cy	780 cy

The amount of personal property within an average flooded single-family home has been found to be:

- 25-30 cy for homes without a basement
- 45-50 cy for homes with a basement

Mobile homes have less wasted space due to their construction and use. The walls are narrower, and the units contain more storage space. Therefore, the typical mobile home generates more debris by volume than a single-family home. Historically, the volume of debris from mobile homes has been found to be:

- 290 cy of debris for a single-wide mobile home
- 415 cy of debris for a double-wide mobile home

3. Outbuildings

All other building volumes may be calculated by using the following formula:

$$\frac{L' \times W' \times H' \times .033}{27} = \_\_\_ \text{ cubic yards of debris}$$

Where:
L = length of building in feet
W = width of building in feet
H = height of building expressed in feet
0.33 is a constant to account for the "air space" in the building
27 is the conversion factor from cubic feet to cubic yards

4. Vegetation

Vegetation is the most difficult to estimate due to the random sizes and shapes of trees and shrubbery. Based on historical events, USACE has established a few rules of thumb in forecasting and estimating vegetative debris.

- Treat debris piles as a cube, not a cone, when estimating
- 15 trees, 8 inches in diameter = 40 cy (average)
- One acre of debris, 3.33 yards high = 16,117 cy

5. Volume – Weight Conversion Factors

These factors to convert woody debris from cubic yards to tons are considered reasonable and were developed by USACE.

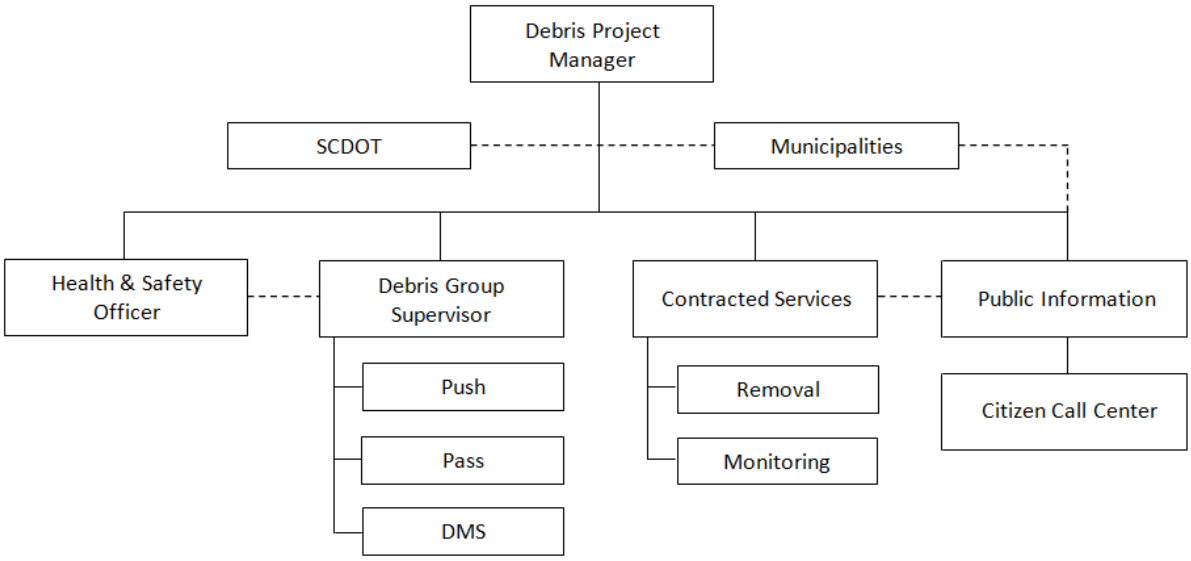
Softwoods	6 cubic yards = 1 ton
Hardwoods	4 cubic yards = 1 ton
Mixed debris	4 cubic yards = 1 ton
C&D	2 cubic yards = 1 ton

To verify these conversion factors in the field, several truckloads may be tested. Trucks should be well loaded, contain woody debris typical of that being removed, and truck capacities should be verified. It is recommended that testing be performed with all affected parties present.

III. Staff Roles and Responsibilities

a) Incident Command System (ICS)

The organizational chart below illustrates how debris management activities will be organized using ICS as a means to ensure effective utilization of resources and establish a chain of command for directing assignments and information sharing.



b) Roles and Responsibilities

1. Debris Project Manager

The Dorchester County Public Works Director or designee will assume the role of Debris Project Manager and shall be responsible for the following responsibilities in regard to all debris management activities:

- Manage, coordinate, and prioritize all debris removal activities related to an incident.
- Assign personnel to track the completion of assigned task.
- Will be responsible for the operation, planning, logistics, financial, and administrative elements involved in debris management activities within the county.

2. Public Works Branch Director

The Debris Group Liaison will be a representative from Dorchester County Public Works and will be assigned to work in the Dorchester County EOC. This individual will serve as the point of contact for assisting and coordinating debris management activities between the EOC and the Debris Group Supervisor, including various other agencies. The Debris Group Liaison will have the following responsibilities:

- Establish communications with counterpart at the State EOC and the surrounding counties.
- Receive and disseminate current information related the severity of the damage and current progress and needs.
- Coordinate with counterparts to fulfill all request for debris management activities.

3. Health and Safety Officer

During debris management operations the Dorchester County office of Risk Management and the appointed Safety Officer(s) will comply with all Federal, State, and local health and safety programs. This will enable the county along with its contractors to avoid accidents and exposure to hazardous materials during debris management operations. The health and safety strategy and procedures will at a minimum include the following:

- Personnel conducting debris operations will be trained, at a minimum, on items such as identification of hazards and type and proper use of personal protective equipment to be used.
- Additional training specific to the job duties of all personnel will be conducted to ensure the health and safety of staff and resident using the site.
- The contracted debris management and monitoring companies will be responsible for the compliance of their respective personnel and subcontractors in regard to health and safety. Individuals that are noncompliant will be suspended from debris removal activities until the situation is remedied. Frequent offenders of safety policies and procedures will be removed from the project.
- The safety officer selected by the incident commander will have the responsibility to implement health and safety requirements.
- Coordinate with DHEC for technical assistance regarding public health issues related to debris management to include: personal protective equipment, proper handling of specific kinds of waste, and general guidelines for safe work environments and equipment operations.
- The type of disaster, location, etc. may require special policies due to unusual circumstances.
- Information will be distributed to all agencies, contractors, and residents in the impacted area in regard to the health and safety programs that are available and the guidelines to follow.
- Representatives of the debris management teams will be advised by the safety officer and/or public health official. All representatives will be responsible for notifying persons under their authority.

4. **Public Information Officer**
   The PIO will be responsible for disseminating information to the local media and other municipalities throughout the county. Prepare and issue public information announcements regarding household garbage and recycling services; landfill, transfer station and drop-off locations; curbside household hazardous waste, and electronic waste (e waste) collection.

5. **Operations**
   The Operations staff is responsible for executing the entire debris removal operation and will perform the following:

   - Position equipment and resources for the response and recovery phases of debris removal operations.
   - Develop staff schedules and strategies.
   - Provide communication, facilities, services, equipment, and materials to support the response and recovery activities.
   - Monitor and direct force account and contract labor.
   - Distribute response and recovery resources.
   - Operate and manage the collection, debris management site, and disposal strategies.
   - Create a demobilization strategy for structures, if necessary.
   - Report progress for distribution to the debris management planning staff.

6. **Debris Field Supervisor**
   The Debris Field Supervisor will be responsible for communicating operating and policy directions to all subordinates involved in debris removal in their designated clean-up area. They must also provide feedback to the Debris Project Manager/Debris Group Liaison from subordinates, work affected citizens and public officials within their area of operation. The Debris Group Supervisor will be a representative of Dorchester County Public Works and will have a broad base of experience and knowledge regarding safety, workplace standards, equipment, etc. Some of the specific responsibilities are to:

   - Coordinate activities of subcontractors assigned to their debris removal area.
   - Supervise truck certifications and ensure the proper documentation for all subcontractors is completed, accurate and submitted in a timely manner.
   - Hold weekly (or as required) tailgate safety meetings with all debris removal personnel assigned to their detail.
   - Monitor crews to ensure all safety regulations are followed.

- Communicate daily with Client's representatives to evaluate progress and make adjustments to daily debris removal plans.
- Collect daily truck tickets and ensure timely delivery to on-site office.
- Provide daily update on the progress of the debris removal progress of all subcontractors.
- Schedule meetings to with contractors to communicate progress and establish priorities.

7. Debris Reduction Site Manager

The Debris Reduction Site Manager is responsible for the overall day-today operations of the debris management site and shall be responsible for the following:

- Maintain daily logs.
- Prepare site progress reports.
- Enforce safety/permitting requirements during site operations.
- Schedule environmental monitoring and make necessary updates to site layout.
- Ensure that debris removal contractors and the onsite debris processing contractors comply with the terms of their contracts.

8. Contracted Removal Services

Contractor's responsibilities include, but are not limited to:

- When authorized will clear debris from public rights-of-way and public property. Debris Contractors will collect brush, tree parts, mixed debris, and C&D debris placed within the rights-of-way from both sides of the roadway by residents. A minimum of three passes will be performed, unless otherwise directed by the Debris Project Manager.
- Establish Temporary Debris Management (TDM) site(s), as required, at location selected or approved by the Debris Project Manager.
- Hauling Debris from public rights-of-way and public property to TDM sites or authorized disposal facilities, and unloading to enable processing, recycling, and proper disposal.
- Managing and operating the TDM sites and loading debris reduction by-products for hauling and disposal.
- Perform debris by-product recycling programs, as approved by the authorized agencies.
- Haul non-recycled debris and debris reduction by-products to an authorized disposal facility.

9. Contracted Monitoring Services

The FPM will be responsible for communicating operating and policy directions to all subordinates involved in debris removal in their designated clean-up area. They must also provide feedback to senior management from subordinates, work affected citizens and public officials within their area of operation. FPMs will have a broad base of experience and knowledge regarding safety, workplace standards, equipment, etc. Some of the specific responsibilities are to:

- Coordinate activities of subcontractors assigned to their debris removal area.
- Supervise truck certifications and ensure the proper documentation for all subcontractors is completed, accurate and submitted in a timely manner.
- Hold weekly (or as required) tailgate safety meetings with all debris removal personnel assigned to their detail.
- Monitor crews to ensure all safety regulations are followed.
- Communicate daily with Client's representatives to evaluate progress and make adjustments to daily debris removal plans.
- Collect daily truck tickets and ensure timely delivery to on-site office.
- Provide daily update to debris removal progress of all subcontractors to Client's personnel and CrowderGulf Management.
- Attend Client meetings to communicate progress and receive Client input priorities.

10. Engineering/Planning

The Engineering/Planning staff will be responsible for providing technical and planning support to all other debris management sections and will be capable of completing the following task:

- Forecast debris volume based on assumed disaster type.
- Develop an estimating strategy for post-disaster debris quantities.
- Strategize and map debris haul routes.
- Select debris management sites and design the site layout.
- Determine reduction and recycling means and methods.
- Identify and coordinate environmental issues.
- Assess available landfill space and determine if additional space is needed.
- Develop the debris collection strategy.
- Write contract scopes of work, conditions, and specifications.
- Coordinate with other local and State jurisdictions for the road clearance and operations.

11. Legal

The Legal unit will review the process for all legal matters in regard to the debris management planning process. In addition to advising the planning staff, the legal department will also be responsible for the following:

- Contract review.
- Establish Right of entry permits.
- Review and/or establish a land acquisition process for temporary staging and reduction sites for debris management.
- Review and/or establish a legal process for the removal/demolition of debris on private property.
- Indemnification, condemnation of buildings.
- Ensure that site restoration and closure requirements are fulfilled.
- Ensure environmental and historic preservation compliance before, during, and after operations.

12. Compliance

Coordinate with essential State and Federal agencies, such as DHEC and the EPA to ensure compliance with environmental/historic preservation laws, regulations, and policies.

13. Finance & Administration

The finance section is responsible for making sure funds are available for equipment, supplies, communication devices, equipment, personnel, and any other supplies necessary for debris management activities.

Administration- This sub function will establish a records management system to document all debris management activities and will be responsible for the following:

- Personnel policies.
- Labor and equipment timesheets and summaries.
- Safety Procedures.
- Contract procurement procedures.
- Contracts.
- Billing and invoices (including debris hauler load tickets).
- Environmental permits.
- Rights of Entry and Hold Harmless agreements for private property debris removal and demolition (when applicable).
- Debris salvage and recycling value information.
- Managing documentation that may be required for Public Assistance grants.

14. Municipalities

This group will consist of at least one representative from each municipality in Dorchester County. Each member of this group will have the following responsibilities:

- Distribute pertinent information to other agencies and departments .
- Determine municipal capability to monitor and conduct debris clearance, removal, and disposal operations.
- Ensure that the municipality thoroughly documents the straight time and overtime hours for all force account labor, the amount of time each employee worked on debris management activities and the specific type of work completed.
- Provide documentation for all equipment, materials, and supplies used for debris management work.

c) Emergency Communications Strategy

Communications will be essential to the success of debris management, from start to finish. Understanding that communications infrastructure may be affected by the event, procedures to address possible shortfalls are imperative. Cellular phones will be the primary means amongst field operations and the EOC. If cellular communications have been comprised, a combination of 800MHz and low-band radio's will be utilized. ESF-2: Communications can provide a limited number of portable radios to supporting contractors and may request additional from the State EOC.

d) Training and Exercises

In coordination with the Dorchester County Public Works Department, EMD will host an annual ESF-3 workshop to discuss the concept of operations and responsibilities for both primary and support agencies involved; this will be an opportunity to make any necessary changes to both the EOP annex and contents under this plan. On a biennial basis, EMD and Public Works will hold a meeting with Crowder Gulf and SAIC to discuss operational issues, changes to the plan and any other relevant information related to debris management operations. Finally, plan stakeholders will have an opportunity to discuss and address debris issues in a simulated exercise environment as part of the annual EOC exercise – the scenario is typically an earthquake or hurricane event.

IV. CONCEPT OF OPERATIONS

a) Debris Management Actions

This Plan is separated into four stages that require planning not only by the Public Works Department, but other county entities that have overlapping responsibilities.

a. Preparedness and Mitigation

- Communicate and coordinate annually with debris management contract holders in preparation for hurricane season, beginning June 1, to discuss changes/updates to the plan or other known issues.
- Review and update (as required) potential debris storage sites for the type and quantity of debris anticipated following a catastrophic event.
- Identify potential debris storage sites for rent and formulate fee agreements and contracts.
- Review, revise and update local and regional transportation routes in cooperation with contiguous and regional jurisdictions.
- Develop site selection criteria checklists and assist in identifying potential debris storage sites.
- Identify and coordinate with appropriate regulatory agencies (DHEC) regarding potential regulatory issues and emergency response needs.
- Develop the necessary right of entry and hold harmless agreements indemnifying all levels of government against potential claims.
- Establish debris assessment process to define scope of problems and train personnel.
- Develop and coordinate pre-scripted announcements regarding the debris removal process, collection times, temporary storage sites, private contractors, environmental and health issues, etc.

b. Increased Readiness

- Alert stakeholders of the situation and to prepare for potential mobilization for response.
- Relocate personnel and resources out of harm’s way and stage in areas where they can be effectively mobilized.

- Review potential local and regional debris sites that may be used during the response and recovery phase in the context of the impeding threat.
- Contact debris management contract holders.
- Pre-assign employees to their collection sites or duty station.

c. Response

- Activate Debris Management Plan.
- Ensure for documentation of all debris related costs.
- Coordinate and track resources.
- Establish priorities regarding allocation and use of available resources.
- Identify and establish debris temporary storage and disposal sites.
- Monitor progress of response operations.

d. Recovery

- Continue to collect, store, reduce and dispose of debris generated from the event in a cost-effective and environmentally responsible manner.
- Continue to document costs.
- Upon completion of debris removal mission, close out debris storage and reduction sites by developing and implementing the necessary site restoration activities.
- Perform necessary audits of operation and submit claim for Federal assistance.

a) Damage Assessment

Initial damage assessments are the foundation for identifying the extent of damages and needs of the affected area. The County Tax Assessor's Office directs field units to accomplish this important mission and consolidates data for subsequent roll-up to the state level.

b) Removal Priorities

Debris removal priorities are typically divided into three phases, the first beginning with life safety to critical transportation infrastructure and eliminate debris that is a threat to public health and safety.

c) Phase I

a. Critical life safety: Clear debris from key roads to provide access for emergency vehicles and resources.

b. Provide access to critical facilities:

- Hospitals & Health Care Facilities
- Emergency Shelters
- Public Safety Buildings
- Communications
- Government Offices

d) Phase II

a. Designate county-wide collection sites for debris.

b. Assign county public works department personnel to these sites.

c. Provide access as needed to these sites.

e) Phase III

a. Begin receiving debris and other waste materials at collection sites.

b. Implement private vendor contracts for additional resources.

f) Debris Management Hierarchy

Debris should be handled with the following considerations to the solid waste management hierarchy:

1. Reduce
2. Reuse
3. Recycle
4. Recover (salvageable items)
5. Landfill

g) Debris Disposal and Reduction

Crushing- The least effective method of reduction for vegetative debris that results in a 50% reduction ratio.

Chipping /Grinding- Using this method vegetative debris is chipped or ground, which will result in a reduction ratio of 75%. The leftover product will be relocated to a local commercial user, or to the landfill for disposal.

Incineration- For large amounts of debris, it is best to use this method when permitted by conditions and regulations. Incinerating can reduce the volume of debris by as much as 90%.

To ensure public safety and safe debris operations, it will be necessary to establish setbacks and buffer zones within and around the reduction site. Chipping/Grinding cannot be operated within 200' of any public road, property line or dwelling. If grinding equipment is designed and operated in a manner that will not present a flying debris hazard, the distance may be lessened on a case by case basis as determined by DHEC. The incineration area will need to be 1,000 feet from any public road or occupied dwelling (other than inspection tower). Individual burn piles cannot exceed 45'x45' and must be no less than 100 feet from any other pile or type of debris on site. Storage piles cannot exceed 30'x200'x15' in height, nor be closer than 50' to any road or property line within 200' of any waterway and 100' from any drinking wells.

h) Site Close-out Procedures

When site operations are complete, the property must be restored to its original condition before returning the site to the property owner. This restoration includes the removal of all traces of operations and possible remediation of any contamination that may have taken place during the operations. The site, whether owned or leased by Dorchester County, must be brought back to its environmental state, prior to it being returned to the owner.

The final environmental site evaluation is an extension of the environmental monitoring program. Similar testing as completed in the baseline study will be conducted to confirm that the site has been returned to its pre-activity state. Test sample will be taken at the same location as those in the initial assessment and monitoring program. Based on the results of the testing, additional remediation may be required.

All operational documentation will be collected and organized and then submitted to the EOC Debris Management Group Supervisor for review. If needed, these documents will be incorporated into the disaster reimbursement request per pre-determined processes established by county policy.

i) Private Property Debris Removal

Private property debris removal (PPDR) is generally not eligible for reimbursement under the Public Assistance Program because debris on private property does not typically present an immediate health and safety threat to the general public. Also, debris removal from private property is generally the responsibility of individual private property owners, and other sources of funding, such as insurance, are commonly available to property owners to cover the cost of work. However, if private property owners move disaster-generated debris to the public right-of-way, the costs associated with removing this debris from the right-of-way may be eligible under the Public Assistance Program.

When large-scale disaster events cause mass destruction and generate large quantities of debris over vast areas, debris on private property may sometimes pose health and safety threats to the public-at-large. If private property owners are not available because they have evacuated, the State or local government may need to enter private property to remove debris considered to be an immediate threat to the lives, health, and safety of its residents. In such situations, the Federal Coordinating Officer (FCO) is authorized to approve the provision of Public Assistance for the removal of debris from private property when it is considered to be in the public interest. Only when pre-approved and it is deemed in the public interest will the County Public Works Department remove debris from private property.

The County will remove debris from private property only if authorized by FEMA.
(See Appendix H: Removal of Eligible Debris from Private Property)

j) Health and Safety Requirements

During debris management operations the Dorchester County office of Risk Management and the appointed Safety Officer(s) will comply with all Federal, State, and local health and safety programs. This will enable the county along with its contractors to avoid accidents and exposure to hazardous materials during debris management operations. The health and safety strategy and procedures will at a minimum include the following:

- Personnel conducting debris operations will be trained, at a minimum, on items such as identification of hazards and type and proper use of personal protective equipment to be used.
- Additional training specific to the job duties of all personnel will be conducted to ensure the health and safety of staff and resident using the site.
- The contracted debris management and monitoring companies will be responsible for the compliance of their respective personnel and subcontractors in regard to health and safety. Individuals that are noncompliant will be suspended from

debris removal activities until the situation is remedied. Frequent offenders of safety policies and procedures will be removed from the project.

- The safety officer selected by the incident commander will have the responsibility to implement health and safety requirements.
- Coordinate with DHEC for technical assistance regarding public health issues related to debris management to include: personal protective equipment, proper handling of specific kinds of waste, and general guidelines for safe work environments and equipment operations.
- The type of disaster, location, etc. may require special policies due to unusual circumstances.
- Information will be distributed to all agencies, contractors, and residents in the impacted area in regard to the health and safety programs that are available and the guidelines to follow.
- Representatives of the debris management teams will be advised by the safety officer and/or public health official. All representatives will be responsible for notifying persons under their authority.

k) Environmental Considerations and Other Regulatory Requirements

Even in times of disaster Dorchester County will be required to stay in compliance with environmental laws and regulations. This will be accomplished by working with Federal and State Environmental Protection agencies and local Health Departments to meet regulatory requirements.

l) Contracted Services

The solicitation and selection of all contracted services are conducted in accordance with State requirements and through a competitive procurement process that complies with Dorchester County's purchasing requirements. For a list of current debris management contractors ***(See Appendix D: Debris Management Contracts)***

To protect the interests of Dorchester County, specific items will be included in the contract(s) to minimize potential conflicts with the contactor. The following is a list of the provisions:

- Basis of Payment- Typically based on the volume and/or weight of the contractor's loads.

- Duration of contract- To expedite the debris removal process, the contract will establish a timeline for completing the work.

- Performance measures- When specific performance task are met and documented, Dorchester County will make payments to the contactor.

- Agreement to restore collateral damage- A contract provision will include a requirement that the contractor is to restore and/or repair (at the contractor's cost) all damaged infrastructure back to the pre-existing conditions if the damage was caused by their activities.

- Termination for convenience- This clause will allow Dorchester County to terminate a contract if the contractor does not deliver the services that are specified in the contract.

- Conflict resolution process- The purpose of this provision is to provide a means of mediation should an issue prove difficult to solve.

Disaster Debris Management Contractors

When the amount of debris generated is beyond the capabilities of Dorchester County's force account resources, mutual aid agreements, State resources, and volunteer labor it will be necessary to use the services of a debris management contractor. The county has established and maintains pre-event/unit-priced standby contracts with several debris management specialists that when directed will take on the responsibility for removal, reduction, and disposal of all disaster generated debris. Contractors will be paid based on the number of cubic yards of eligible debris hauled per truckload to the temporary debris management site(s).

Disaster Debris Monitors

The county has established and maintains a pre-event standby contract with an experienced contractor for disaster debris monitoring that when directed will be responsible for monitoring the collection of disaster debris. Monitoring debris removal will allow the county to:

- Accurately track cost and protect the county's financial interest.
- Verify that the work completed by the contractor is in the scope of work outlined.
- Document justification, as required, for the Public Assistance grant reimbursement.

If the eligible work and cost associated with debris management are not properly documented it could jeopardize Public Assistance Program Funding, therefore Dorchester County may also use force account labor to assist with the debris monitoring process.

If additional contracted labor is needed during debris management operations, additional contracts may be implemented. The following types of contracts are approved by the county:

Lump-Sum Contract- Used when the scope of work can be clearly identified and quantified; use for a well-defined scope of work with a limited contract period.

Lump Sum contracts can be defined in one of two ways:

- Area Method- The scope of work is based on a one time clearance of a specific area.

- Pass Method- The scope of work is based on a certain number of passes through a specified area, such as a given distance along a right of way.

Unit Price Contract- Used when individual work tasks are known but the total amount of work cannot be verified. Units of work can be measured in terms of weight (tons), volume (cubic yards), or any other quantifiable measure of debris hauled. This requires close monitoring of collection, transportation, and disposal to ensure that quantities are accurate. A unit price contract may become complicated due to the fact that debris may need to be segregated for proper disposal.

Time-and-Materials Contract - Used when the scope of work needed to achieve the outcome is unknown. The contractor is paid for actual time, equipment usage based on hourly rates, and material used. *FEMA typically only provides funding for the first 70 hours of work after a declared disaster using this type of contract.*

To protect the interests of Dorchester County, specific items will be included in the contract to minimize the potential conflicts with the contactor. The following is a list of the provisions:

m) Monitoring Debris Removal

Debris monitor(s) will be located at all debris management sites. The primary responsibility of the debris monitor is to verify that the debris being collected is eligible under the terms of the contract and to document debris removal operations.

The debris monitor(s) will be responsible for the following:

- Measure and certify truck capacities (recertify on a regular basis).
- Complete and physically control load tickets (in monitoring towers and the field).
- Validate hazardous trees, including hangers, leaners, and stumps (use appropriate documentation forms).
- Ensure that trucks are accurately credited for their load.
- Ensure that trucks are not artificially loaded to maximize reimbursement (e.g., debris that is wet or not compacted- fluffed).
- Ensure that hazardous waste is not mixed in with loads.
- Ensure that all debris is removed from trucks at the DMS.
- Report to project manager if improper equipment is mobilized and used.

- Report to project manager if contractor personnel safety standards are not followed.
- Report to project manager if general public safety standards are not followed.
- Report to project manager if completion schedules are not on target.
- Ensure that only debris specified in the scope of work is collected and identify work as potentially eligible or ineligible.
- Monitor site development and restoration of the DMS.
- Ensure daily loads meet permit requirements.
- Ensure that work stops immediately in an area where human remains or potential archeological deposits are discovered.
- Report to project manager if debris removal work does not comply with all local ordinances as well as State and Federal regulations.

V. Public Information

Distributing information and educating the public on debris management operations is an essential function to the disaster recovery process. The ESF-15 will be responsible for the public information campaign, however, the Debris Project Manager may assign a trained individual to handle debris management information as they see fit. Various types of information distribution will be used to disseminate information, including but not limited to the following:

- Debris pick-up schedules.
- Disposal methods and ongoing actions to comply with Federal, State and local environmental regulations.
- Disposal procedures for self-help and independent contractors.
- Restrictions and penalties for creating illegal dump sites.
- Curbside debris segregation instructions ***(See Appendix E: Picking up the Pieces).***
- Public drop-off locations for all debris sites.
- Process for answering the public's questions concerning debris removal.

VI. Applicable Rules and Regulations

The documents described in this section establish the legal authority for local governments to engage in debris cleanup operations and seek reimbursement from the federal government. The County should review these documents annually to familiarize themselves with the governing statutes and to identify any changes to the rules and regulations.

FEMA Guidelines

The Federal Emergency Management Agency (FEMA) coordinates the response and recovery efforts for all presidentially declared disasters. FEMA provides disaster

planning and response guidance documents to local governments. The guidance documents that are generally associated with debris recovery are summarized below.

FEMA Publication 322 – Public Assistance Guide

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

FEMA Publication 323 – Applicant Handbook

The Applicant Handbook (Handbook) is the official "how to" for local governments that are considering applying for reimbursement following a disaster through the PA Program. This Handbook should be used in conjunction with the Dorchester County Debris Management Plan immediately following a debris-generating event.

The Handbook provides the rules, procedures, and sample documents that local governments need as the "applicant" to FEMA. The publication is formatted so that the applicant has a step-by-step guide for each phase of the reimbursement process, including what information is critical to ensure reimbursement.

FEMA Publication 325 – Debris Management Guide

The Debris Management Guide is specifically dedicated to the rules, regulations, and policies associated with the debris cleanup process. Familiarity with this publication and any revisions can help a local government limit non-reimbursable expenses. The Debris Management Guide provides the framework for the debris removal process authorized by the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), including the following:

- ✓ Eliminating immediate threat to lives, public health and safety
- ✓ Eliminating immediate threats of significant damage to improved public or private property
- ✓ Ensuring the economic recovery of the affected community to benefit the community at large

FEMA Publication 327 – Public Assistance Debris Monitoring Guide

The PA Debris Monitoring Guide describes how to accurately document debris removal, disposal operations, and associated costs. All reimbursable work must comply with PA guidelines and all applicable federal, state and local regulations.

Failure to properly monitor debris removal operations may cause a rejection of reimbursement.

FEMA Publication 329 – Debris Estimating Field Guide

FEMA guidance to estimate – accurately, consistently, and in a timely manner – the debris quantities and types in the aspect of a FEMA operation.

Disaster-Specific Guidance (DSG)

DSG is a policy statement issued in response to a specific post-event situation or need in a state or region. Each DSG is issued a number and is generally referred to along with its numerical identification.

DSG typically relate to the authorization of private property cleanup, cleanup and payment of stumps, or notification of large projects. County staff should be aware of any new DSG that is issued by FEMA following an event.

Other Relevant Documents

The two primary directives developed by the federal government that provide the authorization and use of federal funds to reimburse local governments for disaster-related expenses are the Stafford Act and the Code of Federal Regulations – Title 44 Emergency Management and Assistance (44 CFR). A brief summary of these laws are provided below.

Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Stafford Act authorizes the PA Program. The fundamental provisions of this act are as follows:

- ✓ Authorizes FEMA to administer federal disaster assistance
- ✓ Defines the extent of coverage and eligibility criteria of the major disaster assistance programs
- ✓ Authorizes grants to the states
- ✓ Defines the minimum federal cost-sharing levels

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

Procedural requirements for PA Program operations are provided by 44 CFR. These regulations are designed to implement a statute based upon FEMA's interpretation of the Stafford Act. They govern the PA Program and outline program procedures, eligibility and funding.

VII. Appendixes

Appendix A: HAZUS- Hurricane Scenario

Appendix B: HAZUS- Earthquake Scenario

Appendix C: Dorchester County Public Works Memorandum (Disaster Debris Plan)

Appendix D: General Descriptions of Dorchester County Convenience Centers and their Locations

Appendix E: Picking up the Pieces (Specific Guidelines for Hauling Disaster Generated Debris to the Curb)

Appendix F: Household Hazardous Waste

Appendix G: List of Preapproved Contractors

Appendix H: Removal of Eligible Debris from Private Property

Appendix A:

HAZUS-Hurricane Scenario

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	HUGO
Type:	Historic
Max Peak Gust in Study Region:	117 mph

Induced Hurricane Damage

Debris Generation

Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 568,293 tons of debris will be generated. Of the total amount, 466,829 tons (82%) is Other Tree Debris. Of the remaining 101,464 tons, Brick/Wood comprises 43% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 1753 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 57,647 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Debris Summary Report:

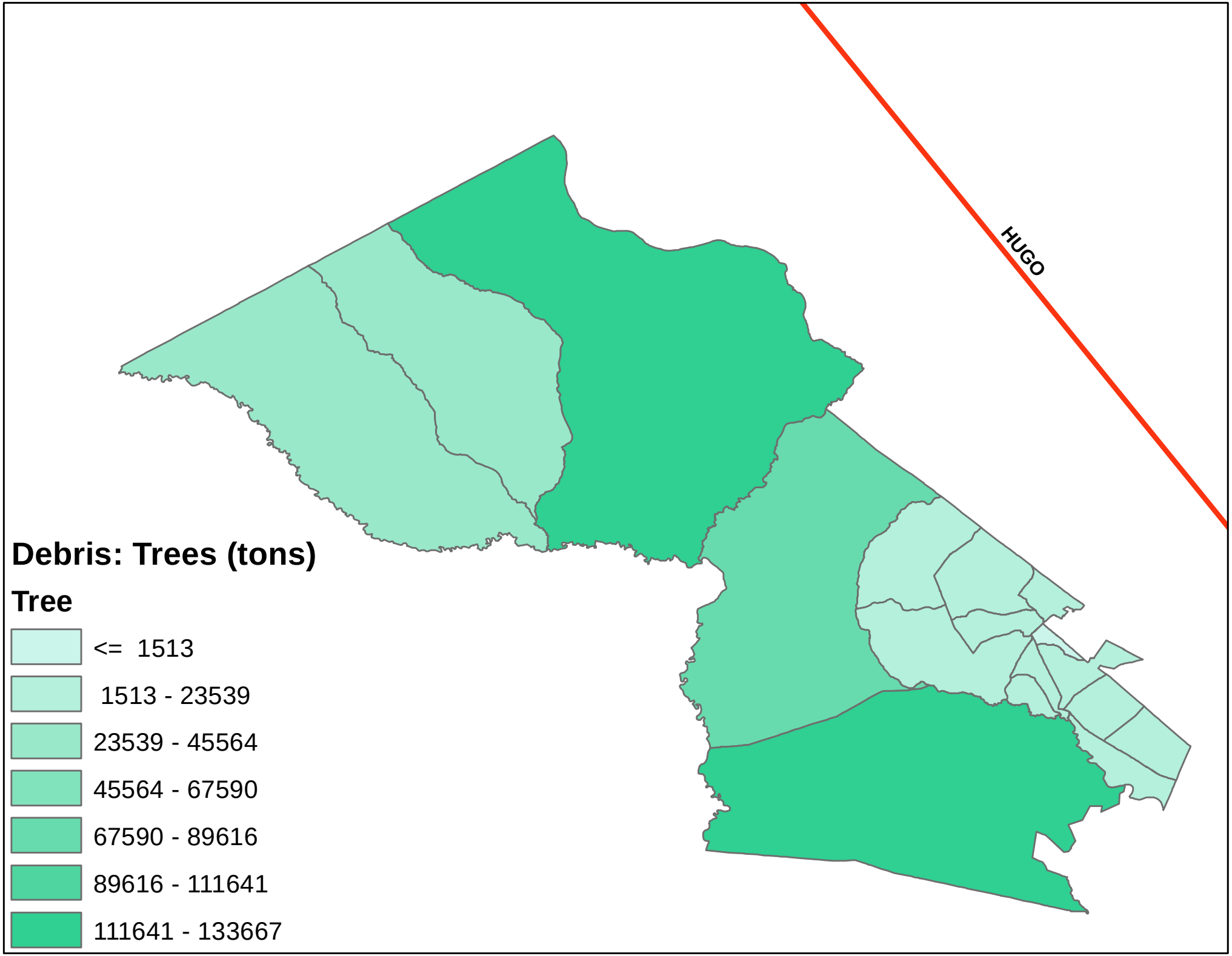
November 27, 2013

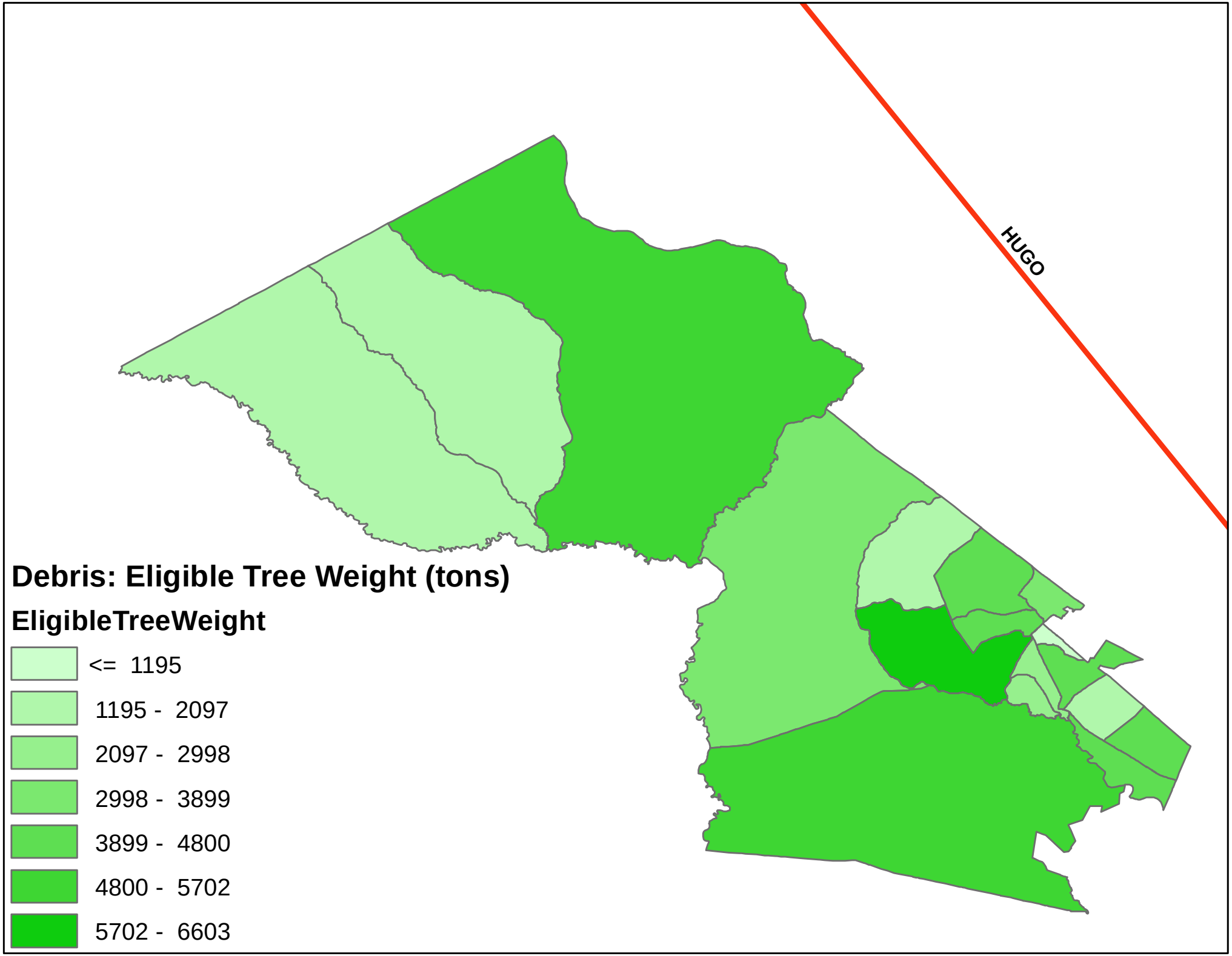
All values are in tons.

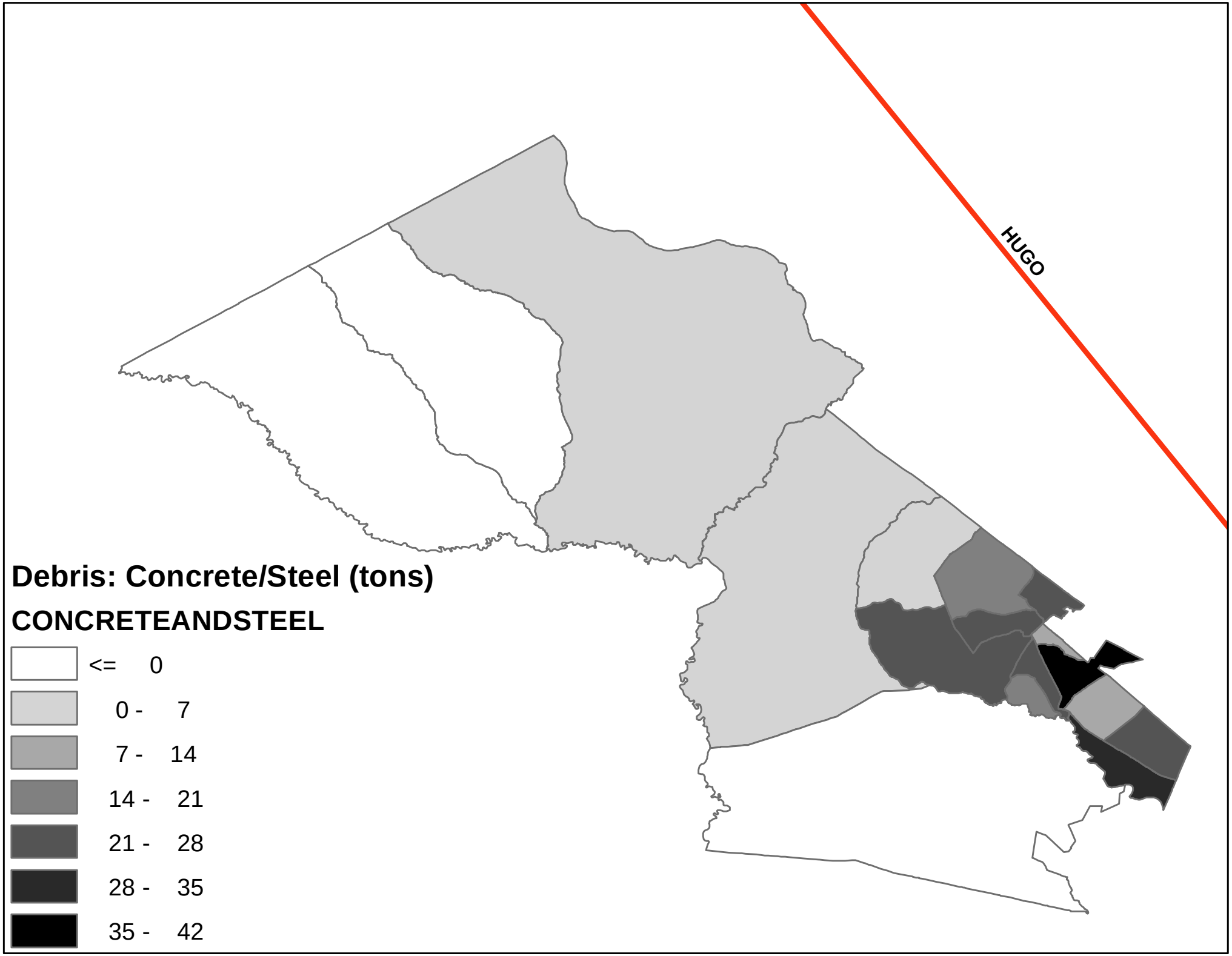
	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
South Carolina					
Dorchester	43,558	259	57,647	466,829	568,293
Total	**43,558**	**259**	**57,647**	**466,829**	**568,293**
Study Region Total	**43,558**	**259**	**57,647**	**466,829**	**568,293**

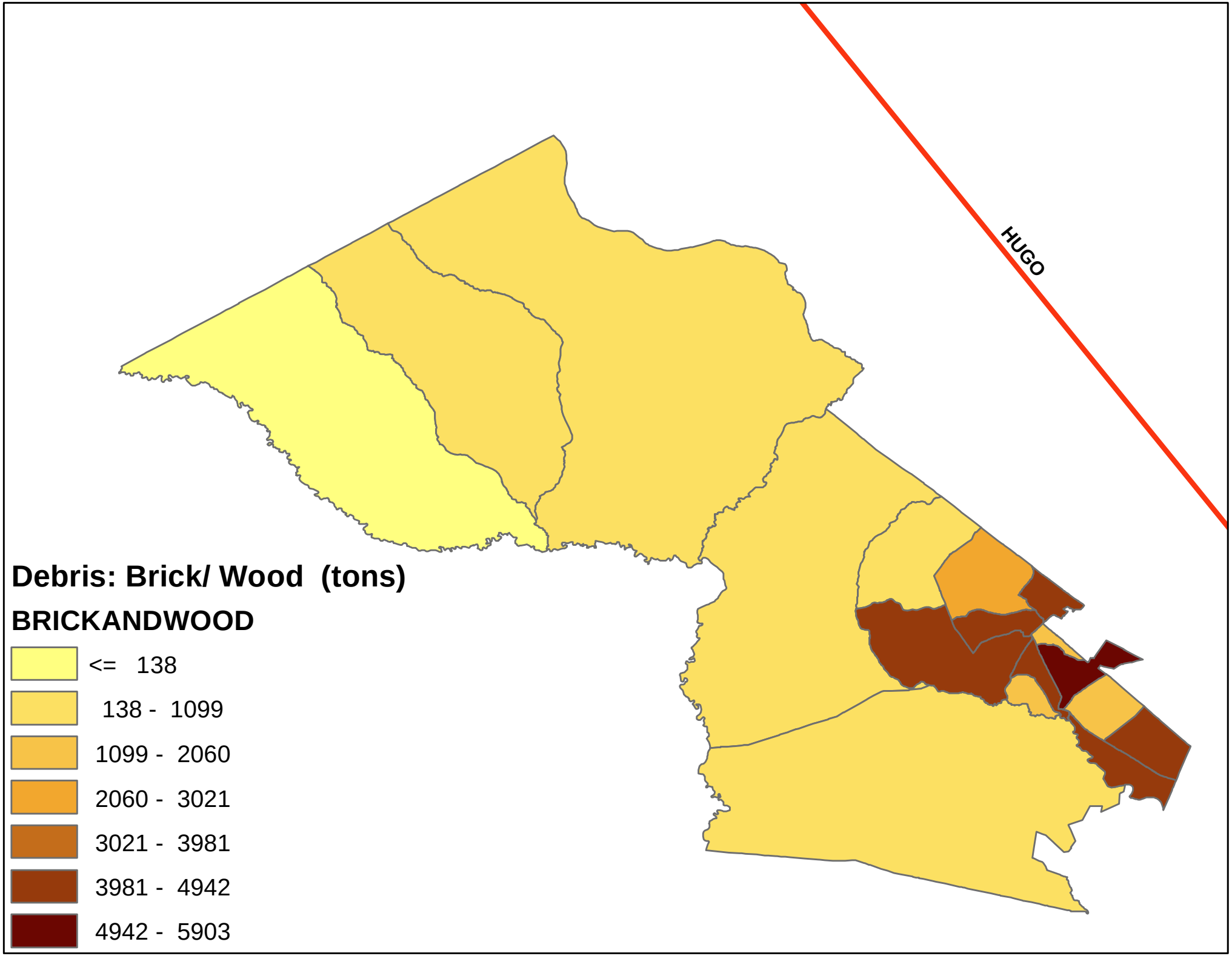
Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/state were selected at the time of study region creation.

Study Region : fema_debris_HU
Scenario : HUGO


HUGO
Debris: Trees (tons)
Tree
<= 1513
1513 - 23539
23539 - 45564
45564 - 67590
67590 - 89616
89616 - 111641
111641 - 133667


HUGO
Debris: Eligible Tree Weight (tons)
EligibleTreeWeight
<= 1195
1195 - 2097
2097 - 2998
2998 - 3899
3899 - 4800
4800 - 5702
5702 - 6603


HUGO
Debris: Concrete/Steel (tons)
CONCRETEANDSTEEL
<= 0
0 - 7
7 - 14
14 - 21
21 - 28
28 - 35
35 - 42


HUGO
Debris: Brick/ Wood (tons)
BRICKANDWOOD
<= 138
138 - 1099
1099 - 2060
2060 - 3021
3021 - 3981
3981 - 4942
4942 - 5903

Appendix B:

HAZUS – Earthquake Scenario

Earthquake Scenario

Hazus uses the following set of information to define the earthquake parameters used for the earthquake loss estimate provided in this report.

Scenario Name	debris_plan
Type of Earthquake	Historical
Fault Name	NA
Historical Epicenter ID #	4694
Probabilistic Return Period	NA
Longitude of Epicenter	-80.00
Latitude of Epicenter	32.90
Earthquake Magnitude	6.80
Depth (Km)	10.00
Rupture Length (Km)	NA
Rupture Orientation (degrees)	NA
Attenuation Function	CEUS, Charleston 2008

Induced Earthquake Damage

Debris Generation

Hazus estimates the amount of debris that will be generated by the earthquake. The model breaks the debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 0.48 million tons of debris will be generated. Of the total amount, Brick/Wood comprises 43.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 19,200 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.

Debris Summary Report

November 27, 2013

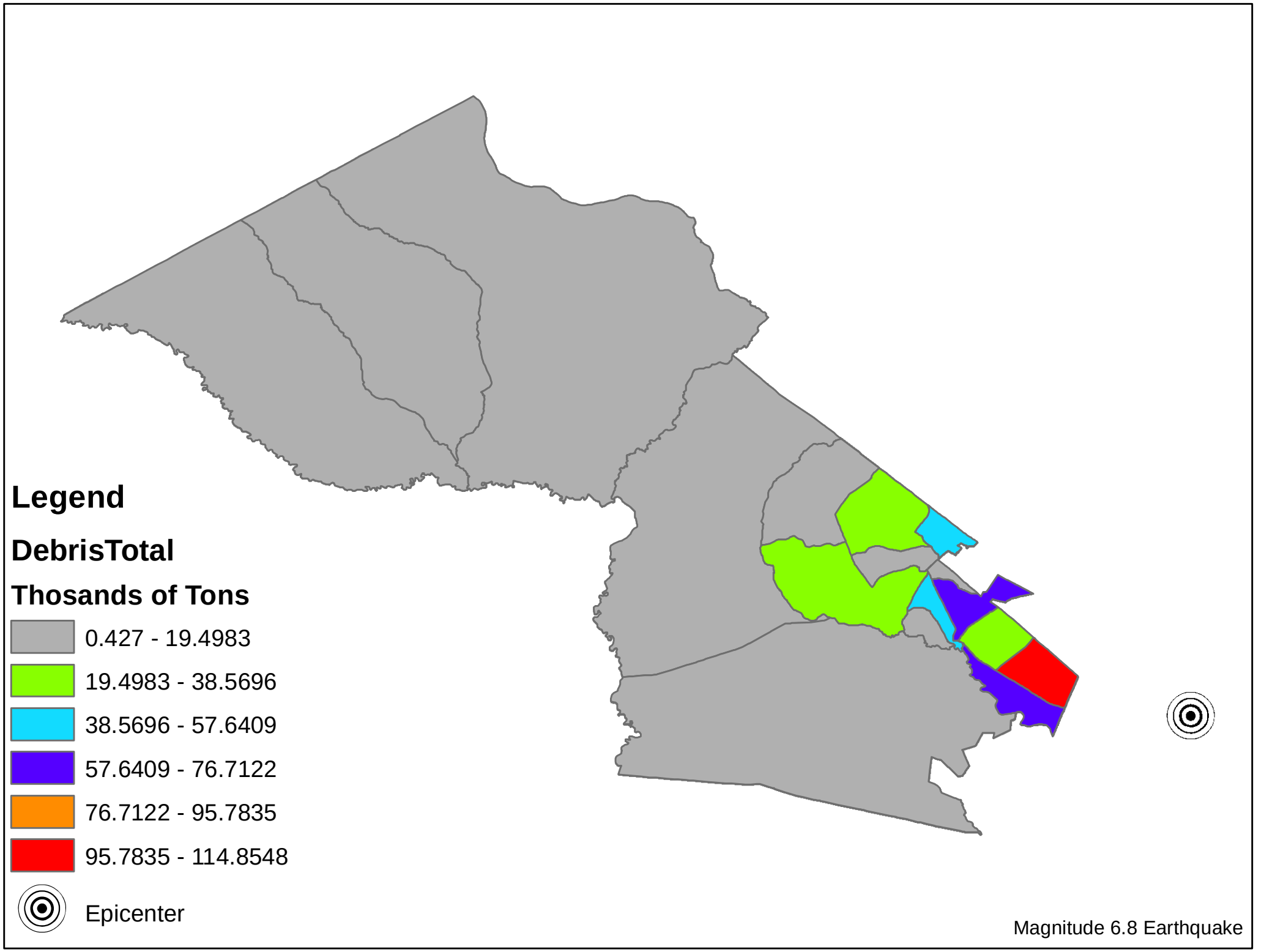
All values are in thousands of tons.

	Brick, Wood & Others	Concrete & Steel	Total
South Carolina			
Dorchester	205	276	481
Total	**205**	**276**	**481**
Region Total	**205**	**276**	**481**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Study Region : fema_debris_EQ

Scenario : debris_plan


Legend
DebrisTotal
Thosands of Tons
0.427 - 19.4983
19.4983 - 38.5696
38.5696 - 57.6409
57.6409 - 76.7122
76.7122 - 95.7835
95.7835 - 114.8548
Epicenter
Magnitude 6.8 Earthquake

Appendix C:

Dorchester County Public Works Memorandum

(Disaster Debris Plan)

DORCHESTER COUNTY PUBLIC WORKS

2120 EAST MAIN STREET, DORCHESTER, SC 29437

Matthew Halter, Public Works Director

(843) 832-0070 - (843) 563-0070 * Fax (843) 832-0073 - (843) 563-0073

MEMORANDUM

To: Department of Health & Environmental Control (Air Quality)
Attention: Anna E. Eskridge

From: Dorchester County Director Public Works, Mr. Matthew Halter, PE, PLS

Subject: Disaster Debris Plan 2013

Date: May 16, 2013

Encl:
(1) Affordable Waste Site
(2) Sandy Pines Site
(3) Lower Dorchester Mulch Site

There have been a few changes to the initial report. See highlighted portions for changes.

For the purpose of the subject planning, Dorchester County is divided into two areas: Upper Dorchester County and Lower Dorchester County, the dividing point is the Four Hole Swamp. All debris generated in the upper part of the County will be directed to the debris sites described in enclosures (1) & (2). All debris generated in the lower part of the County will be directed to the debris in enclosures (3). The primary contacts in the county are as follows:

Mr. Matthew Halter, Public Works Director, (843) 832-0060 & (843) 514-9415 mhalter@dorchestercounty.net
Mr. Mike Goldston, Public Works Deputy Director, (843) 832-0135 mgoldston@dorchestercounty.net
Mr. Jim Simpson, Transportation Supervisor, Upper County, (843)832-0094 & 297-3398 jsimpson2@dorchestercounty.net
Mr. Mario Formisano, Emergency Management Director, (843) 832-0041 mformisano@dorchestercounty.net

Dorchester County has three potential debris sites selected for Hurricane Season 2013, shown in Enclosures (1) through (3).

The following rules must be adhered to:

1. The Governor must declare the county/town a disaster area and he Bureau of Air Quality (at DHEC) must grant a temporary exemption from the regular open burning regulations prior to opening any sit for burning. Site Managers call DHEV at (843) 953-0150, to receive this authorization. This authorization is for vegetative debris only. Domestic garbage or other types of waste may not be burned.
2. It is encouraged that Enhanced Air Burners be obtained and used at authorized burn sites. Tires may not be added to burn piles to enhance burning.
3. Sites will be cleared and graded o avoid ponding of storm-water runoff and to provide a fire lane between bun sites and adjacent property.
4. All-weather access roads must be maintained.

5. The County will provide traffic signs to assist haulers/contractors and the public to find authorized sites listed herein. Directional signage inside the sites showing the designated areas are the responsibility of the site manager.
6. Internal site signs will be posted to designated Owner and/or Site Manager's name, number, hours of operation and how site can be used and what uses are prohibited.
7. Sites will be manned with hours of operations * Monday through Friday, 9:00am to 3:00pm. Sites will be secured when not in use. Local fire protection must be pre-arranged. Sit managers must have a means to call for help.
8. Chipping/Grinding cannot be operated within 200' of any public road, property line or dwelling. (If grinding equipment is designed and operated so as not to present a flying debris hazard, the distance may be lessened on a case by case basis as determined by DHEC). The by-product of the grinding operation should either be hauled to and composted at a DHEC registered compost site, or marketed as a mulch product or an industrial fuel and transported off site within a reasonable time frame as determined by DHEC. Burn piles must not be within 1,000' from any public road or occupied dwelling. Storage piles cannot exceed 30'x200'x15' in height, nor be closer than 50' to any road or property line or within 200' of any waterway and 100' from any drinking water wells. Individual burn piles cannot exceed 45'x45' and be closer than 100' to another bun pile. Prevailing winds must be considered when planning a bun area. Smoke resulting from the burn should not create a traffic hazard on roadways.
9. The site manager will maintain a record of how much material is being processed and the County will make monthly reports to DHEC. The Chipping/grinding refuse will be relocated to a local commercial user, or to the landfill for disposal.
10. Adequate water service and firefighting equipment must be available for protection from uncontrolled fires.
11. The site manager and his/her employees must comply with OSHA requirements and wear a hard hat and safety as may be required.

* A variance can be requested from DHEC to extend the hours of operation based on the volume of debris to be processed.

(1) SCDHEC, Environmental Control
Attention: Ms. Melissa Wheatley or Wendy Boswell,
Region 7 – Charleston EQC
1362 McMillan Avenue, Suite 300
Charleston, SC 29405

(2) Carolina Landfill, LLC
Attention: Kenny Younginer
5264 B International Blvd, Suite 100
North Charleston, SC 29418

(3) Dorchester County Public Works
Attention: Matthew Halter, Director
2120 East Main Street
Dorchester, SC 29437

(4) Dorchester County Public Works
Attention: Mike Goldston, Deputy Director
2120 East Main Street
Dorchester, SC 29437

(5) Dorchester County Emergency Management
Attention: Mario Formisano, Director
212 Deming Way, #3
Summerville, SC 29483

(6) Dorchester County Public Works
Attention: Jim Simpson, Road Maintenance
2120 East Main Street
Dorchester, SC 29437

(7) Dorchester County Public Works
Attention: Jack Ellis, NPDES Administrator
2120 East Main Street
Dorchester, SC 29437

Dorchester County Disaster Debris Sites 2013 (updated 5/16/2013)

Directions and Contacts:
Dorchester County Disaster Debris Sites:

(1) Carolina Landfill, LLC (AKA: Affordable Waste Site) – **(Burn &/or Grind)**
(2) Sandy Pines Site **(Grind Only)**
(3) Lower Dorchester Mulch Site (AKA: Suburban) – **(Grind Only)**
(4) Winding Wood Road, St. George, SC **(Burn &/or Grind)**

PLEASE NOTE: Dorchester County will not use Fennell/Spring Grove site listed in previous correspondence (see below).

Notes about sites:
Carolina Landfill, Sandy Pines and Lower Dorchester Mulch sites were re-evaluated in May 16, 2013 and Winding Wood Road, St. George, SC was re-evaluated May 16, 2013. Lower Dorchester Mulch Site and Sandy Pines do not meet distance requirements for burning debris and may grind only.

Carolina Landfill, LLC & Wining Wood Rd appeared to be the only sites that could meet distance requirements for burning debris. The distance for grinding debris appeared to be okay at all sites, if performed according to guidelines. The Sandy Pines site could not meet the 1000 feet setback (to burn debris) from roads and the nearby railroad.

However, Carolina Landfill, LLC and Winding Wood Road do meet distance requirements for burning debris and grinding. See Pictures of sites below:

Carolina Landfill, LLC (5/16/13) TMS# 063-00-00-102

Lower Dorchester Mulch Site (5/16/13) TMS# 145-08-00-17

Sandy Pines Site (5/16/13) TMS# 085-00-00-065

Site visited 5-8-13. Residential yard debris currently staged at this site

Winding Wood Road, St. George SC TMS# 046-00-00-022

CAROLINA LANDFILL, LLC

Commercial Operation hosted by Carolina Landfill, LLC
355 Harrison Road
Dorchester, SC 29437
General Manager: Kenny Younginer, (843) 297-2215

TMS# 063-00-00-102, A 90 Acre site soon to be expanded to 170 Acres.
Currently used for landfill. This site is suitable for grinder site and for burning. Truck Scales and office on site. Contact (843) 462-2401 (O) and 462-2790 (F).

Directions:
Dorchester County Public Works: follow Hwy 178 N (2/3 mile) for right turn onto Beidler Forest Road (S-18-28). Travel (1 mile) turn left on Harrison Road (S-18-831). Travel (1.2 mile) Affordable Land Fill on your left.

Interstate I-26: Harleyville exit #177, turn south on Judge Street(S-18-453). Travel 1.2 miles to stop sign and turn left on (W. Main Street) Hwy 178. Travel (4.2 miles) and turn left onto Taylor Pond Road (S-18-139). Travel (.9 mile) and turn right onto Harrison Road (S-18-828). Travel (1.8 mile) Affordable Waste Site on your right.

See attached maps:

ENCLOSURE (1)


WEST MAIN STREET
Hwy 178
HARLEYVILLE
EXIT #177
JUDGE STREET
HARLEYVILLE
HWY 178
AFFORDABLE WASTE SITE
Carolina Landfill, LLC
TAYLOR POND ROAD
HARRISON ROAD
BEDLER FOREST ROAD
DORCHESTER COUNTY
PUBLIC WORKS
SUMMERVILLE 14 MILES
RECEIVED
JUN 09 2009
SCDHEC
TRIDENT-EQC
ENCLOSURE (1)

SANDY PINES SITE

Dorchester County Waste Site
Un-manned vacant land

TMS# 085-00-00-065, is a five acre site containing a manned Convenience Site. It has the potential to be a Grinder Site and/or a Burn Site.

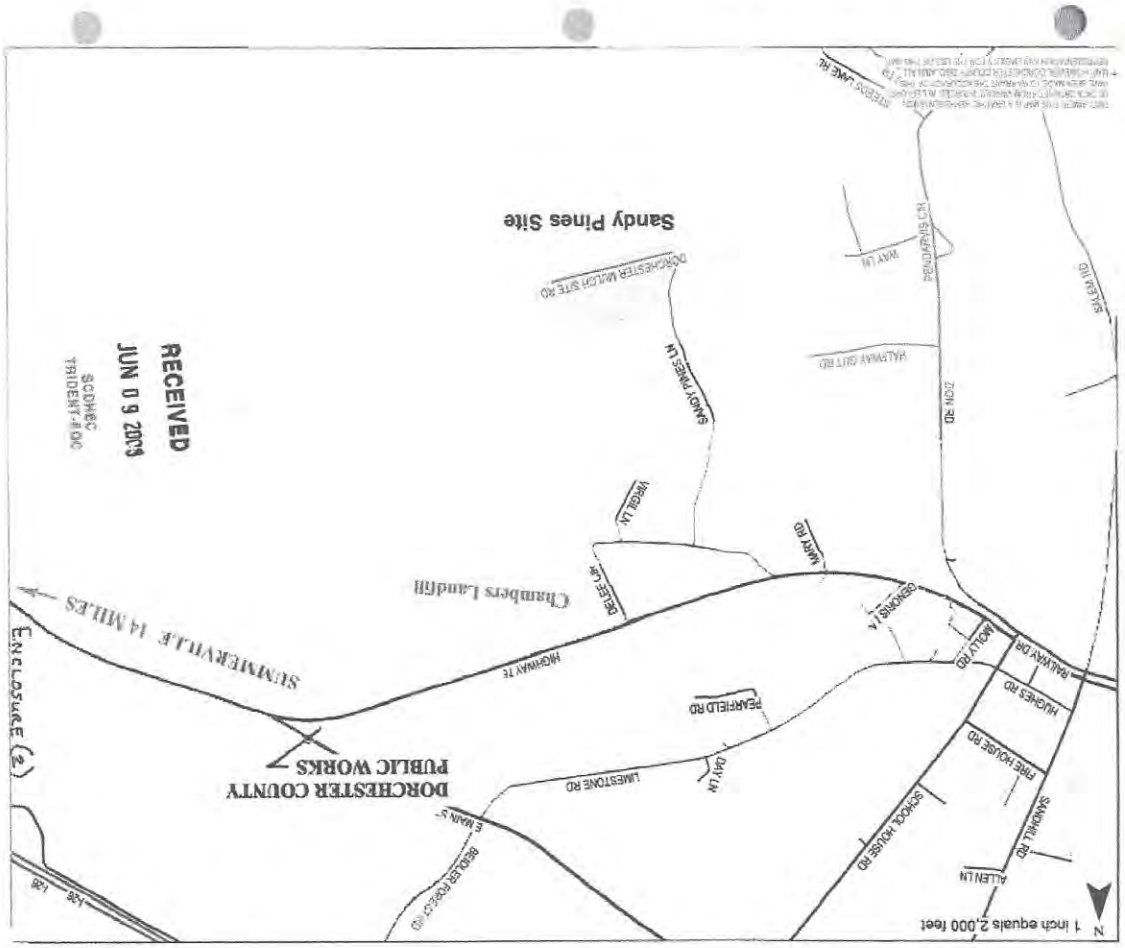
Directions:

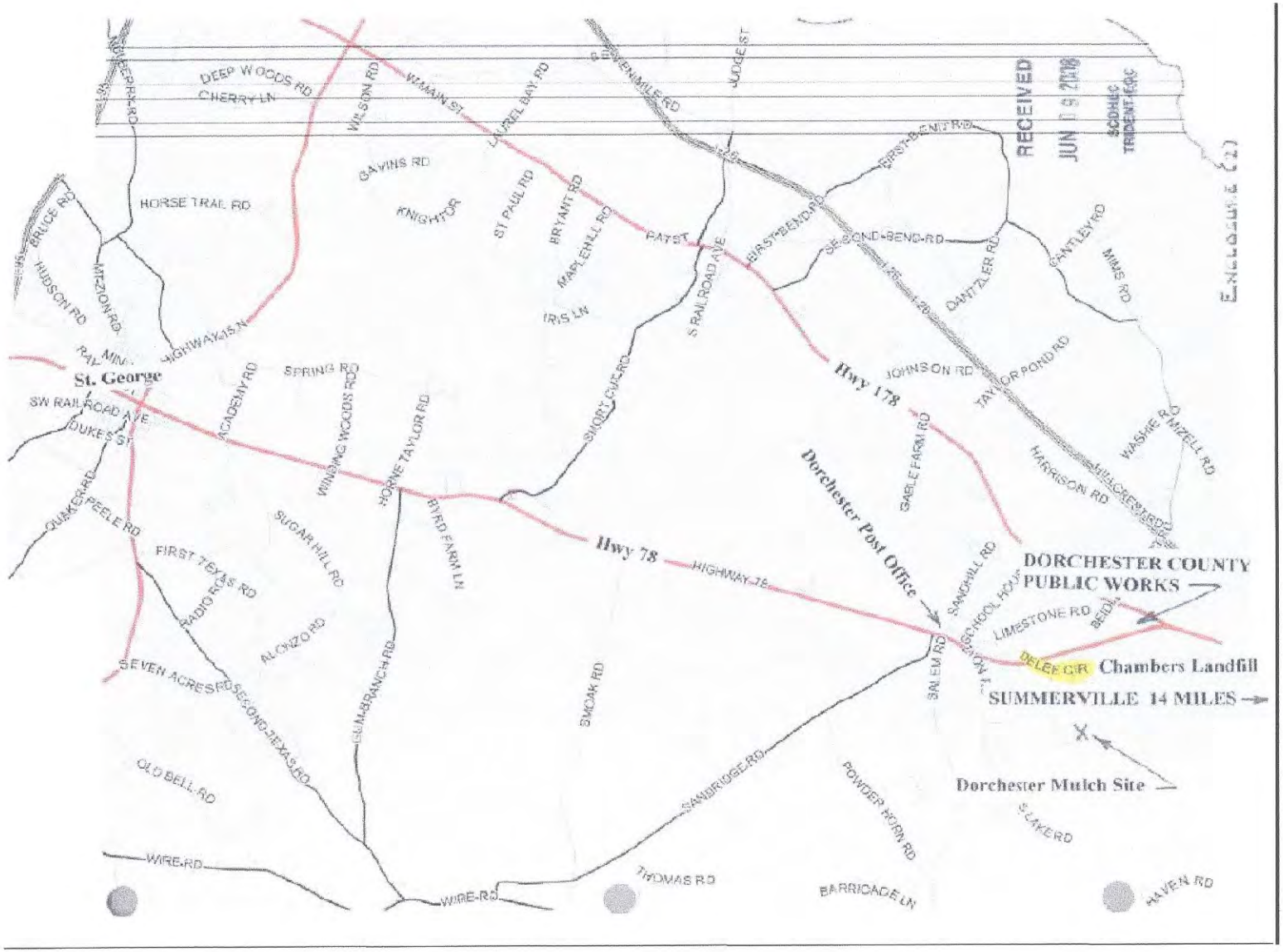
From County Public Works Building travel west on Hwy 78 toward St. George. Travel (1.1 miles) just past the Chamber Landfill Entrance and turn left onto Delee Circle. Travel (.3 miles) and turn right at the Drag Strip. Travel (.3 mile) and turn left onto Sandy Pines Lane. Travel (1 mile) and turn left onto Dorchester Mulch Site Road. Travel (.4 miles) and site is on your left just prior to the Convenience Site at the end of road.

From St. George (County Seat) travel east on Hwy 78 (11.8 miles). You will pass through the Dorchester Post Office area. Turn right onto Delee Circle. Travel (.3 mile) and turn right onto Sandy Pines Lane. Travel (1 mile) and turn left onto Dorchester Mulch Site Road. Travel (.4 miles) and site is on your left just prior to the Convenience Site at the end of road.

See attached Maps:

ENCLOSURE (2)




RECEIVED
JUN 16 2016
SCDHEC
TRIDENT REGION
DEEP WOODS RD
CHERRY LN
WILSON RD
WIMAIN ST
LAUREL BAY RD
SEVEN MILE RD
JUDGE ST
FIRST BENT RD
GAVINS RD
KNIGHTOR
ST PAUL RD
BRYANT RD
MAPLE HILL RD
PATT ST
FIRST BEND RD
SECOND BEND RD
CANTLEY RD
MIMS RD
HORSE TRAIL RD
BRUCE RD
HUDSON RD
MT ZION RD
HIGHWAY 78 N
IRIS LN
S RAILROAD AVE
SMOKY CUT RD
Hwy 178
JOHNSON RD
TAYLOR POND RD
WASHINGTON MIZELL RD
HARRISON RD
HILLCREST RD
St. George
SW RAILROAD AVE
DUKES ST
ACADEMY RD
SPRING RD
WINDING WOODS RD
HORNE TAYLOR RD
BIRD FARM LN
GABLE FARM RD
Dorchester Post Office
QUAKER RD
PEELE RD
FIRST TEXAS RD
SUGAR HILL RD
RADIO ROAD
ALONZO RD
Hwy 78
HIGHWAY 78
SANDHILL RD
SCHOOL HOUSE RD
LIMESTONE RD
DORCHESTER COUNTY
PUBLIC WORKS
DELEE CIR
Chambers Landfill
SUMMERVILLE 14 MILES
SEVEN ACRES RD
SECOND TEXAS RD
SUMMERBRANCH RD
SMOAK RD
SALEM RD
OLD BELL RD
SAMBRIDGE RD
POWDER HORN RD
Dorchester Mulch Site
SLAYE RD
WIRE RD
THOMAS RD
BARRICADE LN
HAVEN RD

LOWER DORCHESTER MULCH SITE

Dorchester County Mulch Site
Un-manned Mulch Site

TMS# 145-08-00-017, is a five and one half acre site being considered as a potential grinder site. It's proximity to highways and habitable housing makes it untenable for burning.

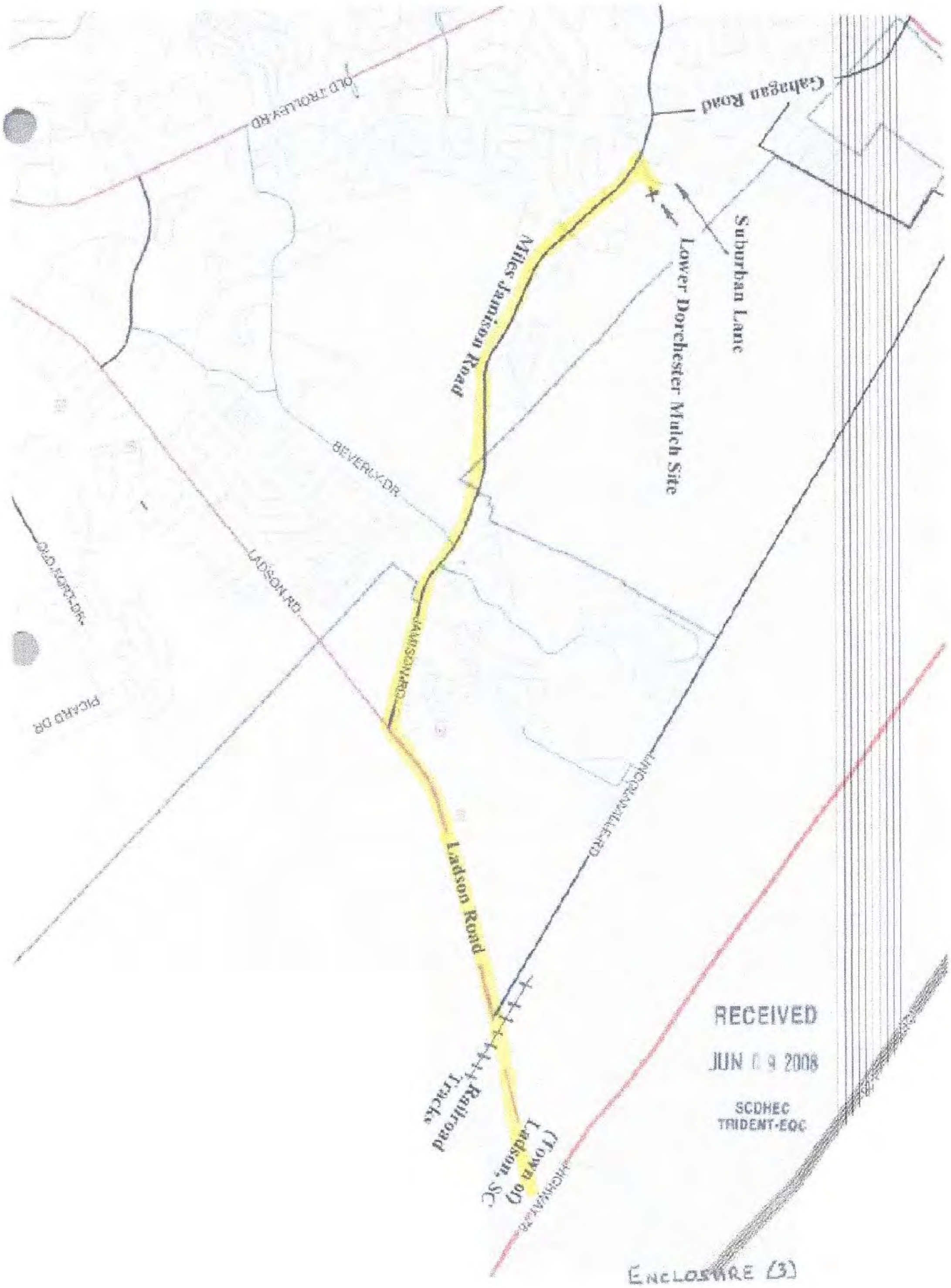
Directions:
From Summerville Town Hall - (located at Richardson Avenue and South Main Street) travel (.5 mile) south on South Main Street. At the traffic light, turn left onto East Sixth South Street. Travel (.3 mile) to cross over the Berlin G. Myers Parkway traffic light. The name of the road changes to Gahagan Road. Travel (1.2 miles) east on Gahagan Road to the traffic light. Turn left and travel (.2 miles) on Miles Jamison Road. Turn left at Suburban Lane. Travel (500') and the site will be on your right. Should you end up in the Suburban parking lot, you've gone too far.

From Ladson, SC - (intersection of hwy 78 and Ladson Road) travel (.6 mile) south on Ladson Road. Cross the Railroad Tracks, pass through the traffic light, and travel (1 mile) to the second traffic light. Turn right onto Miles Jamison Road. Travel (2.5 miles) and turn right onto Suburban Lane. Travel (500') and the site will be on your right. Should you end up in the Suburban parking lot, you've gone too far.

See attached maps:

ENCLOSURE (3)


S MAIN ST
East 6th South Street
Berlin G Myers Parkway
(T Hall)
Summerville, SC
S GUM ST
Cahaspn Road
DOVE LN
GARDEN RD
W BOUNDARY ST
Mike Jamison Road
Suburban Lan
Lower Dorchester Mulch Site
EAGLE DR
GREENWOOD RD
E 5TH NORTH ST
RECEIVED
JUN 2008
SCDHEC
TRIDENT-EQC
ENCLOSURE 3)



RECEIVED
JUN 09 2008
SCDHEC
TRIDENT-EQC

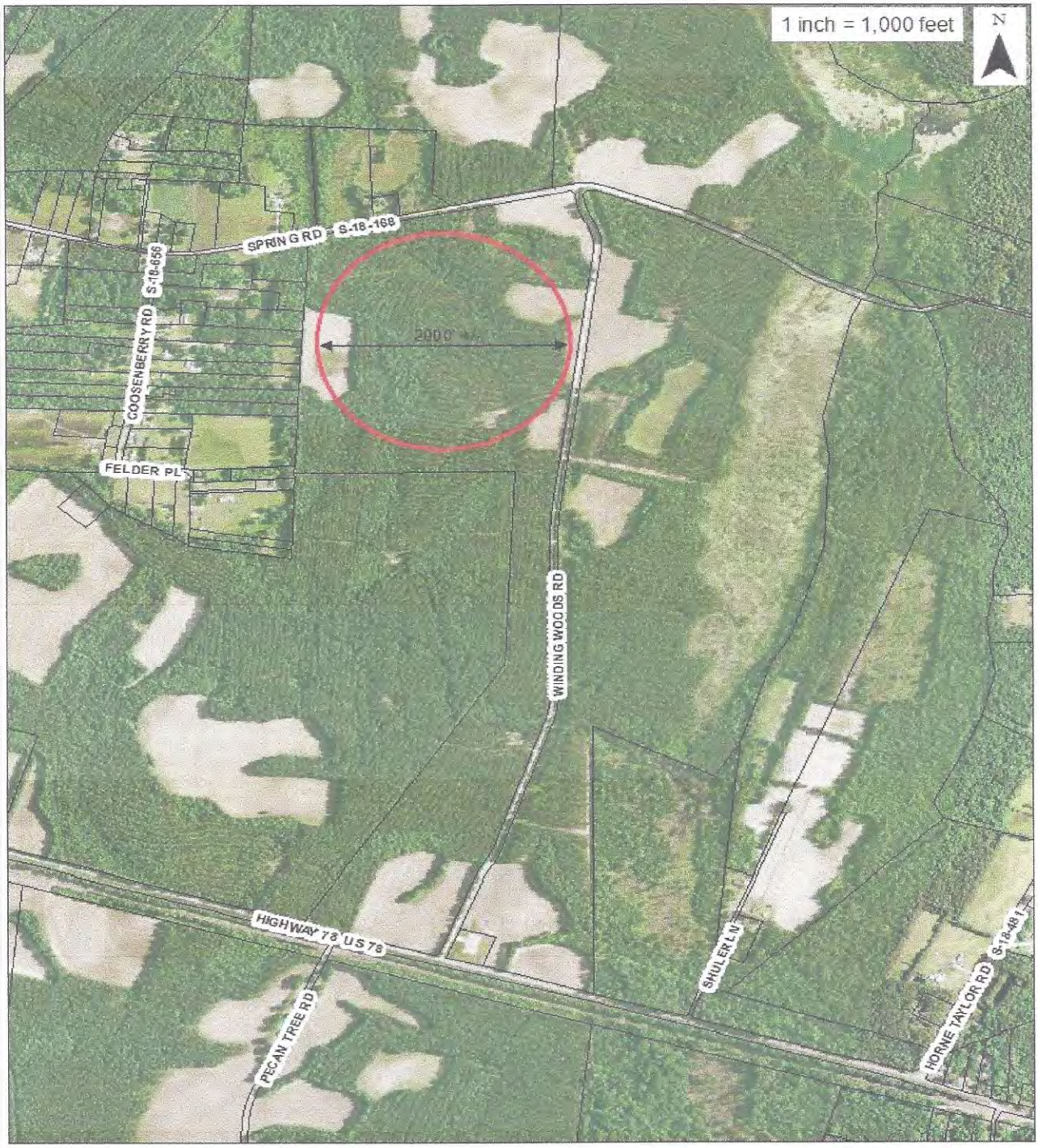
ENCLOSURE (3)

WINDING WOOD ROAD, ST. GEORGE, SC

TMS# 046-00-00-023 is a 294.66 acre site being considered as a potential debris burn and/or grinding site.

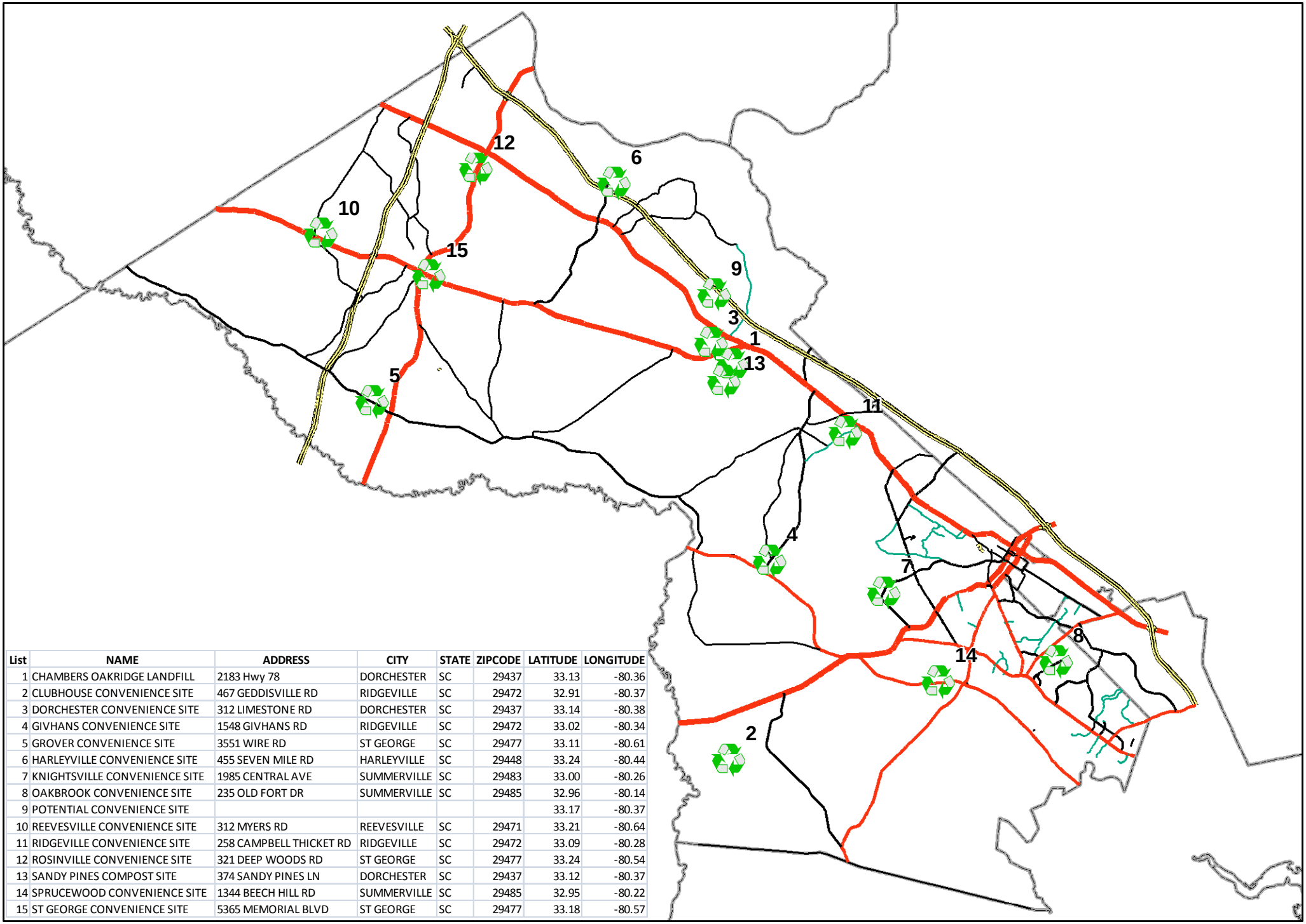
Directions from Charleston:

- Take I-26 West to exit 172 – St. George Hwy 15
- Left onto Hwy 15
- Left onto Hwy 78
- Left onto Winding Wood Road



Appendix D:

General Description of Dorchester County Convenience Centers and their Locations



List	NAME	ADDRESS	CITY	STATE	ZIPCODE	LATITUDE	LONGITUDE
1	CHAMBERS OAKRIDGE LANDFILL	2183 Hwy 78	DORCHESTER	SC	29437	33.13	-80.36
2	CLUBHOUSE CONVENIENCE SITE	467 GEDDISVILLE RD	RIDGEVILLE	SC	29472	32.91	-80.37
3	DORCHESTER CONVENIENCE SITE	312 LIMESTONE RD	DORCHESTER	SC	29437	33.14	-80.38
4	GIVHANS CONVENIENCE SITE	1548 GIVHANS RD	RIDGEVILLE	SC	29472	33.02	-80.34
5	GROVER CONVENIENCE SITE	3551 WIRE RD	ST GEORGE	SC	29477	33.11	-80.61
6	HARLEYVILLE CONVENIENCE SITE	455 SEVEN MILE RD	HARLEYVILLE	SC	29448	33.24	-80.44
7	KNIGHTSVILLE CONVENIENCE SITE	1985 CENTRAL AVE	SUMMERVILLE	SC	29483	33.00	-80.26
8	OAKBROOK CONVENIENCE SITE	235 OLD FORT DR	SUMMERVILLE	SC	29485	32.96	-80.14
9	POTENTIAL CONVENIENCE SITE					33.17	-80.37
10	REEVESVILLE CONVENIENCE SITE	312 MYERS RD	REEVESVILLE	SC	29471	33.21	-80.64
11	RIDGEVILLE CONVENIENCE SITE	258 CAMPBELL THICKET RD	RIDGEVILLE	SC	29472	33.09	-80.28
12	ROSINVILLE CONVENIENCE SITE	321 DEEP WOODS RD	ST GEORGE	SC	29477	33.24	-80.54
13	SANDY PINES COMPOST SITE	374 SANDY PINES LN	DORCHESTER	SC	29437	33.12	-80.37
14	SPRUCEWOOD CONVENIENCE SITE	1344 BEECH HILL RD	SUMMERVILLE	SC	29485	32.95	-80.22
15	ST GEORGE CONVENIENCE SITE	5365 MEMORIAL BLVD	ST GEORGE	SC	29477	33.18	-80.57

Dorchester County Convenience Sites

0 1.25 2.5 5 7.5 10 Miles

N

Dorchester County Emergency Management
212 Deming Way, Suite 3
Summerville, SC, 29483
(843) 832-0039 | Fax (843) 832-0343
ckaufman@dorchestercounty.net
Charlie Kaufman [12-2-2013]


CHAMBERS OAKRIDGE LANDFILL
Location: 2183 Highway 78, Dorchester, SC 29437
Latitude: 33.13 Longitude: -80.36
POWERED BY Pictometry
Copyright ©2011 Pictometry International Corp.


CLUBHOUSE CONVENIENCE SITE
Location: 467 Geddisville Rd. Ridgeville, SC 29472
Latitude: 32.91 Longitude: -80.37
POWERED BY Pictometry
Copyright ©2011 Pictometry International Corp.


DORCHESTER CONVENIENCE SITE
Location: 312 Limestone Rd. Dorchester, SC 29437
Latitude: 33.14 Latitude: -80.38
POWERED BY Pictometry
Copyright ©2011 Pictometry International Corp.


GIVHANS CONVENIENCE SITE
Location: 1548 Givhans Rd. Ridgeville, SC 29472
Latitude: 33.02 Longitude: -80.34
POWERED BY Pictometry
Copyright ©2011 Pictometry International Corp


GROVER CONVENIENCE SITE
Location: 3551 Wire Rd. Saint George, SC 29477
Latitude: 33.11 Longitude: -80.61
POWERED BY
Pictometry
Copyright ©2011 Pictometry International Corp.


HARLEYVILLE CONVENIENCE SITE
Location: 455 Seven Mile Rd. Harleyville, SC 29448
Latitude: 33.24 Longitude: -80.44
POWERED BY Pictometry
Copyright ©2011 Pictometry International Corp.


KNIGHTSVILLE CONVENIENCE SITE
Location: 1985 Central Ave. Summerville, SC 29483
Latitude: 33.00 Longitude: -80.26
POWERED BY
Pictometry
Copyright ©2011 Pictometry International Corp.


OAKBROOK CONVENIENCE SITE
Location: 235 Old Fort Dr. Summerville, SC 29485
Latitude: 32.96 Longitude: -80.14
POWERED BY Pictometry
Copyright ©2012 Pictometry International Corp.


POTENTIAL CONVENIENCE SITE
Latitude: 33.17 Longitude: -80.37
POWERED BY Pictometry
Copyright ©2011 Pictometry International Corp.


REEVESVILLE CONVENIENCE SITE
Location: 312 Myers Rd. Reevesville, SC 29471
Latitude: 33.21 Longitude: -80.64
POWERED BY
Pictometry
Copyright ©2011 Pictometry International Corp.


RIDGEVILLE CONVENIENCE SITE
Location: 258 Campbell Thicket Rd. Ridgeville, SC 29472
Latitude: 33.09 Longitude: -80.28
POWERED BY
Pictometry
Copyright ©2011 Pictometry International Corp.

ROSINVILLE CONVENIENCE SITE
Location: 321 Deep Woods Rd. Saint George, SC 29477
Latitude: 33.24 Longitude: -80.54

SANDY PINES CONVENIENCE SITE
Location: 374 Sandy Pines Ln. Dorchester, SC 29437
Latitude: 33.12 Longitude: -80.37


SPRUCEWOOD CONVENIENCE SITE
Location: 1344 Beech Hill Rd. Summerville, SC 29485
Latitude: 32.95 Longitude: -80.22
POWERED BY
Pictometry
Copyright ©2011 Pictometry International Corp.


SAINT GEORGE CONVENIENCE SITE
Location: 5365 Memorial Blvd. Saint George, SC 29477
Latitude: 33.18 Longitude: -80.57
POWERED BY
Pictometry
Copyright ©2012 Pictometry International Corp.

Dorchester County Convenience Sites

RECYCLE SOUTH CAROLINA

Dorchester County
Public Works Recycling
2120 East Main St
Dorchester, SC 29437

Hours of Operation

OPEN: Monday, Tuesday, Thursday and Friday – 7 a.m. - 6 p.m.;
Saturday – 9 a.m. - 5 p.m.
CLOSED: Wednesday and Sunday

*** SITES ALSO COLLECT SPECIAL ITEMS.** For more information, call (843) 563-0070

Sites 1-10 are for the disposal of regular household trash and for recycling mixed paper, co-mingles, corrugated cardboard, car batteries and used motor oil and filter

1 REEVESVILLE – off Hwy. 78 under the water tower

2 ROSINVILLE – off Hwy. 15 on Deepwoods Road

3 ST. GEORGE* – on Hwy. 78 across from the "Welcome to St. George" sign

4 GROVER – on Wire Road (SC 19)

5 HARLEYVILLE – go north on Hwy. 453, cross I-26, then right on Seven Mile Road

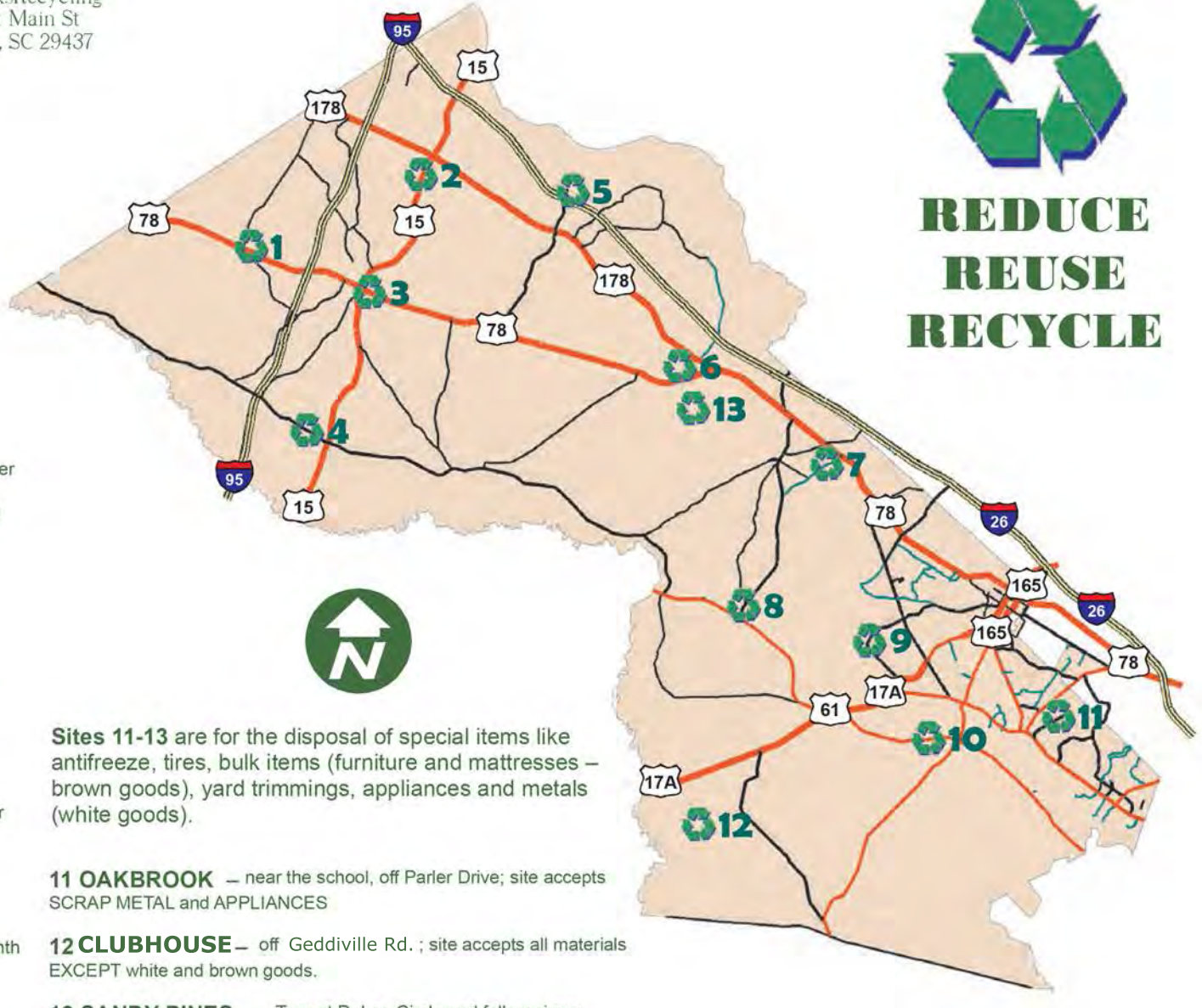
6 DORCHESTER – off Limestone Road on Day Lane

7 RIDGEVILLE – on Campbell's Thicket Road near Leiber Correctional Institute

8 GIVHANS* – on Hwy. 27, one mile north of Hwy. 61

9 KNIGHTSVILLE* – on Central Avenue, one-eighth mile west of the Speedway

10 HIGHWAY 61* – one-and-one-half miles west of Bacon's Bridge Road (SC 165). This site also accepts e-scrap (e.g., computers, monitors, printers, other computer components).



Sites 11-13 are for the disposal of special items like antifreeze, tires, bulk items (furniture and mattresses – brown goods), yard trimmings, appliances and metals (white goods).

11 OAKBROOK – near the school, off Parler Drive; site accepts SCRAP METAL and APPLIANCES

12 CLUBHOUSE – off Geddiville Rd. ; site accepts all materials EXCEPT white and brown goods.

13 SANDY PINES – Turn at DeLee Circle and follow signs; site accepts C and D debis, yard trimmings, METALS and TIRES.

REDUCE
REUSE
RECYCLE

Appendix E:

Picking up the Pieces

(Specific Guidelines for Hauling Disaster Generated Debris to the Curb)

PICKING UP THE PIECES

Following these specific guidlines when hauling hurricane-related debris and household garbage to the curb will make for a speedier removal process

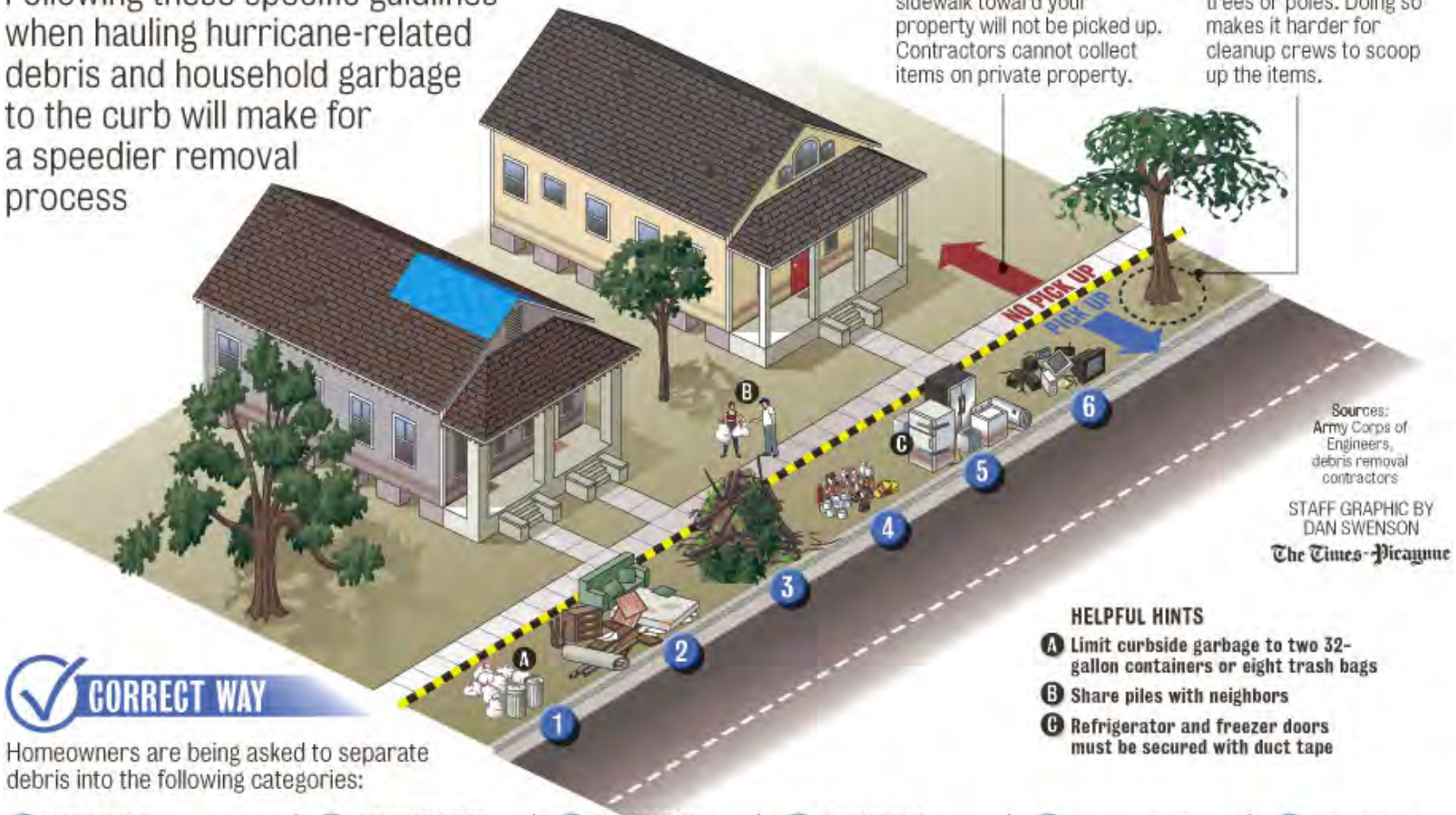
WRONG WAY

CROSSING THE LINE

- Any debris placed from the sidewalk toward your property will not be picked up. Contractors cannot collect items on private property.

PROPPING UP

- Do not set debris against trees or poles. Doing so makes it harder for cleanup crews to scoop up the items.



Sources: Army Corps of Engineers, debris removal contractors

STAFF GRAPHIC BY DAN SWENSON
The Times-Picayune

HELPFUL HINTS

- **A** Limit curbside garbage to two 32-gallon containers or eight trash bags
- **B** Share piles with neighbors
- **C** Refrigerator and freezer doors must be secured with duct tape

CORRECT WAY

Homeowners are being asked to separate debris into the following categories:

1 HOUSEHOLD GARBAGE

- Bagged trash
- Discarded food
- Packaging, papers
- All garbage should be placed curbside the night before the scheduled weekly pickup.

2 CONSTRUCTION DEBRIS

- Building materials
- Drywall
- Lumber
- Carpet
- Furniture
- Mattresses
- Plumbing

3 VEGETATION DEBRIS

- Tree branches
- Leaves
- Logs

4 HOUSEHOLD HAZARDOUS WASTE

- Oils
- Batteries
- Pesticides
- Paints
- Cleaning supplies
- Compressed gas

5 'WHITE' GOODS

- Refrigerators
- Washers, dryers
- Freezers
- Air conditioners
- Stoves
- Water heaters
- Dishwashers

6 ELECTRONICS

- Televisions
- Computers
- Radios
- Stereos
- DVD players
- Telephones

Appendix F:

Household Hazardous Waste

Hazardous Household Waste

There are probably many hazardous materials throughout your home. Take a tour of your home to see where these materials are located. Use the list of common hazardous household items to guide you in your hunt. Once you have located a product, check the label and take the necessary steps to ensure that you are using, storing and disposing of the material according to the manufacturer's directions.

It is critical to store household chemicals in places where children cannot access them. Remember that products such as aerosol cans of hair spray and deodorant, nail polish and nail polish remover, toilet bowl cleaners and furniture polishes all fall into the category of hazardous materials.

Hazardous Household Waste Examples

Cleaning Products

- Oven cleaners
- Drain cleaners
- Wood and metal cleaners and polishes
- Toilet cleaners
- Tub, tile, shower cleaners
- Bleach (laundry)
- Pool chemicals

Indoor Pesticides

- Ant sprays and baits
- Cockroach sprays and baits
- Flea repellents and shampoo
- Bug sprays
- Houseplant insecticides
- Moth repellents
- Mouse and rat poisons and baits

Automotive Products

- Motor oil
- Fuel additives
- Carburetor and fuel injection cleaners
- Air conditioning refrigerants
- Starter fluids
- Automotive batteries
- Transmission and brake fluid
- Antifreeze

Workshop/Painting Supplies

- Adhesives and glues
- Furniture strippers
- Oil- or enamel-based paint
- Stains and finishes
- Paint thinners and turpentine
- Paint strippers and removers
- Photographic chemicals
- Fixatives and other solvents

Lawn and Garden Products

- Herbicides
- Insecticides
- Fungicides/wood preservatives

Miscellaneous

- Batteries
- Mercury thermostats or thermometers
- Fluorescent light bulbs
- Driveway sealer

Other Flammable Products

- Propane tanks and other compressed gas cylinders
- Kerosene
- Home heating oil
- Diesel fuel
- Gas/oil mix
- Lighter fluid

Before a Household Chemical Emergency

The following are guidelines for buying and storing hazardous household chemicals safely:

- Buy only as much of a chemical as you think you will use. Leftover material can be shared with neighbors or donated to a business, charity or government agency. For example, excess pesticide could be offered to a greenhouse or garden center and theater groups often need surplus paint. Some communities have organized waste exchanges where household hazardous chemicals and waste can be swapped or given away.
- Keep products containing hazardous materials in their original containers and never remove the labels unless the container is corroding. Corroding containers should be repackaged and clearly labeled.
- Never store hazardous products in food containers.

- Never mix household hazardous chemicals or waste with other products. Incompatibles, such as chlorine bleach and ammonia, may react, ignite or explode.
- Follow the manufacturer's instructors for the proper use of the household chemical.
- Never smoke while using household chemicals.
- Never use hair spray, cleaning solutions, paint products, or pesticides near an open flame (e.g., pilot light, lighted candle, fireplace, wood burning stove, etc.) Although you may not be able to see or smell them, vapor particles in the air could catch fire or explode.
- Clean up any chemical spill immediately. Use rags to clean up the spill. Wear gloves and eye protection. Allow the fumes in the rags to evaporate outdoors, then dispose of the rags by wrapping them in a newspaper and placing them in a sealed plastic bag in your trash can.
- Dispose of hazardous materials correctly. Take household hazardous waste to a local collection program. Check with your county or state environmental or solid waste agency to learn if there is a household hazardous waste collection program in your area.
- Post the number of the emergency medical services and the poison control center by all telephones. In an emergency situation, you may not have time to look up critical phone numbers. The national poison control number is (800) 222-1222.

During a Household Chemical Emergency

Get out of the residence immediately if there is a danger of fire or explosion. Do not waste time collecting items or calling the fire department when you are in danger. Call the fire department from outside (a cellular phone or a neighbor's phone) once you are safely away from danger.

- Stay upwind and away from the residence to avoid breathing toxic fumes.
- Recognize and respond to symptoms of toxic poisoning including:
- Difficulty breathing
- Irritation of the eyes, skin, throat, or respiratory tract
- Changes in skin color
- Headache or blurred vision
- Dizziness
- Clumsiness or lack of coordination
- Cramps or diarrhea
- If someone is experiencing toxic poisoning symptoms or has been exposed to a household chemical, call the national poison control center at 1 (800) 222-1222 and find any containers of the substance that are readily available in order to provide requested information.
- Follow the emergency operator or dispatcher's first aid instructions carefully. The first aid advice found on containers may be out of date or inappropriate. Do not give anything by mouth unless advised to do so by a medical professional.

After a Household Chemical Emergency

- Discard clothing that may have been contaminated. Some chemicals may not wash out completely.

Appendix G:

List of Preapproved Contractors

PROFESSIONAL SERVICES AGREEMENT

This **PROFESSIONAL SERVICES AGREEMENT** ("Agreement") is dated July 1, 2009, by and between **BECK DISASTER RECOVERY, INC.** ("Consultant"), a Washington Corporation, whose address is 800 North Magnolia Avenue, Suite 400, Orlando, FL 32803 and **DORCHESTER COUNTY, SC,** ("Client"), whose address is 201 Johnston Street, St. George, SC 29477.

WHEREAS, the Client wishes to enter into an exclusive contractual agreement with Beck Disaster Recovery, Inc. to provide professional consulting services in accordance with Dorchester County's Request for Proposal No. 2009-199-2936 EPD-20 for Debris Monitoring and Recovery Services which shall be considered a part of this agreement and is incorporated by herein.

WHEREAS, Beck Disaster Recovery, Inc. wishes to provide said services to Client in accordance with and as set forth in the Beck Disaster Recovery, Inc. proposal submitted to Client dated April 16, 2009. (See Exhibit B, Hourly Labor Rates), which exhibit is hereby incorporated and made a part of this Agreement.

NOW, THEREFORE in consideration of the promises herein and for other good and valuable consideration, the parties agree as follows:

1. **Scope of Services**: Consultant and Client agree Consultant will perform Services associated with disaster management, recovery, and consulting services as described in the Scope of Work attached as Exhibit A.
2. **Term of Services**: The term of this contract is for three (3) years with the option to extend the Agreement annually upon mutual agreement of both parties.
3. **Independent Contractor**: Consultant is an independent contractor and is not an employee of Client. Services performed by Consultant under this Agreement are solely for the benefit of Client. Nothing contained in this Agreement creates any duties on the part of Consultant toward any person not a party to this Agreement.
4. **Standard of Care**: Consultant will perform services under this Agreement with the degree of skill and diligence normally practiced by professional engineers or consultants performing the same or similar services. No other warranty or guarantee, expressed or implied, is made with respect to the services furnished under this Agreement and all implied warranties are disclaimed.
5. **Changes/Amendments**: This Agreement and its exhibits constitute the entire agreement between the Parties and together with its exhibits supersede any prior written or oral agreements. This Agreement may not be changed except by written amendment signed by both Parties. The estimate of the level of effort, schedule and payment required to complete the Scope of Services, as Consultant understands it, is reflected herein. Services not expressly set forth in this Agreement or its exhibits are excluded. Consultant shall promptly notify Client if changes to the Scope of Services affect the schedule, level of effort or payment to Consultant and the schedule and payment shall be equitably adjusted. If Consultant is delayed in performing its services due to an event beyond its control, including but not limited to fire, flood, earthquake, explosion, strike, transportation or equipment delays, act of war, or act of God, then the schedule or payment under the Agreement shall be equitably adjusted, if necessary, to compensate Consultant for any additional costs due to the delay.
6. **Fee for Services**: The fee for the services under this Agreement will be based on the actual hours of services furnished multiplied by Consultant's Billing Rates as set forth in Exhibit B, plus all

reasonable expenses directly related to the services furnished under this Agreement.

7. **Payment**: Client shall pay Consultant for services furnished under this Agreement in accordance with the payment and deliverables schedule shown in Exhibit B. Client shall pay Consultant in U.S. dollars within thirty (30) days of receipt of invoices less any disputed amounts. If Client disputes any portion of the invoice, the undisputed portion will be paid and Consultant will be notified in writing, within ten (10) days of receipt of the invoice of the exceptions taken. Consultant and Client will attempt to resolve the payment dispute within sixty (60) days or the matter may be submitted to arbitration as provided below. Additional charges for interest shall become due and payable at a rate of one and one-half percent (1-1/2%) per month (or the maximum percentage allowed by law, whichever is lower) on the unpaid, undisputed invoiced amounts. Any interest charges due from Client on past due invoices are outside any amounts otherwise due under this Agreement. If Client fails to pay undisputed invoiced amounts within sixty (60) days after delivery of invoice, Consultant, at its sole discretion, may suspend services hereunder or may initiate collections proceedings, including mandatory binding arbitration, without incurring any liability or waiving any right established hereunder or by law.

8. **Indemnity**: To the extent permitted by law, Consultant agrees to indemnify, defend and hold harmless Client and its directors, officers, shareholders and employees from and against any liability (including without limitation, reasonable costs and attorneys' fees) incurred by Client to the extent caused by Consultant's negligent acts, errors or omissions, including judgments in favor of any third party.

   To the extent permitted by law, Client agrees to indemnify, defend and hold harmless Consultant and its directors, officers, shareholders, employees and subconsultants from and against any liability (including, without limitation, reasonable costs and attorney's fees) incurred by Consultant to the extent caused by Client's negligent acts, errors or omissions, including judgments in favor of any third party.

   Each party (the "First Party") specifically and expressly waives its immunity under applicable worker's compensation and industrial insurance laws regarding liability against the other party (the "Second Party") for actions brought by any of the First Party's employees against the Second Party, to the extent the liability is caused by the First Party's negligent acts, errors or omissions.

9. **Reperformance of Services**: If Client believes any of the services provided under this Agreement do not comply with the terms of this Agreement, Client shall promptly notify Consultant to permit Consultant an opportunity to investigate. If the services do not meet the applicable standard of care, it will promptly reperform the services at no additional cost to Client, including assisting Client in selecting remedial actions. If Client fails to provide Consultant with prompt notice of non-compliance and an opportunity to investigate and reperform its services, Consultant's total obligation to Client will be limited to the costs Consultant would have incurred to reperform the services.

10. **Insurance**: Consultant shall maintain insurance with the following required coverages and minimum limits and will provide insurance certificates to Client:

Worker's Compensation	Statutory
Employer's Liability	U.S. $1,000,000
Commercial General Liability	U.S. $1,000,000 per occurrence
	U.S. $1,000,000 aggregate
Comprehensive General Automobile	U.S. $1,000,000 combined single limit
Professional Liability	U.S. $1,000,000 per claim and in the aggregate

11. **Work Product**: Client shall have the unrestricted right to use the documents, analyses and other

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data prepared by Consultant under this Agreement ('Work Products'); provided, however Client shall not rely on or use the Work Products for any purpose other than the purposes under this Agreement and the Work Products shall not be changed without the prior written approval of Consultant. If Client releases the Work Products to a third party without Consultant's prior written consent, or changes or uses the Work Products other than as intended hereunder, (a) Client does so at its sole risk and discretion, (b) Consultant shall not be liable for any claims or damages resulting from the change or use or connected with the release or any third party's use of the Work Products and (c) Client shall indemnify, defend and hold Consultant harmless from any and all claims or damages related to the release, change or third party use.

12. **Limitation of Liability**: No employee of Consultant shall have individual liability to Client. To the extent permitted by law, the total aggregate liability of Consultant, its officers, directors, shareholders, employees and subconsultants for any and all claims arising out of this Agreement, including attorneys' fees, and whether caused by negligence, errors, omissions, strict liability, breach of contract or contribution, or indemnity claims based on third party claims, shall not exceed one million dollars (U.S. $1,000,000.00).

13. **No Consequential Damages**: In no event and under no circumstances shall Consultant be liable to Client for any principal, interest, loss of anticipated revenues, earnings, profits, increased expense of operation or construction, loss by reason of shutdown or non-operation due to late completion or otherwise or for any other economic, consequential, indirect or special damages.

14. **Information Provided by Others**: Client shall provide to Consultant in a timely manner any information Consultant indicates is needed to perform the services hereunder. Consultant may rely on the accuracy of information provided by Client and its representatives.

15. **Opinions of Cost**: Consultant does not control the cost of labor, materials, equipment or services furnished by others, nor does it control pricing factors used by others to accommodate inflation, competitive bidding or market conditions. Consultant estimates of operation expenses or construction costs represent its best judgment as an experienced and qualified professional and are not a guarantee of cost. This section does not apply to the cost of Consultant performing the Scope of Services.

16. **Safety and Security**: Consultant has established and maintains programs and procedures for the safety of its employees. Unless specifically included as a service to be provided under this Agreement, Consultant specifically disclaims any authority or responsibility for job site safety and safety of persons other than Consultant's employees. Consultant shall not provide any such services and disclaims any responsibility under this Agreement related to site security or the assessment, evaluation, review, testing, maintenance, operation or safety practices or procedures related to security.

17. **Termination**: Either party may terminate this Agreement upon thirty (30) days prior written notice to the other party. Client shall pay Consultant for all services rendered to the date of termination plus reasonable expenses for winding down the services. If either party defaults in its obligations hereunder, the non-defaulting party, after giving seven (7) days written notice of its intention to terminate or suspend performance under this Agreement, may, if cure of the default is not commenced and diligently continued, terminate this Agreement or suspend performance under this Agreement.

18. **Dispute Resolution**: Consultant and Client shall attempt to resolve conflicts or disputes under this Agreement in a fair and reasonable manner and agree that if resolution cannot be made to attempt to mediate the conflict by a professional mediator (except for payment disputes which may be submitted directly to arbitration). If mediation does not settle any dispute or action which arises under this Agreement or which relates in any way to this Agreement or the subject matter

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of this Agreement within ninety (90) days after either requests mediation, the dispute or conflict shall be subject to arbitration in English under the Construction Industry Arbitration Rules as promulgated by the American Arbitration Association and arbitrability shall be subject to the Federal Arbitration Act.

19. Miscellaneous:

a. This Agreement is binding upon and will inure to the benefit of Client and Consultant and their respective successors and assigns. Neither party may assign its rights or obligations hereunder without the prior written consent of the other party.

b. Any notice required or permitted by this Agreement to be given shall be deemed to have been duly given if in writing and delivered personally or five (5) days after mailing by first-class, registered, or certified mail, return receipt requested, postage prepaid and addressed as follows:

Client:	DORCHESTER COUNTY, SC
Attention:	Jason Ward or Samuel Stephens, Jr.
Address:	201 JOHNSTON STREET ST. GEORGE, SC 29477
Consultant:	BECK DISASTER RECOVERY INC.
Attention:	CHARLES M. MCLENDON, PRESIDENT
Address:	800 N. MAGNOLIA AVENUE, SUITE 400 ORLANDO, FL 32803

With a copy to:
Legal Department (which will not be considered notice)
1001 Fourth Avenue, Suite 2500 Seattle
Washington 98154-1004 USA

c. Client expressly agrees that all provisions of the Agreement, including the clause limiting the liability of Consultant, were mutually negotiated and that but for the inclusion of the limitation of liability clause in the Agreement, Consultant's compensation for services would otherwise be greater and/or Consultant would not have entered into the Agreement.

d. If any provision of this Agreement is invalid or unenforceable, the remainder of this Agreement shall continue in full force and effect and the provision declared invalid or unenforceable shall continue as to other circumstances.

e. This Agreement shall be governed by, and construed in accordance with, the laws of the State of South Carolina.

f. In any action to enforce or interpret this Agreement, the prevailing party shall be entitled to recover, as part of its judgment, reasonable attorneys' fees and costs from the other party.

g. This Agreement shall not be construed against Consultant only on the basis that Consultant drafted the Agreement.

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Project Understanding

Located near South Carolina's coast and part of the Charleston-North Charleston-Summerville metro area, Dorchester County (County) boasts over 118,000 residents with a land area of approximately 575 square miles. .

Although a major Hurricane has not significantly impacted South Carolina in over ten years, the County is taking the necessary preparations to respond to potential future natural hazards most notably tornados, floods and hurricanes. In the last decade, the County has been fortunate enough to avoid direct hits by major storms that threatened the Eastern Seaboard, most notably Hurricanes Floyd and Isabel. However, it is important to note that a storm of Hurricane Isabel's strength could generate upwards of 1 million cubic yards of debris based on the County's current population.

Recognizing the need to expedite debris removal operations and maximize potential reimbursement of County and contractor efforts, it is the County's intention to retain the services of a qualified firm for disaster management, recovery and consulting services to support oversight and management of debris recovery contractors. BDR understands these needs and will provide a full management team dedicated to the County's recovery efforts should the community be affected by a natural or man-made disaster.

Following a disaster event, BDR is prepared to respond to the County's needs and provide the County with the adequate number of professionals and personnel to support oversight and management of debris recovery contractors. Our experienced management and field personnel have a keen understanding of the rules and guidelines of regulatory agencies such as the Federal Emergency Management Agency (FEMA), Department of Transportation (DOT), Federal Highway Administration (FHWA), and Natural Resource Conservation Service (NRCS). Immediately after notice to proceed, BDR's established protocol will be implemented to ensure eligibility and accuracy of all documentation generated while monitoring the County's debris removal efforts so that federal reimbursement procedures run as smoothly as possible. As part of our technical services, BDR will provide real-time information to the County regarding the debris removal process. Accurate and daily information is crucial to making informed decisions and expediting recovery efforts. BDR provides daily reports to clients that include quantitative numbers, as well as physical progress reports. County officials will be able to, at their discretion, inform County residents of the progress that is being made in their community.

BDR offers the County two unmatched and distinct advantages:

- Comprehensive debris monitoring, recovery and reimbursement experience
- State-of-the-art technology to improve accuracy and efficiency

Although we sincerely hope no harm will ever come to the County or its residents, rest assured that BDR will be there if and when you need us. Our management staff has overseen reimbursement for over 62 million cubic yards of debris removal representing over $1.6 billion in FEMA reimbursable costs. We have helped 175 public sector clients recover from 20 separate major disaster declarations. BDR will provide the County with a comprehensive debris management program that maximizes FEMA

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reimbursement, empowers the County to make debris removal decisions and expedites the time needed for recovery.

Technical Approach

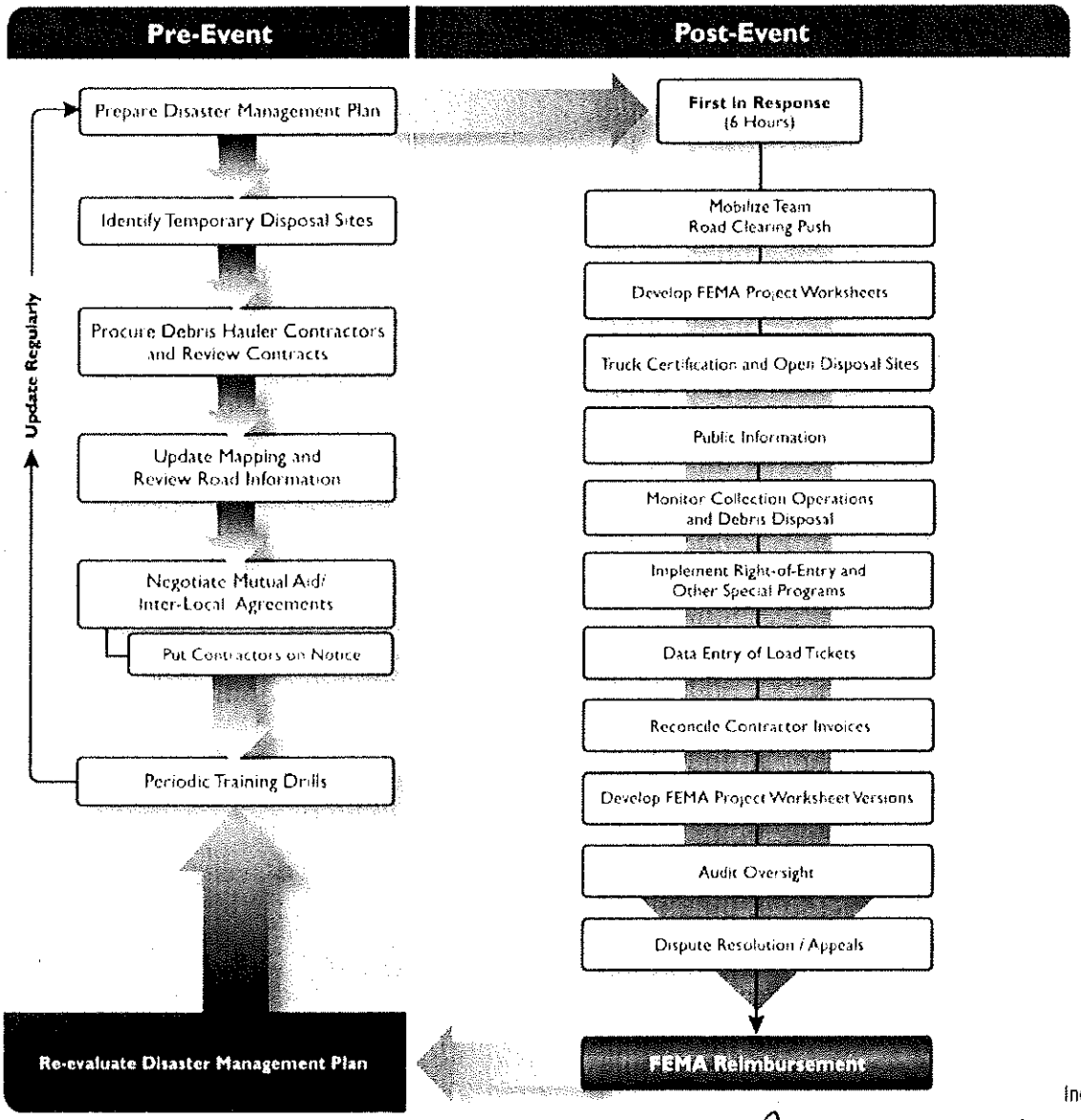
This section describes the general approach BDR will utilize to provide the disaster management, recovery and consulting services needed to support oversight and management of debris recovery contractors on behalf of the County. For organizational purposes, this section has been divided into three discrete areas:

A. Disaster Debris Monitoring Services

B. Additional Service/Solutions

The diagram below graphically depicts the interaction and sequence of service offerings during a typical disaster debris-generating project lifecycle.

Exhibit 3-1: Disaster Debris Project Lifecycle



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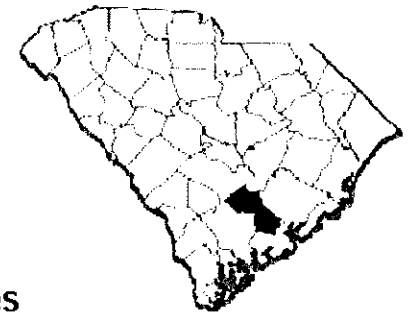

A. Disaster Debris Monitoring Services

BDR is the nation's leading provider of disaster debris monitoring services and has been deployed in response to every hurricane making landfall in the continental U.S. since 2004. BDR worked on behalf of over 170 cities and counties throughout the country in response to 26 declared disaster areas. Our staffing peak of more than 3,200 was reached in October 2008 when the firm simultaneously managed debris removal and recovery projects on behalf of 80 clients throughout Texas, Louisiana, Alabama, and Florida.

Our services begin days before a known event impacts Dorchester County. BDR assists the County in activating contracts, ensuring temporary debris storage and reduction site (TDSRS) locations are available, coordinating logistics between partner communities and organizations and other essential requirements. Following this period, BDR will assist the County with immediate response activities – including damage assessments and time and materials documentation during the 70 hour push period. Finally, BDR can assist the County during the recovery period to manage debris contractors, document work in accordance with state and federal reimbursement guidelines, develop public information and media materials and other essential recovery tasks. The sections that follow present BDR's approach to providing the disaster debris monitoring services requested by the County.

Project Management

BDR's approach to project management involves the development of a robust project team to allow for key staff with project management responsibilities to focus exclusively on the project management function. Specific elements of BDR's project management approach are discussed below.

Project Management Plan (a.k.a. Debris Management Action Plan): Upon activation, one of the initial tasks that BDR will perform is the development of a project management plan for the specific disaster occurrence that includes essential documents including: (1) an organizational chart showing the inter-relationships between the County, BDR and the debris removal contractor staff, (2) a contact list of relevant staff persons from the County, BDR and the debris removal contractor, (3) a copy of the BDR and debris removal contractor contracts and (4) other key field documents such as a County map depicting TDSRS locations, etc.

Cost Tracking: BDR recognizes that one of its primary responsibilities is to expeditiously implement a cost accounting system to capture critical data required for reimbursement by state and federal agencies.

Cost Control: Given BDR's experience in the debris monitoring business and our understanding of the FEMA Public Assistance (PA) Program and the Federal Highway Administration Emergency Relief (FHWA-ER) Program, we understand the scrutiny that government agencies receive on debris removal

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efforts. Therefore, BDR will implement cost control protocols in order to ensure that reasonable cost requirements established by funding agencies are met. Examples of procedures used by BDR to control project costs include:

- Communicating with the client on a daily basis relative to their expectations for staff resources and level of service
- Monitoring the ratio of monitors to supervisors on a daily basis (10:1 is our target ratio)
- Attempting to utilize as many local personnel as possible in order to avoid travel and per diem expenses
- Geographic Information System (GIS) integration for accurately tracking road maintenance responsibility (County, municipality, State, FHWA-ER or private)
- Close daily coordination with debris haulers on crew resources in order to match monitor needs with available crews (and avoid unnecessary staff from showing up for work with no crews)
- Limiting senior management and administrative time to direct hours spent with project or client personnel
- Utilizing BDR's national contracts for rental cars, cell phones, etc. that provide lower rates than individual plans

Staff Mobilization: When the impact of a disaster becomes apparent on the County, essential BDR staff with key experience in various aspects of debris operations (including 70 hour push, truck certification, mapping/zone development, etc.) will mobilize in the region in order to participate in the "response" phase of the disaster event. Staff included in BDR's field monitor database will be contacted and put on notice of the potential need to mobilize to the County. During this period, other logistical arrangements, such as lodging arrangements for key staff will be booked in order to ensure reasonable housing for the response period.

Equipment/Supplies Mobilization: BDR staff will prepare our mobile command center, generators, inventory of load tickets and other essential field equipment (e.g., cameras, GPS units, etc.) for potential mobilization to the County. We will also contact key vendors (e.g. construction trailer vendors, etc.) to expedite field equipment that will be required for an extended debris removal assignment.

Daily Meetings: BDR will facilitate daily meetings between the County, BDR and the debris removal contractor project management staff (typically around 4 to 5 p.m. in the afternoon) to discuss daily results, problems that require resolution, coordination issues, potential operational improvements, etc. BDR staff members in attendance will include the project manager (or their designee), the operations manager for each contractor and other appropriate BDR staff as necessary. BDR has found that daily meetings are essential for the first few weeks of a debris removal operation, after which frequency is typically reduced, as appropriate.

Work Scheduling: BDR will work with the County's designated debris manager to schedule work for each day. BDR will assist the County in identifying and addressing critical damage areas and "hot spots" that require immediate attention.

Reports and Website Management: Information is one of the most critical elements of a debris removal operation. BDR's daily reporting system will provide the County with daily and cumulative statistics, including: (1) the number of collection vehicles operating, (2) the total loads and cubic yards collected per TDSRS, by debris type (3) the total loads and cubic yards collected per contractor, by debris type, (4) the average truck size per contractor and (5) the number of participants at public drop-off

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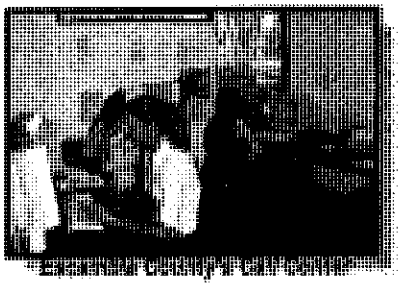
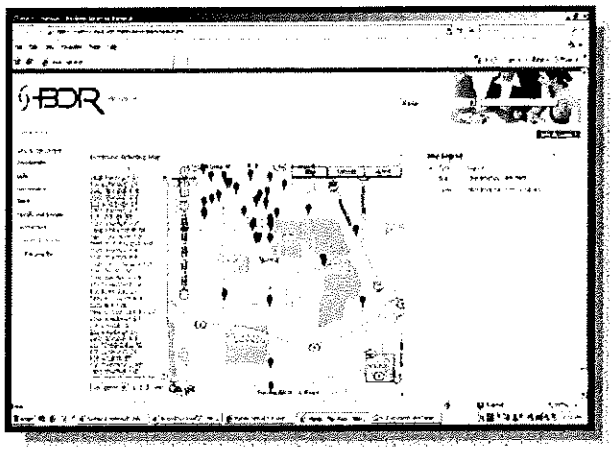
sites, etc. BDR is also prepared to comply with the County's requirements for weekly reports, a final summary report and other reports and documentation as requested.

BDR can assist the County in developing and managing a website on the debris removal process. The website would likely include: (1) instructions on proper debris set-out procedures, (2) maps (updated daily) showing the progress of debris removal operations and general timeframes when debris removal contractors can be expected in a general area and (3) daily and cumulative debris collection statistics (loads and cubic yards removed).



Debris Hotline Call Center Operations: Following a disaster, citizens will look to the County for direction regarding the debris removal process and project progress. BDR is prepared to assist the County in establishing and staffing (including supplying equipment, phone lines, etc.) a debris hotline to respond to public concerns, comments and complaints. BDR operated Escambia County's debris hotline, as a FEMA reimbursable expense, following Hurricanes Ivan and Dennis for approximately a 12-month period.

Contractor Damages: Damages resulting from contractor debris removal efforts are inevitable in a debris removal effort. BDR has developed a database application to track and help the County manage contractor damages.



GIS Application: BDR's information technology and data management infrastructure is equipped to provide GIS reporting and progress posting to mapping software. In order to accomplish this, BDR will work with County staff to gather the necessary layer data required to build and populate GIS reporting tools. Summary characteristics of the GIS mapping include:

- Mouse-over ticket data
- Reverse geo-coding to resolve street address
- Color coding for various scope items
- Street level detail and zooming
- Map and satellite imagery views

Resource Management: BDR maintains a staff of resource managers with an exclusive responsibility to assist project managers and other field staff in scheduling, dispatching and logistical operations of field monitors, equipment and other critical field needs. BDR's staff of resource managers will coordinate:

- Acquiring, hiring, training, deploying and supervising field monitors
- Developing daily schedule and assignments for field monitors
- Ensuring truck certification operations use BDR's standard methodology and documentation practices and that each truck is measured prior to use

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- Maintaining records of contract debris hauler's trucks and providing data as requested by designated staff
- Providing the necessary truck certification placards for ease of identification and tracking
- Responding to operational or field issues
- Ensuring load tickets are entered into a database application and the source documentation is digitized
- Reviewing, reconciling and validating contract debris hauler invoices prior to submission to the County for payment
- Surveying or conducting damage assessments of areas for specialized debris removal activities such as, but not limited to, hazardous leaning trees, hazardous hanging branches, hazardous stumps, construction and demolition (C&D) debris, household hazardous waste (HHW) or other potentially hazardous situations
- Assisting with project worksheets, detailed damage inspection reports (DDIR) and other report preparation required by FEMA, FHWA or other agencies for reimbursement of County staff and debris removal contractor efforts
- Providing daily operational reports to keep the County informed of work progress
- Any additional operational issues as requested by the County debris manager

Push Period Assistance

The 70-hour push period is the time when debris removal contractors (and/or County crews) are charged with clearing blocked roadways for emergency vehicle passage. If contractor crews are utilized, the work is generally done on a time and materials basis during this period. Because this period is typically reimbursed by FEMA at 100 percent federal share level, it is critical that equipment utilized for emergency road clearance work is properly identified and logged. BDR is prepared to assist the County during the push period in a number of ways including: (1) documenting blocked roads that require immediate clearance, (2) administering the sign-in and sign-out of labor and equipment to track time and material charges, (3) assisting County staff in maintaining maps or databases to track road clearance progress and other essential tasks as requested and (4) maintaining supporting documentation for reimbursement of 70-hour push work.

Public Information Support

Those local governments that have received the highest praise from their citizenry following a disaster are typically those that have communicated the best. BDR is prepared to provide public information staffing support as requested by the County. BDR has full-time public information/relations staff available to assist County staff with press releases, public notices, website development and support and other public information functions.

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Truck Certification

Truck certification is perhaps the most critical element of the monitoring component of a debris removal project because the process establishes a volumetric capacity for each collection vehicle utilized – many of which deliver hundreds of loads during a debris removal project. Minor errors in truck certification measurement and calculation can result in substantial volumetric and cost discrepancies. BDR has established a standard methodology for truck certification. Aspects of BDR's truck certification procedure include:

Guaranteeing the amount a full truck can hold is an important part of the collection process.

All trucks must be occurately measured, certified and clearly labeled before beginning any work hauling debris.

- **Use of the BDR truck certification form:** This form includes the latest in FEMA guidelines on truck certification documentation and volume calculations.
- ***Truck Trac*™** – through the use of a laser distance meter, Truck Trac™ utilizes laser technology to more accurately measure and certify the volumetric capacity of debris removal hauling vehicles with greater efficiency and precision. This state of the art technology eliminates measurement and rounding errors and reduces the amount of time required to accurately measure a truck.
- **Minimum vehicle requirements:** BDR will inspect collection vehicles to ensure South Carolina Department of Transportation (SCDOT) and County compliance.
- **Special notations on truck placards for sideboards and other unique vehicle attributes:** These notations inform tower monitors that the measured capacity includes sideboards or other modifications, thus discouraging collection contractors from fraudulently altering vehicles after certification.
- **Photography of vehicles and drivers.**
- **Periodic spot checks and recertification of trucks:** This pertains to trucks that were potentially altered after initial certification.

Field Monitoring

BDR has developed a number of unique approaches to our field monitoring program. Specific aspects of this program are highlighted below.

Monitor Requirements: In order to qualify to work as a loading site monitor, all individuals must be able to speak English, be at least 18 years of age, able to provide a valid U.S. driver's license, capable of working outside and able to climb a 10 foot high staircase or ladder. In addition, all monitors must have experience in previous or similar monitoring or inspection work.

Local Employees: One very important goal of a disaster recovery effort is to put displaced workers from the local area back to work. BDR is committed to hiring and training field monitor staff from the County.

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Typically, 80-90 percent of our project staff is hired from the local community. To the extent there are concerns over the quality of field collection monitor staff, BDR is prepared to bring in experienced field monitors from other parts of the country. All BDR field personnel will be provided with badges (including a recent photo) identifying them as County contractors.

Field Monitor Training Program: All monitors must attend a field monitoring training session provided by BDR and approved by the County. BDR's field monitoring training session includes a video and PowerPoint presentation on field monitor responsibilities. In addition to this training, monitors are provided with a variety of field reference documents (e.g., sample completed tickets, etc.). We have included a copy of our training manuals for the County's review under separate cover.

BDR requires all monitors to attend a structured training by certified staff. BDR's training is OSHA, EPA and FHWA compliant.

Daily Field Monitor Operations: The bullets below highlight some of the various aspects of a BDR debris removal program.

- At the start-up of collection operations, BDR collection monitors arrive at the staging location approximately 45-minutes prior to the start of field operations. Activities that typically occur during this 45-minute period include: (1) debriefing by the collection manager and/or field supervisors on important issues, (2) distribution of safety gear (caution lights, safety vests, etc.) and (3) distribution of map books and debris tickets. Strict records are kept of the debris ticket numbers assigned to specific monitors allowing for easy tracking in the event of alleged fraud.
- At the outset of collection operations, we anticipate approximately one monitor assigned to approximately four trucks. As operations continue and trucks spread out within collection zones to efficiently collect scattered debris, the ratio of monitor to trucks will likely decline.
- A collection field supervisor will be assigned to approximately ten to twelve monitors. BDR has found this to be a reasonable ratio – allowing field supervisors to routinely interface and perform quality assurance control checks with field monitors on multiple occasions each day. Responsibilities of the field supervisor include verification of load ticket accuracy and response to collection monitor and debris contractor issues in the field.
- Field monitors shall be responsible for: (1) verifying the proper loading and compaction of debris into the debris recovery contractor's certified loading container, (2) ensuring that all debris recovery contractors and their subcontractors adhere to the County's Debris Management Action Plan and that they are working in an efficient and safe manner, (3) surveying their assigned areas for special need issues (e.g., stumps, leaners/hangers, etc.) and (4) photographing loads as directed by the County.
- At approximately 3 p.m. each afternoon, we will ask the debris contractor's project manager to provide an estimate on the number of monitors that will be required for the following day. This will allow time for the BDR scheduling manager to schedule the appropriate number of collection monitors.
- At the close of operations each day, all collection and disposal monitors will report back to the staging area to (1) turn in all completed tickets, (2) update the master map book showing street areas cleared of debris on that particular day and (3) report any inconsistencies or problems that occurred during the day.

QA/QC Program: The vast majority of ticket errors occur within the first few weeks of the initiation of a debris removal program. As such, BDR assigns QA/QC staff to each TDSRS tower with the sole

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responsibility of reviewing tickets and contacting supervisors and field monitors immediately after errors are identified. This process serves three very important purposes: (1) it allows BDR to quickly rectify ticket errors by getting the correct information immediately, (2) it provides instant feedback to field monitors thereby reducing errors that would otherwise be made throughout the day (until such time as tickets are reviewed) and (3) it allows BDR to track monitor performance and terminate those monitors that make repeat errors.

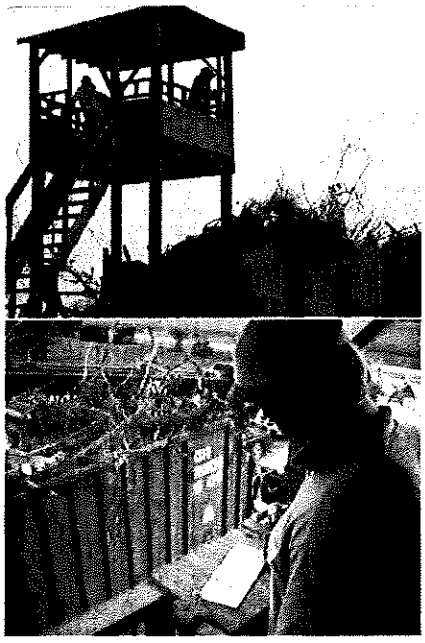
Other Field Monitoring Support Services: BDR has extensive experience with all aspects of debris monitoring beyond traditional right-of-way (ROW) monitoring including: (1) leaner and hanger removal programs, (2) FEMA and Natural Resources Conservation Service (NRCS) waterways debris removal programs, (3) abandoned vehicle and vessel recovery programs and (4) comprehensive private property/right-of-entry (ROE) debris removal programs. BDR has administered the largest ROE programs in recent history including programs for New Orleans, LA; Escambia County, FL; Pensacola, FL; Gulfport, MS; Harrison County, MS and Waveland, MS.

TDSRS Monitoring and Support

BDR's approach to TDSRS monitoring and support stems from the parent company's decades of experience in the design and operations of solid waste management disposal facilities. Examples of specific approaches relative to TDSRS monitoring and support are identified below.

TDSRS Emergency Permitting: BDR is highly knowledgeable of state and federal emergency permitting guidelines. BDR routinely serves as the local government's agent (with regulatory agencies) for TDSRS permitting issues.

TDSRS Tower Monitoring: BDR will provide a minimum of two tower monitors per TDSRS tower site. Specific responsibilities of tower monitors shall include: (1) making truck fullness load calls and recording the information on the proper load ticket, (2) taking photographs of loads (as directed by the County), (3) communicating with truck drivers and debris contractor staff on potential safety issues, (4) verifying that contractor equipment is empty prior to leaving the TDSRS and (5) collecting and organizing load tickets and providing them to designated BDR staff. BDR is also prepared to provide security at TDSRS sites when not in operation.



Public Drop-Off Site Operations: BDR is prepared to provide site supervision (at levels directed by the County) for any public drop-off sites that the County may elect to open. Residential drop-off site services routinely provided by BDR include site permitting, traffic support, address verification (eligibility determination) and recording, general customer service functions and site closure and security.

Market Assistance: BDR staff is uniquely familiar with disposal and recycling markets throughout the country. During recent storm seasons, BDR assisted a number of our clients in evaluating proposals by collection contractors on proposed outlets for storm debris residuals both wood chips and C&D debris.

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Other TDSRS Support Services: BDR is prepared to assist the County with any other TDSRS services that may be required including traffic support (i.e., flaggers) and after-hours site security.

Data Administration and Invoice Reconciliation

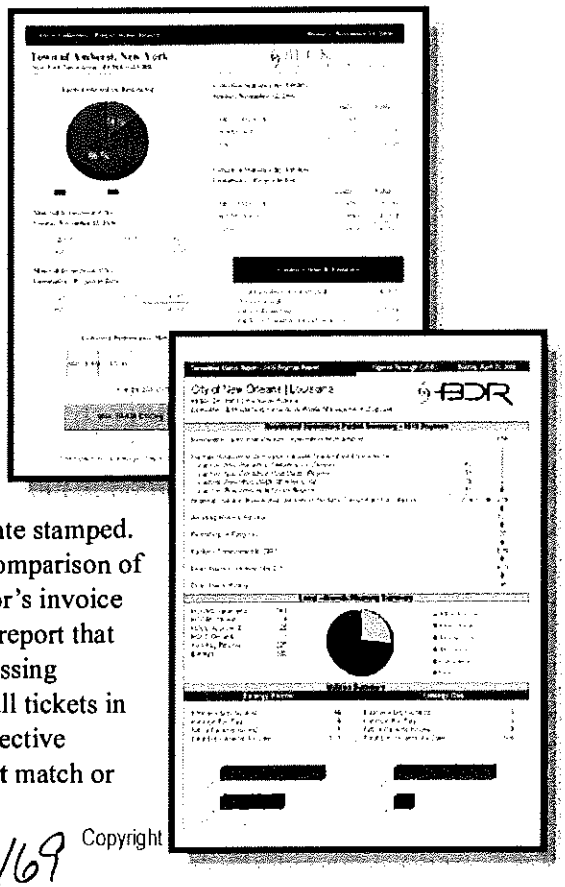
One of the most important and time consuming elements of a disaster recovery operation is the process of managing thousands of load tickets and reviewing and approving debris contractor invoices. BDR has received praise from both municipal staff and debris contractors for the promptness and level of attention we place on this very important element of the debris recovery process.

*"BDR compiled, reviewed, and validated over **thirty-seven thousand load tickets** for debris collection. BDR staff has been instrumental in all our meetings with FEMA and has provided supporting data and back up information when funding eligibility issues required additional explanation. The entire City Management Team is grateful for the dedication and personal commitment displayed."*

-David Sloan
Environmental Services Director
City of Orlando, Florida

BDR's method for managing and processing load tickets for next day reporting is as follows:

- Load tickets are collected from final disposal sites throughout the day. The tickets are then scanned using optical character recognition (OCR) scanners, uploaded and entered into BDR's SQL relational database RecoveryTrac™.
- Database queries are run to check for blank fields on tickets, duplicate ticket numbers, unreasonable cycle times (time loaded vs. unloaded), etc. If a problem is noted, the tickets are pulled and reviewed. If necessary, the monitor who wrote the ticket is interviewed to clarify critical information. Until a problem is resolved, the ticket is rendered invalid.
- By 8 A.M. the following morning, the County (and any other stakeholders the County would like to receive the information – i.e. municipalities, FEMA debris coordinator, etc.) will be e-mailed a summary of the previous day's work to include total trucks in the field, total debris loads collected by material type, total cubic yardage collected by material type and other data, as requested by the County. BDR can also provide daily a GIS map to the County showing the roads that have received first, second and third collection passes.
- If desired, BDR can also maintain this information on a County or BDR website so that accurate, near real-time information is available to the public.
- For invoice reconciliation, once invoices are received at BDR's offices they are electronically and physically date stamped. A database query is run that performs a ticket by ticket comparison of the BDR's RecoveryTrac™ database versus the contractor's invoice supporting documentation. RecoveryTrac™ generates a report that shows where the two data sets agree, disagree or have missing information. A BDR data analyst is tasked with pulling all tickets in question and making a determination of the required corrective action. A pre-approval report summarizing all tickets that match or



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pass the reconciliation process is forwarded to a BDR financial analyst. The BDR financial analyst will be familiar with the terms and conditions of the County's contract with the debris contract hauler and ensure all submitted invoices meet contract requirements. To the extent that tickets still in dispute are less than the contractor's retainage, the invoice, less the retainage, is approved for payment. The BDR staff member in charge of invoicing then prepares a letter to the County's representative responsible for invoice payment, recommending payment of the invoice. Following invoice approval, an extensive process to evaluate tickets that differ in the BDR and contractor databases is performed. This typically requires significant communication between BDR and contractor staff to resolve discrepancies. After all discrepancies are resolved, BDR sends a follow-up letter to the County recommending the amount of retainage to be released. Finally, a BDR invoicing specialist performs an audit of the materials in the invoice file to ensure that the file is complete.

- BDR's proprietary database allows the County to track the impact payment approvals made on obligated project worksheets and County purchase orders (PO). This allows the County to effectively plan for PO adjustments and the need to generate adjustment project worksheets.

Funding Support

BDR is committed to ensuring that our clients receive maximum reimbursement for eligible work from state and federal agencies. Specific funding support services provided by the BDR Team are outlined below.

Immediate Needs Funding Support: One of the unique elements of BDR's approach is our focused initiative to obtain immediate needs funding (INF) for our clients. This process involves: (1) conducting preliminary damage assessments with County and state representatives, (2) developing a debris quantity estimate that is supported by FEMA staff, (3) documenting associated immediate expenditures and (4) assisting in contacting the state and completing a request for public assistance (FEMA Form 90-49).

BDR's expertise in obtaining up-front funding from FEMA for local government clients greatly reduces the need to drain general fund reserves or draw on credit lines.

Emergency Roadway Clearing Assistance: The 70-hour push period is the time when debris removal contractors (and/or County crews) are charged with clearing blocked roadways for emergency vehicle passage. If contractor crews are utilized, the work is generally done on a time and materials basis during this period. Because this period is typically reimbursed by FEMA at 100 percent federal share level, it is critical that equipment utilized for emergency road clearance work is properly identified and logged. BDR will assist the County in maximizing reimbursement for 70-hour push work by: (1) documenting blocked roads that require immediate clearance, (2) administering the sign-in and sign-out of labor and equipment to track time and material charges, (3) assisting County staff in maintaining maps or databases to track road clearance progress and other essential tasks as required and (4) maintaining supporting documentation for reimbursement of 70-hour push work.

Federal Highway Administration – Emergency Relief (FHWA-ER) Program Support: Following a disaster, communities often leave potential reimbursement funds on the table by overlooking 100 percent reimbursement for debris removal on FHWA-ER program funded roadways. BDR understands the County's need to maximize reimbursement and maintains over 10 years of experience in assisting government agencies with Department of Transportation (DOT) coordination and FEMA PA/FHWA-ER reimbursement. This experience provides BDR with considerable familiarity of the differences in

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eligibility between the FEMA PA and FHWA-ER programs. Prior to or following a disaster event, BDR is prepared to assist the County in maximizing FHWA-ER reimbursement by:

- Assisting the County and South Carolina Department of Transportation (SCDOT) with determining maintenance responsibility roadways
- Coordinating with SCDOT and County staff regarding the FHWA-ER reimbursement process
- Developing DDIRs to catalog damage to FHWA-ER funded roadways
- Providing and tracking documentation (load tickets, cost estimates, contracts, invoices, equipment logs, GPS coordinates, etc.) necessary to FHWA-ER reimbursement

Most recently, BDR assisted the City of Norman, OK (City) following a severe winter storm with obtaining over $1 million in FHWA-ER program funding for those roadways eligible for 100 percent federal funding. Since the City was not burdened with its local cost-share, this accounted for a cost savings of over $200,000 for the City for debris related costs

Funding/Regulatory Assistance: BDR has former senior-level FEMA staff located in Washington, D.C. that can provide support in tracking project worksheets throughout the process and provide quick responses to problem issues that may be slowing the funding process.

Closeout Assistance: Our FEMA appeals and funding specialists have worked with FEMA closeout officers to attain millions of previously de-obligated dollars for communities in South Florida, the Florida Panhandle and the State of Mississippi.

B. Other Services/Solutions

Emergency Management Planning and Training

Following the recent unprecedented hurricane seasons and more specifically the devastating results of Hurricane Katrina, government ignorance of the potential catastrophic results of a hurricane is no longer a valid excuse. At BDR, we work with our clients prior to hurricane season to ensure that the necessary plans, contracts, and procedures are in place in order to respond quickly and efficiently to any emergency situation and to identify and attain government funding programs available following a declared disaster.

BDR can provide a wide variety of preparedness, response and recovery planning and consulting services. BDR is prepared to work with the County in determining the preparedness and planning services that the County feels are necessary. The following pages provide a summary of the services that may be of interest and great benefit to the County.

Continuity of Operations (COOP) Planning: BDR has a proven disaster preparedness planning methodology that is based upon the latest business continuity planning, disaster preparedness, and project management principles. This process-centric methodology has been used by governments across the country to develop COOPs. The focus of BDR's methodology is on identification of the core operations processes, identification of essential facilities, equipment, records and other resources that are

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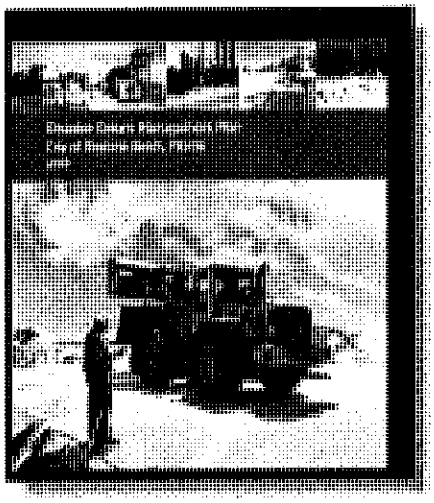
required to perform those processes and the plans to facilitate a timely and orderly recovery from an emergency. BDR's methodology for continuity planning is designed to meet the requirements of the EMAP, National Incident Management System (NIMS) and the National Fire Protection Association 1600 planning standards.



Debris Management Plan Development and Updates: FEMA is providing financial incentives for communities that are prepared. BDR has written numerous debris management plans and is very familiar with plan requirements set forth in FEMA Publication 325 - Debris Management Guide and FEMA Publication 598 – Public Assistance Pilot Program. If a community already has a plan or pre-positioned contract in place, BDR can review the documents to ensure that they comply with all FEMA debris management plan guidelines. Specific elements of debris management plans prepared by BDR include an organizational assessment, a TDSRS evaluation to include Tier 1, 2 and 3 sites, a detailed summary of debris removal operations available to implement when necessary and an action plan that outlines the specific steps that need to occur at each phase of the debris management process.

Mitigation Program Support: BDR has extensive experience in developing hazard mitigation plans and funding strategies to assist communities in receiving federal and County disaster and mitigation funding and special appropriations for disaster relief, long term recovery and mitigation projects. We routinely provide local mitigation strategy staff support to improve the community's resistance to damage from known natural hazards by providing technical and strategic assistance in prioritizing and positioning their initiatives to compete effectively for pre- and post-disaster mitigation funding, thereby reducing the cost of disasters at all levels and speed community recovery.

TDSRS Identification and Selection: As a result of BDR's experience in managing and monitoring millions of cubic yards of temporary debris storage and reduction, BDR understands the requirements necessary for an adequate TDSRS location. Our disposal experts review logistics, acreage, vegetative and population density analyses, local ordinances and contract reduction methods to identify safe, efficient and effective TDSRS locations. We have experience in working with GIS tools to identify potential sites and conduct field investigations to determine constituent acceptability and the likelihood of successfully permitting the site under DEP emergency guidelines.

Debris Contractor Procurement: Given our in-depth knowledge of FEMA reimbursement policies, BDR recognizes the necessity of competitively-bid contracts. We have assisted a number of clients in writing procurement documents and assisting in the debris hauler evaluation process. Our approach to assisting the County with this process involves understanding the geography, demographics and culture of the community to develop a scope of work (and corresponding pricing structure) that encompasses all of the potential needs of the County. BDR designs comprehensive procurement documents and resulting contracts to protect our client's economic health and eliminate potential exposure associated with scopes of work that historically have not been reimbursed by FEMA.

Public Assistance/Cost Recovery Services: In response to the 2007 Department of Homeland Security Appropriations Act, FEMA began a new Public Assistance Pilot Program last summer. Public assistance is intended to provide assistance to states, local governments and certain non-profit organizations to alleviate suffering and hardship resulting from major disasters or emergencies declared by the president.

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Public assistance is designed to, amongst other things, help repair and replace critical infrastructure, public structures and services damaged in a disaster, as well as speed the recovery process by improving debris removal operations and supporting emergency measures. BDR has a team of public assistance experts that can guide your community through the pilot program and help maximize the benefits and incentives that it offers. Through such practices as identification of eligible emergency and permanent work (Category A-G), appeal services and negotiations and final review of all emergency work performed, BDR will continue to aid your community in cost recovery efforts long after storm debris has been removed.

Public Information Planning and Support: Another critical element of a disaster preparedness and response program is accurate, coordinated public information. BDR is prepared to work with the County's public information officer in preparing "pre-season" notices and educational materials to inform the citizenry of what to expect following a disaster. We also have extensive experience in preparing press releases and newspaper notices, as well as participating in interviews on local access television stations.

Multi-Jurisdiction Coordination: County governments are often relied upon by their member communities to provide many of the core services required to respond to a natural or man-made disaster. BDR recommends (and can facilitate) an annual meeting of those individuals from the County and other key stakeholders (DEP, School Board, etc.) that may be involved in debris management issues following a disaster to outline responsibilities of each jurisdiction or agency.

Annual Meetings: In addition to the multi-jurisdiction coordination meetings discussed above, BDR recommends one or more annual meetings between the County, debris contractor(s) and the monitoring firm. The purpose of these meetings is to ensure a common understanding and coordinated effort regarding processes and procedures exercised prior to, during and following a disaster situation.

Mock Training Exercises: A mock training exercise is an effective method of testing and evaluating the readiness of a community to respond to an emergency situation. We can assist the County in designing and conducting drills or table-top exercises to evaluate staff readiness.

Process Readiness: Another unique approach of the BDR Team is that of process readiness. In the term process readiness, we are referring to the process of preparing BDR to react quickly and efficiently to a natural or man made disaster event. This process includes supply management of load tickets, truck certification forms and other critical supplies necessary for immediate response and accurate documentation. We use technology to make data management more efficient, upgrading our load ticket and invoice reconciliation software systems. Our management team broadens their knowledge and skill sets with FEMA guidance workshops, advanced OSHA certifications and emergency response training.

DOT Coordination and Road List Database Development: Perhaps the most critical pre-event activity is coordination with DOT on road clearance and debris removal responsibilities. BDR can assist the County in developing a road database with associated maintenance responsibilities and ensuring that there is a clear understanding between DOT and the County regarding the road segments to be handled by each entity. Identification of the responsible applicant for various road segments is critical for reimbursement from FEMA and FHWA.

Grant Support: BDR has extensive experience in developing funding strategies to assist communities in receiving federal and state disaster and mitigation funding and special appropriations for disaster relief, long-term recovery and mitigation projects. We routinely provide local mitigation strategy staff support to improve the community's resistance to damage from known natural hazards by providing technical and strategic assistance by prioritizing and positioning their initiatives to compete effectively

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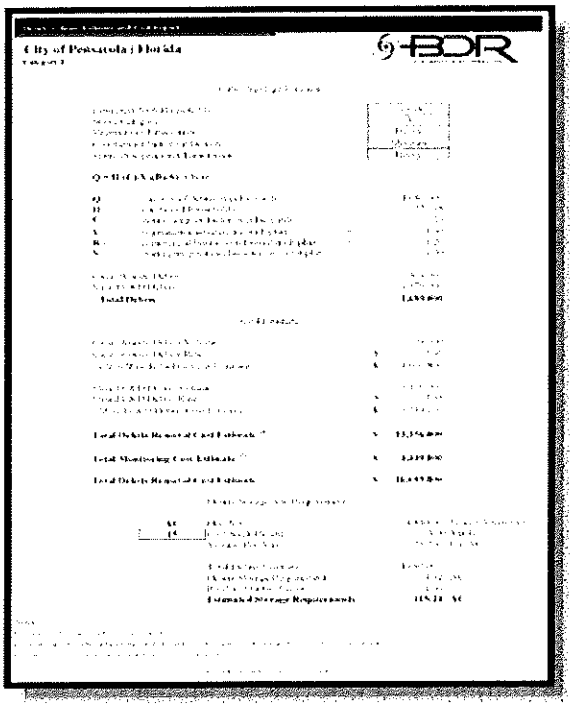
for pre- and post-disaster mitigation funding, thereby reducing the cost of disasters at all levels and expediting recovery.

Other Pre and Post-Event Services: In addition to the services listed above, BDR can provide other pre-event disaster/emergency planning and post-event response and recovery services as needed.

Damage Assessment and Reconstruction Services

BDR is available to provide comprehensive damage assessment and reconstruction services to Dorchester County. A summary of our proposed damage assessment and reconstruction services is outlined below.

Damage Assessment



As a subsidiary of an international engineering and consulting firm, BDR possesses unique skills and resources to assist the County with a damage assessment inventory following a natural or man made disaster. Our approach to damage assessment begins with the BDR project manager coordinating with the County's debris manager (or other assigned individual) to identify the specific damage assessment services requested (e.g. debris related, structures, utilities, etc.). The BDR project manager will communicate with the BDR resource manager and the appropriate staff with the proper service acumen will mobilize.

Debris Estimation: A key element of the damage assessment process is determining the quantities of debris created by the event throughout the County. In order to adequately plan and mobilize for a disaster debris recovery effort, it is critical to understand the potential quantities of debris that may be generated. BDR has found that rather than relying upon a single approach, a combination of debris estimating methodologies generally produces a more accurate estimate. Debris estimating methodologies that will be used by BDR include:

- ***U.S. Army Corp of Engineers Debris Estimating*** Model (this model is widely utilized and takes into account factors such hurricane category, population base, amount of vegetative cover, etc.)
- ***Drive-By Parcel Survey*** to estimate the average quantity of debris per parcel, then multiplying the debris per parcel figure by the total number of parcels (residential, commercial, or both) in the applicable jurisdiction
- ***Flyover*** (to determine if the debris field is isolated in certain areas or widespread across the entire jurisdiction); and
- Personal estimates by BDR and debris contractors experienced in disaster recovery efforts.

Each of these approaches will be considered in developing an estimated debris volume in the County.

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Critical Infrastructure Evaluation: BDR has trained engineers and construction managers on staff to assist Duplin County in evaluating damages to critical infrastructure including facility and utility systems. BDR is also prepared to assist the County in assessing the habitability of structures. We can assist the County in preparing cost estimates for damages and identifying and implementing short-term solutions to facility and utility system issues.

Reconstruction Services

In the event of a natural or man-made disaster impacting the County, the BDR Team – including BDR's parent R.W. Beck, Inc. – are committed to the long term recovery of the County. R.W. Beck, Inc. is listed in the Engineering News Record (ENR) as one of the Top 100 design engineering firms in the United States and has vast resources and capabilities to assist the County in restoring critical infrastructure from initial damage assessment through planning and design to construction management and oversight. Most recently, BDR assisted the City of Waveland, Mississippi in restoring the City's stormwater management system (including culvert replacement, etc.).

In addition, R. W. Beck provided a broad range of services to the Virgin Islands Water and Power Authority (VIWAPA) following Hurricanes Hugo in 1989 and Marilyn in 1995. On both occasions, R. W. Beck conducted an assessment of the initial damage to VIWAPA's transmission and distribution system and generation facilities. We prepared cost estimates and coordinated with FEMA to align their calculations to damage cost estimates and also provided field monitoring and technical assistance during the reconstruction. When reconstruction was complete, we conducted a follow up field inventory of VIWAPA's system and developed new transmission and distribution maps.

Specific reconstruction services offered by the BDR Team include:

- System master planning (utilities, transportation, etc.)
- Permitting – including utility systems, facilities, disposal sites, etc.
- Utility system planning, design, permitting, and construction management
- Transportation system design and engineering
- Scheduling and cost estimating
- Program and construction management
- Development of procurement documents for facilities, utility systems, etc.
- GIS support
- Signage inventory and replacement
- Other reconstruction services requested by the County

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Financial Recovery Services

BDR has a team of PA experts that can help maximize the benefits and incentives of the program. BDR can assist the County with a wide variety of public assistance services including, but not limited to:

- Provide financial recovery management consultation for available programs;
- Assist in the development and implementation of a comprehensive recovery strategy;
- Compile and implement a disaster recovery team;
- Provide advice in guiding the disaster recovery team;
- Prepare draft correspondence to the necessary funding entities;
- Review eligibility issues, and work with the client to develop justifications for presentation to the funding entities;
- Assist the client in developing approach to filing and tracking costs;
- Develop and review procurement documents;
- Review documentation gathered and organized by departments;
- Assist in capturing and summarizing eligible costs for selected departments;
- Assist the client with compiling and summarizing all categorical costs for presentation to the funding entities;
- Prioritizing recovery workload
- Identification of FEMA-PA eligible emergency and permanent work (Category A-G);
- Assist the client in preparing Project Worksheets, DDIR's, and various other grant applications to ensure that all applicable back up information is accurate and submitted appropriately;
- Insurance evaluation, documentation adjusting and settlement services
- Project worksheet generation and review. BDR will prepare and review Category A-G project worksheets and assist federal agencies with the generation of large project worksheets when necessary
- FEMA, FHWA ER and NRCS-Emergency Watershed Protection reimbursement support
- Staff augmentation with experienced public assurance coordinators and project officers
- Appeal services and negotiations;
- Reconstruction and long-term infrastructure planning;
- Document force account labor for emergency measures to maximize reimbursement for eligible Category A work;
- Final review of all emergency and permanent work performed
- Aid in the finalizing preparations for final inspections, audits, closeout and participate in exit conferences with funding entities;
- Address funding conflict issues;
- Hazard Mitigation Grant Program strategizing and application;
- Community Development Block Grant strategizing and application.

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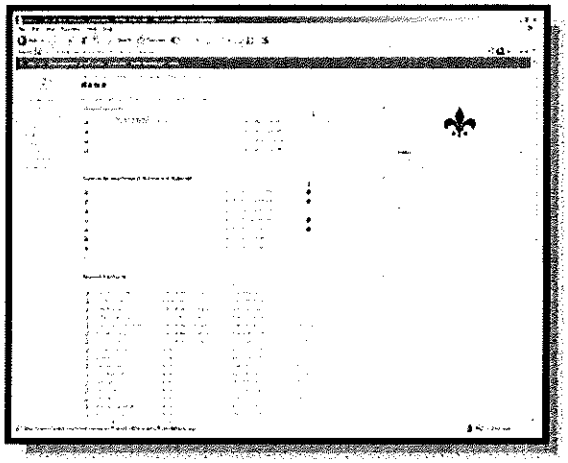
Innovative Concepts

Our firm has built a reputation around and maintains committed to incorporating innovative technologies and unique approaches to ensure our methodology is efficient and effective. These innovative concepts have been described below.

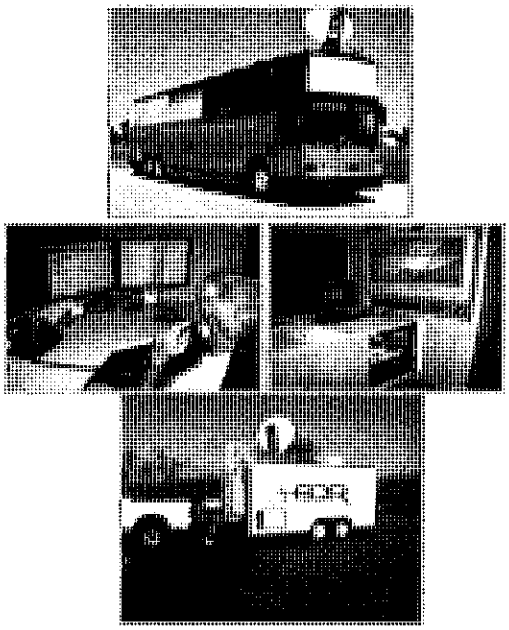
Microsoft SharePoint

The BDR Team will establish a secure web-based project team collaboration site using Microsoft SharePoint. The collaboration site will be hosted on BDR's server during the project engagement. The County and BDR Team members will be provided access to the site. The site serves as a document repository to allow for efficient document management. The repository allows team members to have access to current and past versions of any documents and status reports. The system allows visibility into project status at any time by members of the project team or supervisory personnel, which is helpful on a project involving multiple departments or within a large government organization.



Specialized Equipment Improves Efficiency

Over the past 18 months alone, BDR has invested nearly $2 million in improving our data management systems and reporting processes to ensure that accurate and expeditious reports are provided when we are called upon to activate. Part of this investment has included a mobile command center (MCC) which includes on-board mapping capabilities, scanners, internet stations and meeting space and generators for up to 2 weeks of power without refueling, automated ticketing technology, GIS tracking tools for roads and canals and hauler invoice reconciliation software. That translates into our ability to speed the processing and approval of the County's haulers' invoices. Equally important to our improved data management systems, satellite connectivity and remote data transmission units will verify and reconcile load tickets and other data between the County and the municipalities that utilize County-owned facilities in a central repository so that proper payment can be billed back to the cities and we can provide up-to-date information on the recovery effort to County officials.



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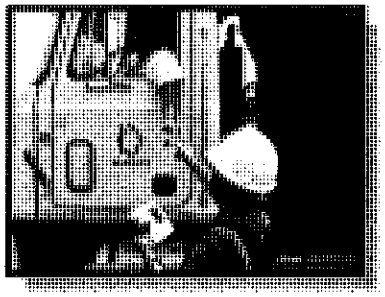
BDR Recovery Management Suite

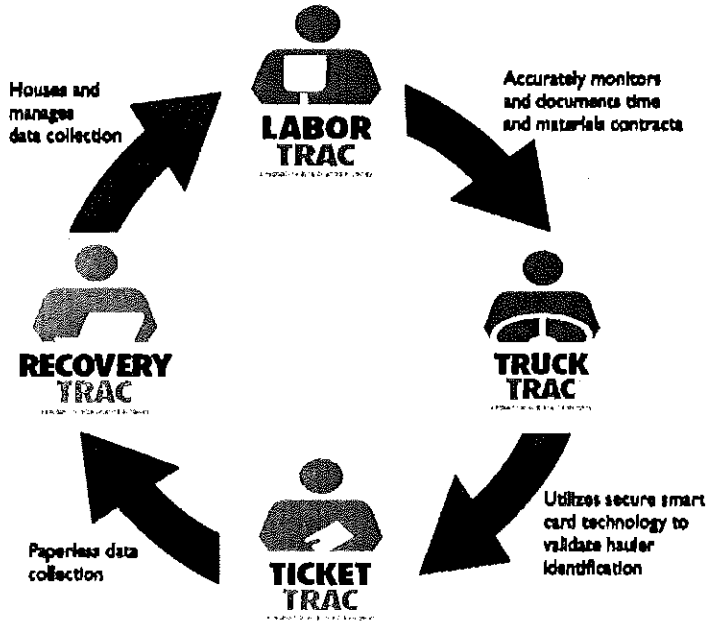


BDR continues to look for opportunities to improve the disaster recovery process. As such, BDR has developed a cutting edge suite of applications and hardware to manage the data and information generated during the course of monitoring a demolition and debris removal project. The BDR Recovery Management Suite (BRMS) is an advanced set of highly integrated applications and state-of-the-art electronic tools designed specifically to automate and enhance the collection and processing of debris management data in the aftermath of natural disasters. BRMS is comprised of the following four separate applications:

- ***Labor Trac***™ – utilizes biometric fingerprint technology to more accurately monitor and document time and materials contracts for 70-hour response work and service contracts such as monitoring.
- ***Truck Trac***™ – through the use of a laser distance meter, Truck Trac™ utilizes laser technology to more accurately measure and certify the volumetric capacity of debris removal hauling vehicles with greater efficiency and precision.
- ***Ticket Trac***™ – achieves paperless, electronic data collection using rugged handheld units which are supported by wireless data synchronization, GPS, geo-fencing and encrypted smart card technology.
- ***Recovery Trac***™ – an SQL relational database that houses and manages the data collected through its sister applications. This powerful application contains modules for managing debris hauling vehicle certifications, collection ticket information, contactor invoices, FEMA project worksheets and many other data points.

While the applications that comprise BRMS operate independently, the information generated by each is collected and managed by Recovery Trac™ as depicted in the diagram below.

Figure 3-2: BDR Recovery Management Suite



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In addition to the efficiencies that BRMS provides in the collection and processing of debris management data, BRMS ultimately delivers a project closeout database to the applicant that will prove invaluable through the various levels of regulatory audits facing the applicant for years to come. In essence, BRMS provides a data and document management interface that will allow the County, state and federal auditors to validate the debris removal process and subsequent payments, through a series of hyperlinks to facilitate positive audit outcomes.

Training Program

BDR has developed a robust training program for use in educating collection and disposal site monitors. All monitors are required to participate in BDR's training program prior to being put in the field. The training program includes a video, PowerPoint presentation and training manual in an effort to educate monitors on their responsibilities and how to safely handle hazards they may encounter while in the field. The training manual is intended to be a general guide for the monitors to ensure the collection and disposal of debris is accomplished and documented for the County in a safe, efficient and FEMA compliant manner.

BDR currently has training manuals for truck certification, collection monitoring and disposal monitoring. Each of these manuals educates monitors on the appropriate attire, safety gear and procedures conducive to a safe working environment. The manuals provide knowledge of industry-standard safety guidelines including examples of unsafe work conditions and how these should be handled and reported to ensure the safety of the employees and the public. These manuals, in combination with the County's scope of work, will be used as the basis for training debris monitoring staff.

In addition, prior to the start of every hurricane season, BDR conducts a mandatory 2-day mock training exercise to review new FEMA and corporate guidelines, polices and procedures to ensure a safe work environment and a best practice approach to disaster recovery.

Copies of BDR's training manuals have been included under a separate cover.

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COST PROPOSAL FORM
RFP# EPD-20 Debris Monitoring and Recovery Services

The hourly labor rates shall include all applicable overhead and profit. All non-labor related project costs (including travel, lodging, per diem, communications, supplies, rental equipment, and other direct project expenses) will be billed to the County at cost without mark-up.

POSITIONS	**HOURLY RATES**
Project Manager	$ 95.00
Operations Managers	$ 70.00
GIS Analyst	$ 63.00
Field Supervisors	$ 59.00
Debris Site/Tower Monitors	$ 42.00
Load Ticket Data Entry Clerks	$ 33.00
Billing/Invoice Analysts	$ 55.00
Project Assistants	$ 33.00
Field Coordinators (Crew Monitors)	$ 42.00

OTHER REQUIRED POSITIONS

Proposer may include other positions, with hourly rates, as needed.

POSITIONS	**HOURLY RATES**
see attached	$
	$
	$
	$
	$

VENDOR NAME: Beck Disaster Recovery, Inc.

VENDOR SIGNATURE: _____

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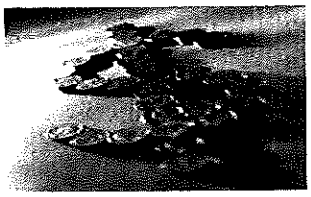

Schedule of Hourly Labor Rates for Financial Recovery Services

To the extent that the County requests BDR's assistance for financial recovery services (such those listed in the Technical Approach under Item *"2 –Additional Services/Solutions*) the following hourly billing rates would apply. The fees for these services can be provided to the County on a fixed fee, time and materials basis or other alternative compensation structure. Non-labor related expenses will be invoiced at cost, without mark-up.

Table 4-1: Financial Recovery Services Hourly Labor Rates*

Position	Hourly Rates
Senior Public Assistance Consultant	175.00
Public Assistance Consultant	150.00
Senior Planner/Analyst	135.00
Planner/Analyst	110.00
Assistant Analyst	90.00

* Rates are subject to annual adjustments on the anniversary date of the contract in accordance with the U.S. Consumer Price Index.

Schedule for Other Recovery/Reconstruction Services

To the extent that the County requests BDR's assistance for other response, recovery, engineering, and reconstruction program management services (such those listed in the Technical Approach under Item *"2 –Additional Services/Solutions*), the following positions and hourly rates apply. The fees for these services can be provided to the County on a fixed fee, time and materials basis or other alternative compensation structure. Non-labor related expenses will be invoiced at cost, without mark-up.

Table 4-2: Other Recovery/Reconstruction Hourly Labor Rates*

Position	Hourly Rate
Principal-in-Charge	$275
Program Manager	$225
Senior Project Engineer/Architect/Analyst/Planner	$195
Public Assistance/Insurance Specialists	$190
Project Manager/Deputy Program Manager	$180
Environmental Specialists	$165
Public Outreach Manager	$155
Procurement Specialists	$155

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Position	Hourly Rate
Grant Management Specialists	$150
IT/Software Specialists	$150
Construction Manager	$145
Project Engineer/Architect/Analyst Planner	$140
QA/QC Manager	$135
Project Controls Manager	$130
Safety Manager	$125
IT and Document Control Manager	$125
Assistant Construction Manager	$120
Contract Administration/Billing Support	$115
Estimator	$115
Scheduler	$115
Documentation Specialists	$110
Field Supervisor	$95
Analytical Aide/Assistant	$85
Administrative Assistant	$70
Field Monitor/Assistant	$65

- Rates are subject to annual adjustments on the anniversary date of the contract in accordance with the U.S. Consumer Price Index.

Automated / Electronic Ticketing System**

As County Solid Waste Division staff are aware, BDR is in the process of developing an automated, paperless ticketing technology that utilizes smart cards to store and manage ticket data. Use of this system significantly reduces manual data entry efforts and speeds daily reporting. To the extent that the County and BDR mutually agree on the use of this new system (as opposed to traditional manual load tickets), BDR is proposing to charge the County an additional $0.75 per collection and disposal/tower monitor hour charged. This additional fee is necessary to pay for the cost of field handheld units (several hundred of which will likely be required).

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h. Notwithstanding any statute to the contrary, the Parties agree that any action to enforce or interpret this Agreement shall be initiated within two (2) years from the time the party knew or should have known of the fact giving rise to its action, and shall not in any case be initiated later than six (6) years after Consultant completes its Scope of Services under this Agreement.

i. This Agreement may be executed in multiple counterparts, each of which shall be deemed to be an original instrument, but all of which taken together shall constitute one instrument.

IN WITNESS WHEREOF, the Parties have signed this Agreement the date first written above.

DORCHESTER COUNTY, SC

Signature	Jason L. Ward	Signature	
Name	Jason L. Ward	Name	
Title	County Administrator	Title	
Date	6/18/09	Date	

BECK DISASTER RECOVERY, INC.

Signature		Signature	
Name	Charles M. Melendez	Name	
Title	President	Title	
Date	6/25/09	Date	

Exhibit A – Scope of Services
Exhibit B – Fee Schedule

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CrowderGulf

Disaster Recovery and Debris Management

5435 Business Parkway
Theodore, Alabama 36582

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

January 25, 2012

Mr. Sam Stephens, Procurement Director
Dorchester County
Purchasing Department
201 Johnson Street
St. George, SC 29477

Re: Contract Renewal for Emergency Debris Management and Removal

Dear Mr. Stephens:

CrowderGulf has been providing Dorchester County Emergency Debris Management and Removal per the contract originally executed on July 29, 2009. The term of the contract shall be for three (3) consecutive years beginning on the date of acceptance. This contract may be renewed for an additional three (3) years after a written concurrence of both parties.

If Dorchester County is in agreement to renew 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 new expiration July 29, 2015.

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

Best regards,

John Ramsay
President

RENEWAL ACCEPTANCE – Dorchester County, SC

_____
Signature

_____
Name/Title

_____
Date

Contract for Debris Management Services

THIS CONTRACT is made this the 29 day of **July**, 2009, by and between **Crowder Gulf Joint Venture** (herein referred to as "**Contractor**") and the **County of Dorchester** a political subdivision of the **State of South Carolina** (herein referred to as "County of Dorchester").

RECITALS

WHEREAS, it is foreseen that it may be in the public interest to provide for the expedient removal of storm debris within the corporate limits of **The County of Dorchester** plus recovery Technical Assistance to the appointed and elected officials resulting from a future storm or manmade event; and

WHEREAS, The **County of Dorchester** has in the past suffered the full force and effects of major storms and the resulting destruction brought upon **County of Dorchester** by such storms or manmade disasters; and

WHEREAS, the Public Health and Safety of all the citizens will be at serious risk; and

WHEREAS, the immediate economical recovery of The **County of Dorchester** and its citizens is a major concern and the primary priority for recovery; and

WHEREAS, the availability of experienced prime storm debris contractors may be severely limited; and

WHEREAS, **Contractor** has the experience, equipment, manpower, permits and licenses to perform all storm related debris services; and

WHEREAS, the **County of Dorchester** and the **Contractor** have agreed to the Scope of Services, prices, terms and conditions as set out in this Contract; and

THEREFORE, in considerations acknowledged by both parties, said parties do agree to the following stipulations and conditions.

1.0 SERVICES

1.1 Scope of Contracted Services:

The **Contractor** shall provide all expertise, personnel, tools, materials, equipment, transportation, supervision and all other services and facilities of any nature necessary to execute, complete and deliver the timely removal and lawful disposal of all ***eligible storm-generated debris (herein referred to as "debris")***, including hazardous and industrial waste materials and within the time specified in this Contract. Emergency push, debris removal and demolition of structures will be limited to: 1) That which is determined to eliminate immediate threats to life, public health, and safety; 2) That which has been determined to eliminate immediate threats of significant damage to improved public or private property; and 3) That which is considered essential to ensure the economic recovery of the affected community to the benefit of the community at large.

These contracted services shall provide for the cost effective and efficient removal and lawful disposal of debris accumulated on all public, residential and commercial properties, streets, roads, other rights-of-way and public school properties, including any other locally owned facility or site as may be directed by the **County of Dorchester**. Contracted services will only be performed when requested and as designated by the **County of Dorchester**.

The Contractor shall load and haul the debris from within the legal boundaries of the County to a site(s) specified by the **County of Dorchester** as set out in Section 4.8 of this Contract.

1.2 Emergency Push / Road Clearance:
The Contractor shall accomplish the cutting, tossing and/or pushing of debris from the primary transportation routes as identified by and directed by the **County of Dorchester**. This operational aspect of the scope of contracted services shall be for the first 72 hours after an event and will be billed on a time and material basis. Once this task is accomplished, the following additional tasks will begin as required.

1.3 Right-of-Way (ROW) Removal:
The Contractor shall remove all debris from the ROW of the **County of Dorchester** when directed to do so by the **County of Dorchester**. The Contractor shall use reasonable care not to damage any public or private property not already damaged by the storm event. Should any property be damaged due to negligence on the part of the Contractor, the **County of Dorchester** may either bill the Contractor for the damages or withhold funds due to the Contractor.

1.4 Right-of-Entry (ROE) Removal *(if implemented by the* County of Dorchester*)*:
The Contractor will remove ROE debris from private property with due diligence, as directed by the **County of Dorchester**. The Contractor also agrees to make reasonable efforts to save from destruction items that the property owners wish to save, (i.e., trees, small buildings, etc.) The Contractor will exercise caution when working around public utilities (i.e., gas, water, electric, etc.). Every effort will be made to mark these utilities but the **County of Dorchester** does not warrant that all will be located before debris removal begins, nor does the Contractor warrant that utility damages will not occur as a result of properly conducting the contracted services.

1.5 Demolition of Structures *(if implemented by the* County of Dorchester*)*:
The Contractor will remove structures designated for removal by and at the direction of the **County of Dorchester**. The Contractor agrees to remove in a timely manner all structures as determined by the **County of Dorchester** as set out in Section 1.1 of this Contract.

1.6 Private Property Waivers:
The **County of Dorchester** will secure all necessary permissions, waivers and Right-of-Entry Agreements from property owners as prescribed by the Government for the removal of debris and/or demolition of structures from residential and/or commercial properties, as set out in Sections 1.4 and 1.5 above.

1.7 Disaster Recovery Technical Assistance:
The Contractor will provide Disaster Recovery Technical Assistance to elected and appointed officials within the **County of Dorchester**. This service shall include Debris Program Management Assistance. This is the concept of complete recovery management support where the Contractor would assist a local government

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applicant on all aspects of the recovery process. Contractor personnel cannot assume the sovereign duties and functions of the **County of Dorchester** officials and therefore, these services shall be provided by the Contractor through a consulting firm acceptable to the **County of Dorchester** and in the form of guidance and consultation. If we have to hire a consulting firm, then we will pass through the charges to the **County of Dorchester.**

2.0 PERFORMANCE OF SERVICES

2.1 Description of Service:

The Contractor agrees to perform the contracted services in a professional and workmanlike manner and in compliance with all applicable laws, ordinances, rules, regulations and permits. Only the highest quality workmanship will be acceptable. Services, equipment and workmanship not conforming to the Contract documents or meeting the approval of the **County of Dorchester** may be rejected. Replacements and/or rework, as required, will be accomplished at no additional cost to the **County of Dorchester**.

2.2 Cost of Services:

The Contractor shall bear the costs of performing all contracted services hereunder, as directed by the **County of Dorchester**, including but not limited to that which is set out in Section 1.0, plus applicable permit and license fees and all maintenance costs required to maintain its vehicles and other equipment in a condition and manner adequate to accomplish and sustain all contracted services as set out in this Contract.

2.3 Matters Related to Performance:

2.3.1 Subcontractor(s):

The Contractor may utilize the service of subcontractors and shall be responsible for the acts or omissions of its subcontractors to the same extent the Contractor is responsible for the acts and omissions of its employees. The Contractor shall ensure that all its subcontracts have and carry the same major provisions of this Contract and that the work of their subcontractors is subject to said provisions. Nothing contained in this Contract shall create any contractual relationship between any subcontractor and the **County of Dorchester**. The Contractor shall supply the names and addresses of subcontractors and materials suppliers when requested to do so by the **County of Dorchester**.

2.3.2 Indemnification:

The Contractor agrees to indemnify, hold harmless and defend the **County of Dorchester** from and against any and all liabilities, suits, actions, legal proceedings, claims demands, damages, costs and expenses (including attorney's fees) rising out of any act or omission of the Contractor, its agents, subcontractors or employees in the performance of this Contract.

2.3.3 Insurance(s):

The Contractor agrees to keep the following Insurance in full force and effective during the term of this Contract. The Contractor must also name the **County of Dorchester**, as additional insured, while working within the boundaries of the **County of Dorchester**.

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2.3.4 Worker's Compensation:

- Coverage per **County of Dorchester** requirements.

2.3.5 Automobile Liability:

- Coverage per **County of Dorchester** requirements.

2.3.6 Comprehensive General Liability:

- Coverage per **County of Dorchester** requirements.

2.3.7 Insurance Cancellation / Renewal:
The Contractor will notify the **County of Dorchester** at least thirty (30) days in advance of cancellation, non-renewal or adverse change to the required insurance. New certificates of insurance are to be provided to the **County of Dorchester** at least ten (10) days following coverage renewals or changes.

3.0 STANDARDS OF PERFORMANCE

3.1 Contractor Representative:
The Contractor shall have a knowledgeable and responsible Representative report to the **County of Dorchester's** designated Contract Representative within 24 hours following the activation of this contract. The Contractor Representative shall have the authority to implement all actions required to begin the performance of contracted services as set out in this Contract and the Contractor's General Operations Plan.

3.2 Mobilization:
When the written Notice to Proceed has been received by the Contractor and/or the on-site Contractor Representative, he/she will make all necessary arrangements to mobilize a minimum of 50% of the required resources within 48 hours and 100% of the required resources within 96 hours to commence and conduct these contracted services.

3.3 Payment and Performance Bonds: Contractor shall provide payment and performance bonds 7 – 10 days following activation of contract.

3.4 Time to Complete:
The Contractor shall complete all directed work as set out in Section 1.0 of this Contract within *(number of days will be determined once extent of damage has been determined)* working days and in accordance with Section 5.8 of this Contract.

3.5 Completion of Work:
The Contractor shall be responsible for removal of all debris up to the point where remaining debris can only be described as storm litter and additional collection can only be accomplished by the use of hand labor.

3.5.1 Extensions (optional):
In as much as this is a "time is of the essence" based Contract; the commencement of contracted services will be as set out in Section 3.2. If the completion of this Contract is delayed by actions of the **County of Dorchester**, then and in such event the time of completion of this Contract shall be extended for such additional time within which to complete the performance of the Contract as is required by such delay. This Contract may be extended by mutual consent of both the **County of Dorchester** and the Contractor for reasons of additional time, additional services and/or additional areas of work.

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3.6 Term of Contract:
The term of the Contract shall be for three (3) consecutive years beginning on the date of acceptance by and signatures of the **County of Dorchester** and Contractor, whichever comes later.

3.7 Contract Renewal:
This Contract may be renewed for an additional three years after a written concurrence of both parties on any negotiated changes to the terms and specifications contained in this Contract. Section 7.0 of this Contract may be reviewed on an annual basis, at which time amended unit costs may be submitted by the Contractor to the **County of Dorchester** to reflect the current disaster recovery market value of all contracted services in this Contract. Such amendments shall become part of this Contract after both parties sign any such written amendment(s).

3.8 Contract Termination:
This Contract shall terminate upon 6 months written notice from either party and delivered to the other party, as set out in Section 8.1 of this Contract.

4.0 GENERAL RESPONSIBILITIES

4.1 Other Agreements:
The **County of Dorchester** may be required to enter into agreements with Federal and/or State agencies for disaster relief. The Contractor shall be bound by the terms and conditions of such agreements.

4.2 County of Dorchester Obligations:
The **County of Dorchester** shall furnish all information and documents necessary for the commencement of contracted services, to include a valid written Notice To Proceed. A representative will be designated by the **County of Dorchester** to be the primary point of contact for inspecting the work and answering any on site questions prior to and after activation of this Contract via a written Notice To Proceed. The **County of Dorchester** is responsible for issuing all Public Service Announcements (PSA) to advise citizens and agencies of the available debris services. The Contractor may assist the **County of Dorchester** with the development of debris-based PSA(s), if requested.

4.3 Conduct of Work:
The Contractor shall be responsible for planning and conducting all operations in a satisfactory workmanship manner. The Contractor shall exhibit respect for the citizens and their individual private properties. All operations shall be conducted under the review of a **County of Dorchester** Representative. The Contractor shall have and require strict compliance with a written Code of Ethics.

4.4 Supervision:
The Contractor will supervise and/or direct all contracted services. The Contractor is solely responsible for the means, methods, techniques, safety program and procedures. The Contractor will employ and maintain on the work site a qualified supervisor who shall have full authority to act on behalf of the Contractor and all communications given to the supervisor by the **County of Dorchester's** Authorized Representative shall be as binding as if given to the Contractor.

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4.5 Damages:
The Contractor shall be responsible for conducting operations in such a manner as to cause the minimum damage possible to existing public, private and commercial property and/or infrastructure. Contractor shall also be responsible for any damages due to the negligence of its employees and subcontractors as set out in Sections 1.2 through 1.5 of this Contract.

4.6 Other Contractor(s):
The Contractor shall acknowledge the presence of other contractors involved in disaster response and recovery activities by the federal, state and local government and of any private utility, and shall not interfere with their work.

4.7 Ownership of Debris (optional):
All debris, including regulated hazardous waste, shall become the property of the Contractor for removal and lawful disposal. The debris will consist of, but not limited to vegetative, construction and demolition, white goods and household solid waste.

4.8 Disposal of Debris:
Unless otherwise directed by the **County of Dorchester**, the Contractor shall be responsible for determining and executing the method and manner for lawful disposal of all eligible debris, including regulated hazardous waste. The primary location of the reduction and disposal site(s) shall be determined by the **County of Dorchester** and Contractor. Other sites may be utilized as directed and/or approved by the **County of Dorchester**.

5.0 GENERAL TERMS AND CONDITIONS

5.1 Geographic Assignment:
The geographic boundary for work by the Contractor's crews shall be as directed by the **County of Dorchester** and will be limited to properties located within the **County of Dorchester's** legal boundaries.

5.2 Multiple, Scheduled Passes (optional):
The Contractor shall make scheduled passes at the direction of the **County of Dorchester** and/or unscheduled passes of each area impacted by the storm event. The **County of Dorchester** shall direct the interval timing of all passes. Sufficient time shall be permitted between subsequent passes to accommodate reasonable recovery and additional debris placement at the ROW by the citizens and the **County of Dorchester**.

5.3 Operation of Equipment:
The Contractor shall operate all trucks, trailers and all other equipment in compliance with any/all applicable federal, state and local rules and regulations. Equipment shall be in good working condition. All loading equipment shall be operated from the road, street or ROW using buckets and/or boom and grapple devices to collect and load debris. No equipment shall be allowed behind the curb or outside of the public ROW unless otherwise directed by the **County of Dorchester**. Should operation of equipment be required outside of the public ROW, the **County of Dorchester** will provide a Right-of-Entry Agreement, as set out in Section 1.6 of this Contract.

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5.4 Certification of Load Carrying Capacity:
The Contractor shall submit to the **County of Dorchester** a certified report indicating the type of vehicle, make and model, license plate number and/or trailer VIN number, assigned debris hauling number and measured maximum volume, in **cubic yards**, of the load bed of each piece of equipment to be utilized to haul debris.

The measured volume of each piece of equipment shall be calculated from the actual physical measurement performed by the **County of Dorchester** and Contractor Representative(s). A standard measurement form certifying actual physical measurements of each piece of equipment shall be an attachment to the certified report(s) submitted to the **County of Dorchester**.

5.5 Vehicle Information:
The maximum load capacity of each hauling vehicle will be rounded to the nearest whole **cubic yard (CY)**. (Decimal values of .1 through .4 will be rounded down and decimal values of .5 through .9 will be rounded up.) The measured maximum load capacity (as adjusted) of any vehicle load bed will be the same as shown on the trailer measurement form and painted on each numbered vehicle or piece of equipment used to haul debris. All vehicles or equipment used for hauling will have and use a Contractor approved tailgate and sideboards will be limited to those that protect the load area of the trailer.

5.6 Security of Debris During Hauling:
The Contractor shall be responsible for the security of debris on/in each vehicle or piece of equipment utilized to haul debris. Prior to leaving the loading site(s), the Contractor shall ensure that each load is secure and trimmed so that no debris extends horizontally beyond the bed of the equipment in any direction. All loose debris shall be reasonably compacted and secured during transport. As required, the Contractor will survey the primary routes used by the Contractor and recover fallen or blown debris from the roadway(s).

5.7 Traffic Control:
The Contractor shall mitigate impact on local traffic conditions to all extents possible. The Contractor is responsible for establishing and maintaining appropriate traffic control in accordance with the latest Manual of Uniform Traffic Control Devices. The Contractor shall provide sufficient signing, flagging and barricading to ensure the safety of vehicular and pedestrian traffic at all debris removal, reduction and/or disposal site(s).

5.8 Work Days/Hours:
The Contractor may conduct debris removal operations from sunup to sundown, seven days per week. Any mechanical, debris reduction operations or burning operations may be conducted from 24 hours a day, seven days per week. Adjustments to work days and/or work hours shall be as directed by the **County of Dorchester** following consultation and notification to the Contractor.

5.9 Hazardous and Industrial Wastes:
The Contractor shall set aside and reasonably protect all hazardous or industrial materials encountered during debris removal operations for collection and disposal in accordance with the Contractor's Hazardous and Industrial Materials Cleanup and Disposal Plan. The Contractor will build, operate and maintain a Hazardous Waste and Industrial Material Storage area until proper disposal of such waste is feasible. The Contractor may use the subcontracting services of a firm specializing in the

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management and disposal of such materials and waste, if/when directed by the **County of Dorchester**.

5.10 Stumps:
All hazardous/eligible stumps identified by the **County of Dorchester** will be pulled, loaded, transported, stored, reduced and disposed in accordance with the standards of this Contract. All stumps will be documented, invoiced and paid in accordance with Stump Conversion Table – Diameter to Volume Capacity.

5.11 Utilizing Local Resources:
The Contractor shall, to every extent possible, give priority to utilizing resources within the **County of Dorchester**. Debris Contract local preferences will include, but not limited to, procurement of services, supplies and equipment, plus awarding service subcontracts and employment to the local work force.

5.12 Work Safety:
The Contractor shall provide and enforce a safe work environment as prescribed in the Occupational Safety and Health Act of 1970, as amended. The Contractor will provide such safety equipment, training and supervision as may be required by the **County of Dorchester** and/or Government. The Contractor shall ensure that its subcontracts contain a similar safety provision.

5.13 Inspection and Testing:
All debris shall be subject to adequate inspection by the **County of Dorchester** or any public authority in accordance with generally accepted standards to ensure compliance with the Contract and applicable federal, state and local laws. The **County of Dorchester** will, at all times, have access to all work sites and disposal areas. In addition, authorized representatives and agents of the Government shall be permitted to inspect all work, materials, invoices and other relevant records and documentation.

5.14 Other Agencies:
The term "Government" as used in this Contract refers to those governmental agencies, which may have a regulatory or funding interest in this Contract.

6.0 REPORTS, CERTIFICATIONS and DOCUMENTATION

6.1 Accountable Debris Load Forms:
The **County of Dorchester** shall accept the serialized copy of the Contractor's debris reporting ticket(s) as the certified, original source documents to account for the measurement and accumulation of the volume of debris delivered and processed at the reduction and/or disposal site(s). The serialized ticketing system will also be used in the event of additional debris handling for volume reduction and/or the possible requirement for a debris transfer station(s). These tickets shall be used as the basis of any electronic generated billing and/or report(s).

6.2 Reports:
The Contractor shall submit periodic, written reports to the **County of Dorchester** as requested or required, detailing the progress of debris removal and disposal. These reports may include, but not be limited to:

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6.2.1 Daily Reports:
The daily reports may detail the location where passes for debris removal were conducted, the quantity of debris (by type) removed and disposed and the total number of personnel crews engaged in debris management operations and the number of grinders, chippers and mulching machines in operation. The Contractor will also report damages to private property caused by the debris operation or damage claims made by citizens and such other information as may be required to completely describe the daily conduct of the Contractor's operations.

6.2.2 Weekly Summaries:
A summary of all information contained in the daily reports as set out in Section 6.2.1 of this Contract or in a format required by the **County of Dorchester**.

6.2.3 Report(s) Delivery:
The scheduling, point of delivery and receiving personnel for the debris operations report(s) will be directed by the **County of Dorchester** in consultation with the Contractor.

6.2.4 Final Project Closeout:
Upon final inspection and/or closeout of the project by the **County of Dorchester**, the Contractor shall prepare and submit a detailed description of all debris management activities to include, but not limited to the total volume, by type of debris hauled, reduced and/or disposed, plus the total cost of the project invoiced to the **County of Dorchester**. If requested, any other additional information as may be necessary to adequately document the conduct of the debris management operations for the **County of Dorchester** and/or Government.

6.3 Additional Supporting Documentation:
The Contractor shall submit sufficient reports and/or documentation for debris loading, hauling, disposal, and load capacity measurements as may be required by the **County of Dorchester** and/or Government to support requests for debris project reimbursement from external funding sources.

6.4 Report Maintenance:
Contractor will be subject to audit by federal, state and local agencies pursuant to this Contract. The Contractor will maintain all reports, records, debris reporting tickets and contract correspondence for a period of not less than three (3) years.

6.5 Contract File Maintenance:
The Contractor will maintain this Contract and the invoices that are generated for the contracted services for a period of three (3) years or the period of standard record retention of the **County of Dorchester**, whichever is longer.

7.0 UNIT PRICES and PAYMENTS

7.1 See Fee Schedule – Attachment .....

Contractor: **CrowderGulf Joint Venture, Inc.**
5435 Business Parkway
Theodore, AL 36582

County of Dorchester:

The County of Dorchester
201 Johnston Street
St. George, South Carolina 29477

8.2 Applicable Law:
The laws of the **State of South Carolina** shall govern this Contract.

8.3 Entire Contract:
This Contract (including any schedules or exhibits attached hereto) constitutes the entire Contract and understanding between the parties with respect to the matters contained herein. This Contract supersedes any prior contracts and/or understandings relating to the subject matter hereof. This Contract may be modified, amended or extended by a written instrument executed by both parties as per Sections 7.5 and 8.1 of this Contract.

8.4 Waiver:
In the event one of the parties waives a default by the other, such a waiver shall not be construed or deemed to be a continuing waiver of any subsequent breach or default of the other provisions of this Contract, by either party.

8.5 Severability:
If any provision of this Contract is deemed or becomes invalid, illegal or unenforceable under the applicable laws or regulations of any jurisdiction, such provision will be deemed amended to the extent necessary to conform to applicable laws or regulations. If it cannot be so amended without materially altering the intention of the parties, it will be stricken and the remainder of this Contract will remain in full force and effect.

IN WITNESS WHEREOF, the Contractor has caused this Contract to be signed in its corporate name by its authorized representative and the County of Dorchester has caused this Contract to be signed in its legal name by persons authorized to execute said Contract as of the day and year first written above on page one.

CrowderGulf Joint Venture

By: _____
John Ramsay

Title: **President** 7/24/2009

ATTEST:
Melinda Kohnle
Melinda Kohnle, Contracts Mgr.

County of Dorchester

By: _____
Name

Title County Administrator

ATTEST:
_____

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THE GRAY INSURANCE COMPANY

CERTIFICATE OF INSURANCE NO 176

CERTIFICATE HOLDER

Dorchester County Purchasing
Attn: Sam Stephens
201 Johnston Street
St. George, SC 29477

NAMED INSURED

CrowderGulf Joint Venture
5435 Business Parkway
Theodore, AL 36582-1675

☒ YES	☐ NO	Do all policies contain a Waiver of Subrogation in favor of Certificate Holder if required by written contract?
☒ YES	☐ NO	Do all policies except the Workers' Compensation name the Certificate Holder as Additional Insured if required by written contract?
☒ YES	☐ NO	Do policies provide 30 days written notice of cancellation to Certificate Holder?
☒ YES	☐ NO	Is coverage under all insurance carried by Named Insured Primary Insurance if required by written contract?

CONFIRMATION OF COVERAGE	TYPE OF INSURANCE	POLICY NUMBER	POLICY PERIOD	LIMITS OF LIABILITY IN THOUSANDS (000)
	WORKERS' COMPENSATION & EMPLOYERS LIABILITY	XSWC-070550	09/01/2008 09/01/2011	WORKERS COMPENSATION Statutory EMPLOYERS LIABILITY Each Accident $ 1,000 Disease - Policy Limit $ 1,000 Disease - Each Employee $ 1,000 MARITIME EMPLOYERS LIABILITY $ 1,000
☒ YES ☐ NO	U S Longshoremen's and Harbor Workers' Compensation Act Coverage			
☒ YES ☐ NO	Outer Continental Shelf Land Act			
☒ YES ☐ NO	Jones Act (including Transportation, Wages, Maintenance, and Cure), Death on the High Seas Act & General Maritime Law			
☒ YES ☐ NO	Voluntary Compensation Endorsement			
☒ YES ☐ NO	Other States Insurance			
☒ YES ☐ NO	Alternate Employer/Borrowed Servant Endorsement			
☒ YES ☐ NO	"In Rem" Endorsement			
☒ YES ☐ NO	Gulf of Mexico Territorial Extension			
	GENERAL LIABILITY Form & Edition Date ISO CG 00 01 11/88	XSGL-073220	09/01/2008 09/01/2011	General Aggregate Unlimited Products-Comp/OPS Agg $ 3,000 Personal & Advertising Injury $ 1,000 Each Occurrence $ 1,000 Fire Damage (Any one fire) $ 50 Medical Expense (Any one person) $ 5
☒ YES ☐ NO	Broad Form Property Damage Liability including X, C, U			
☒ YES ☐ NO	Products/Completed Operations			
☒ YES ☐ NO	Contractual Liability			
☒ YES ☐ NO	Sudden and Accidental Pollution Liability			
☒ YES ☐ NO	Occurrence Form			
☒ YES ☐ NO	Personal Injury			
☒ YES ☐ NO	"In Rem" Endorsement			
☒ YES ☐ NO	Cross Liability			
☒ YES ☐ NO	Watercraft exclusion has been modified by the vessels endorsement on scheduled equipment			

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CONFIRMATION OF COVERAGE	TYPE OF INSURANCE	POLICY NUMBER	POLICY PERIOD	LIMITS OF LIABILITY IN THOUSANDS (000)
	AUTOMOBILE LIABILITY	XSAL-073018	09/01/2008 09/01/2011	
☒ YES ☐ NO	Any Auto			Bodily Injury & Property Damage Combined $ 1.000
☒ YES ☐ NO	All Owned Autos			
☐ YES ☐ NO	Scheduled Autos			
☒ YES ☐ NO	Hired Autos			
☒ YES ☐ NO	Non-Owned Autos			
	EXCESS LIABILITY	GXS-042339	09/01/2008 09/01/2009	
☒ YES ☐ NO	Excess Form			Each Occurrence $ 4.000 Aggregate $ 4.000

JOB OR PROJECT DESCRIPTION

Proposal Number: EPD-19 Emergency Debris Management and Removal

SPECIAL CONDITIONS

Dorchester County, officers, agents, employees and volunteers are additional insured on a primary basis on all policies except Workers' Compensation and are provided waiver of subrogation, all if required by written contract.

Should the insurance herein described be cancelled, assigned or changed in such a manner as to affect this certificate, THE GRAY INSURANCE COMPANY will endeavor to give thirty (30) days written notice to the certificate holder, but failure to do so shall impose no obligation or liability upon THE GRAY INSURANCE COMPANY

THE GRAY INSURANCE COMPANY
3601 N I-10 Service Road West, Metairie, LA 70002

DATE: 07/27/2009

FORM NO. 135 REV. 1/01

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED— OWNERS, LESSEES OR CONTRACTORS (FORM B)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization:

When required by written contract, any person, firm or organization.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you

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WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy We will not enforce our right against the person or organization named in the Schedule (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit any one not named in the Schedule.

Schedule

When required by written contract, any person, firm or organization.

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Appendix H:

Removal of Eligible Debris from Private Property

Removal of Eligible Debris from Private Property

Public Assistance Debris Operations Job Aid (FEMA 9580.1)

Removal of Eligible Debris from Private Property

A discussion of eligibility for removal of debris from private property is contained in the Debris Management Guide, FEMA Publication 325; however, issues regarding such removal are common. In particular, problems may arise regarding the definitions of public health and safety" and "economic recovery" related to debris on private property. Removal of debris from private property is primarily the responsibility of the individual property owner, aided by insurance settlements or volunteer organizations.

- Ensure that the term "economic recovery of the affected areas" is not being misapplied. Use of this criterion is normally restricted to the removal of disaster- related debris from large commercial areas to expedite restoration of the economic viability of the affected community.
- Ensure that all applicants are aware that only FEMA makes eligibility determinations regarding removal of debris from private property. (*Note: Applicants as applied here would be Dorchester County for Public Assistance through FEMA.*)
- Ensure that all applicants are aware of the limitation of debris removal from private property early in the disaster.
- If FEMA determines that debris is so widespread that removal from private property i s appropriate, ensure that the eligible applicant understands the requirement to collect any insurance proceeds that covers the debris removal. These proceeds must be reported to FEMA, and that amount de-obligated from the appropriate Public Worksheet (PW of the PA application).
- Ensure that the determination that " a public health and safety issue exists" is <u>not</u> based on building codes. Generally, the determination would be based on ordinances related to condemnation. Additionally, most such ordinances require that the applicant place a lien on the property for re-coupment of demolition and debris removal costs. If so, that amount should be treated similar to insurance proceeds, and de-obligated.
- Ensure that there is a clear understanding that a public health and safety hazard must exist for the removal of the debris to be eligible. Again, the final determination for the eligibility of debris removal from private property is a FEMA responsibility.
- Demolition of a structure is not always the most cost-effective health and safety alternative. For "attractive nuisances," where structural integrity has not been compromised, cleaning and securing the facility may be the best alternative.
- Concrete slabs or foundation-on-grade do not present a health or safety hazard to the general public except in very unusual circumstance, such as erosion under a concrete slab on a hillside.
- Broken slabs, or slabs incapable of supporting a new structure, do not constitute a public health or safety hazard. They are more appropriately part of the reconstruction of the facility, and concrete slabs that are removed for reconstruction purposes are not eligible for removal as disaster-related debris, even when brought to the curbside.
- The cost of removing substantially damaged structures, as well as associated slabs, driveways, fencing, garages, sheds, and similar appurtenances, are eligible when the property is part of a Section 404 Hazard Mitigation buyout and relocation project. Review the *Policy on Demolition of Private and Public Facilities*, November 9, 1999.